THE ROLE OF NURSES IN DIABETES CARE AND THE IMPACT OF THE DIFFERENT APPROACHES OF NURSES ROLE ON PATIENTS PERCEIVED QUALITY OF NURSING CARE: TWO CASE STUDIES FROM THE UK AND KUWAIT

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ABSTRACT

Type 2 diabetes (T2D) is considered as a global major health problem, which requires healthcare systems to find solutions to meet the needs of the great numbers of people with T2D. One key to these solutions is nurses who undertake the provision of diabetes care. Nursing care in T2D varies across countries as a result of differences in healthcare systems, the way in which they are organised and other factors relating to nursing practice. The UK and Kuwait are two countries which have high incidences of T2D but differing health care delivery models, which has raised the need to understand the different roles of nurses in providing T2D care in these two countries' healthcare systems. Key aims of this research were: (1) to investigate the actual roles undertaken by nurses in T2D care; (2) to investigate the extent to which these different roles affect perceived quality of nursing care; (3) to investigate the guidelines of diabetes care in the UK and Kuwait; and (4) to evaluate if nurses are delivering care based on these guidelines.

This study investigated two cases in the UK and Kuwait regarding nursing roles in T2D care and how they affect the perceived quality of nursing care. In order to understand the phenomenon, a multiple case study design was employed involving multiple sources of information including documents review, non-participant observations, and semi-structured interviews with nurses and their patients with T2D. The diabetes clinic sites for this study were Nottingham University Hospitals (NUH) Trust in the UK and the Ministry of Health (MoH) hospitals in Kuwait. A thematic approach was utilised as a framework for the within-case and cross-case analyses.

The findings of the study showed that nurses are motivated and competent to provide optimum care to achieve patient satisfaction, which is a significant sign of quality of nursing care. The nurse-led system in the UK and the physician-led system in Kuwait indicate different approaches in T2D care. In the UK, the nurse's part in T2D care has been extended and advanced, making the role comparable to a physician's role. For instance, the status of 'nurse consultant' and 'nurse prescriber', allows the nurse to coordinate and lead diabetes care. In Kuwait, nurses contribute significantly to T2D diabetes care; however, their role is not officially recognised as they are not titled 'diabetes nurse' despite the fact they follow physician-established guidelines. Findings from this research further showed that the role of a diabetes nurse in Kuwait lacks clarity, as evidenced by

the lack of any published statements specifying their roles according to their specialisation, experience and qualifications. This absence of what nurses are supposed to be doing or a lack of a statement relating to the guideline-informed role of nurses has therefore resulted in an undervaluation and lack of support for this role in Kuwait.

The results of this study enhanced understanding of the roles nurses play within T2D care in both the UK and Kuwait. The information gathered also provides better understanding about nurses' guideline-informed roles and their actual roles in T2D care and therefore that data determines how the differences in the roles of nurses might impact on patients' perceived quality of nursing care.

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Definitions and Abbreviations

ADA	American Diabetes Association
AACN	American Association of Critical Care Nurses
CDA	Canadian Diabetes Associaltion
CDCP	Centre for Disease Control and Prevention
CRT	Cluster Randomised Trial
DN	Diabetes Nurse (in this research DN is pertaining to diabetes nurses in the UK; no nurses given this title in Kuwait)
FG	Focus group
GP	General Practitioner
GT	Grounded Theory
IDF	International Diabetes Federation
KD	Kuwaiti Dinar
MoH	Ministry of Health
NHS	National Health Services
NICE	National Institue for Health and Care Excellence
NREM	Nurse Role Effectiveness Model
NUH	Nottingham University Hospital
PIS	Participant information sheet
Ramadan	Annual fasting month for Muslims
RCT	Randomised Controlled Trial
TA	Thematic analysis
T2D	Type 2 diabetes
QNC	Quality of nursing care
WHO	World Health Organisation

Chapter 1: INTRODUCTION

1.1 Diabetes as a worldwide issue

Diabetes is increasingly becoming a global public health concern with its prevalence steadily on the rise as stated by the American Diabetes Association (ADA) (ADA 2014b). Globally, it is projected that newly diagnosed patients with diabetes will increase from 14.6 percent to 16.9 percent in 2030, as reported by the International Diabetes Federation (IDF) (IDF 2013 p.11). The ADA projects that by the year 2034, the number of people with diabetes will nearly double (ADA 2009). The IDF defined diabetes as 'a state of high blood glucose associated with early death' (IDF 2013). The World Health Organisation (WHO) stated that the causes of diabetes are lack of insulin production or ineffectiveness of the insulin produced by the pancreas (WHO 2014). Generally, the majority of individuals affected are: 1) men, as they are biologically accepted as more likely to develop diabetes than women and 2) people aged between 40-59 years (Logue et al. 2011; Scobie & Samaras 2014; Kautzky-Willer et al. 2016)

According to recent studies, the number of newly diagnosed patients with diabetes in the UK is increasing (Diabetes UK 2015); this is a similar situation to Kuwait, where the incidence of diabetes is on the rise (Dasman Diabetes Institute 2016). According to the IDF (2013), Germany, Spain, Italy, France, and UK are countries with the highest number of people with diabetes in Western Europe. Similarly, in Kuwait, diabetes has become a significant health concern since it was found that it is amongst the top ten countries worldwide with a high prevalence of diabetes in 2010 (WHO 2016). This high prevalence in both countries raises an important call to initiate serious steps to overcome this increase. One such initiative is to empower those nurses who are involved in diabetes care. Improved outcomes among patients with T2D have been empirically linked to the empowerment of nurses in diabetes care (Juul et al. 2012).

1.1.1 Types of diabetes

Table 1 (below) summaries the various types of diabetes. The US Center for Disease Control and Prevention (CDCP) suggests that Type 1, Type 2, and gestational diabetes are the major types of the disease (CDCP 2011). However, among these three types, T2D comprises 90 percent of people who are affected (IDF 2013). The WHO defines T2D as chronic hyperglycaemia caused by decreased

insulin production, impaired insulin function or, mutually, in the absence of autoimmune damage of the pancreatic beta cell (WHO 2006).

Table 1 Types of diabetes

Type of diabetes	**Description**
Type 1	1a: presence of auto antibodies causing immune destruction of B cells 1b: insulin deficiency causes progressive destruction of B cells
Type 2	Most common type of diabetes. Insulin secretion is insufficient and leads to hyperglycemia
Gestational	Diabetes occurs during pregnancy and may last after delivery
Monogenic diabetes	Mutations affecting genes that regulate B cells' functions
Pancreatic disease	Diabetes that can damage B cells, which results in hyperglycemia
Drug induced diabetes	Drugs that affect either insulin secretion or insulin action
Transplantation-associated diabetes	Solid organ transplantation can be associated with diabetes mellitus

Additionally, the fundamental disorder of T2D is typically related to insulin insensitivity that causes failure of pancreatic insulin secretion to compensate for the insulin insensitivity (CDCP 2011). What makes T2D even more problematic is that it displays no early symptoms and tends in many cases only to be diagnosed years after its onset (Diabetis UK 2013). Unfortunately, people who are diagnosed in the later stages might develop diabetes complications that require oral hypoglycaemic drugs and who will perhaps need insulin injections in the future (IDF 2013). Thus, this type of diabetes needs attention, as its complications lead to poor health outcomes and probably to overuse or consumption of healthcare services; consequently, managing T2D is an on-going challenge in the healthcare sector. Therefore, the focus of this thesis is on T2D.

1.2 Context of the study

Managing T2D requires new models of care and practice. For at least the last ten years the literature has supported the need to prepare nurses with a knowledge base to promote best practice for patients with diabetes (Chan & Zang 2007). Nurses' levels of knowledge are probably indicative of how developed nurses are

in their area of practice. El-Deirawi and Zuraikat (2001) confirmed that appropriate preparation and training for nurses in different areas of practice would improve their relevant professional knowledge, which will consequently improve their levels of care giving. There is uncertainty regarding the role of nurses in effectively supporting patients with T2D; and this is particular evident in countries such as Kuwait that do not have specialist diabetes nurses as a recognised group. Whilst nurses make a fundamental contribution to the effective management of diabetes, their collaborative role with other healthcare providers is less well expressed (Goodwin et al. 2010).

Juul et al. (2012) asserted that nurses are well trained to undertake patients' education and to improve care and adherence. Nurses performing roles in place of physicians in some areas of medicine have been identified. For example, nurses perform cardiac resuscitation (Lu et al. 2008) and demonstrate diverse and complex consultant roles in providing high standards of patient-centred care (Baldwin et al. 2013). When comparing a nurse-led model with traditional care Vrijhoef et al. (2001a) asked 83 general practitioners to assign patients on their list with T2D to a traditional medical model of care or a nurse specialist model of care. The research adopted a non-equivalent control group design and there was therefore no random allocation of patients to one or other model. They found equal patient clinical outcomes, self-care behaviour and patient satisfaction and found that glycaemic control, in a nurse-led model, improved. Similarly, Denver et al. (2003) in their comparative study between nurse led hypertension clinic with conventional community care found improvements in patients with T2D systolic blood pressure within a six month period of control in a nurse-led clinic.

There is limited evidence about the role played by nurses within diabetes care, the effectiveness of the different elements of this role, the way patients value these elements of their care, and the way nurses perceive these care elements in relation to their roles. Patients perhaps appreciate the nurse's role, whether the informed-role by the guidelines or the actual role, as they need appropriate care that meets their health needs. Moreover, understanding patients' perceptions about quality of nursing care is a significant indication about the quality of that caring. However, there is only limited research on patients' perceptions of the quality of nursing care in T2D and insufficient research about the guidelines-informed role and actual role undertaken by nurses in T2D care. There have been a number of studies about quality of nursing care in T2D. These studies however, have not focused on obtaining an understanding of the research topic from

different perspectives, such as those of nurses and patients, in a single study. This omission points to the value of undertaking this present research.

1.3 Motivation for the current study

Diabetes affects people both in developed and developing countries. T2D is a chronic condition and therefore requires long-term care such as glucose monitoring, diet, exercise, and insulin administration. The ways these activities are implemented vary between countries and we do not know which method provides the best outcomes. Therefore, this study looked at the way diabetes is managed in two countries: the UK and Kuwait. From my personal experience as a teacher in nursing, I have worked with nurses in diabetes clinics and observed them undertaking various activities that are comparable with those undertaken by doctors. Few people in Kuwait know that nurses provide diabetes care in hospitals or clinics. For instance, my father suddenly became ill; he was diagnosed with diabetes but his doctor did not provide him with sufficient information to reassure him, as he was a newly diagnosed patient. He used to call me at 04.00 (4am) to share his worries and let me know he could not sleep, always being afraid of hypoglycaemia. I asked him to see the doctor again and the doctor referred him to the nurses working in the hospital's diabetes clinic and since that time, a nurse has been following up with my father and he never misses an appointment. We (my father and me) did not know that there are nurses working in diabetes clinics in Kuwait. This is when I realised that there is a need to conduct research to explore the role of nurses in diabetes care in Kuwait. Diabetes care is well-developed in Kuwait and nurses are an integral part of the diabetes team.

1.4 Rationale for this study

Nursing care for T2D diabetes varies across countries as a result of differences in healthcare systems and the way in which nursing is organised and practiced (Daly et al. 2013; Aiken et al. 2014; Cho et al. 2015). Some countries have not distinguished or categorised the role of nurses, due to inadequate empirical research, to provide evidence supporting the need to recognise a nurse's role. The lack of applicable evaluation methods relating to nursing duties has led to limited evaluation of the nurse's role, for example: 'nurse consultant' (Bloomer & Cross 2011).

This picture seems to describe the role of nurses in Kuwait; a picture which lacks clarity, as nurses are uncertain about their roles. This ambiguity is indicated by the lack of a published role for nurses, which could and perhaps should specify their function according to speciality. The absence of a well-defined role for nurses has caused lack of support, alongside underutilisation of the role (Bloomer & Cross 2011). This lack of support has led to some nurses leaving the profession (Flinkman et al. 2010). As Sayers et al. (2011) report in their integrative literature review of the nurse educator role in acute care there are no national or standardised approaches to the role descriptions in healthcare and therefore this literature review must include the role performance literature.

There are healthcare systems adopting nurse-led models, which are patient-centred; whilst others still keep to a more traditional physician-led model reflecting a medically - oriented model of care. Managing T2D in Kuwait and in the UK, involves different approaches (Al-Adsani et al. 2009; McDowell et al. 2009b; Booth et al. 2013). These different approaches might be a consequence of the way nursing is organised within the two healthcare systems.

In some hospitals in Kuwait, diabetes care is provided by a physician supported by nurses' collaboration (Al-Adsani et al. 2009). In fact, these nurses provide full patient care with health education and follow up. The nurse's role in diabetes care has not been developed in Kuwait. This is indicated by the fact that irrespective of their function or speciality, such as diabetes educator, all nurses are titled 'staff nurse'.

Nursing practice in diabetes care in the UK and Kuwait has not been evaluated to understand how each system contributes to the quality of patient care. Investigating the role(s) of nurses in diabetes clinics in both countries, by utilising a case study approach and reviewing national and international guidelines including different sources of information, provided deeper understanding about the role of nurses in diabetes care. In addition, the reasons for choosing the UK and Kuwait for this study, are that both countries have high incidences of T2D and both have nationalised healthcare systems. It is worth mentioning here that Kuwait has a historical relationship with the UK (Herb 2009) and one of the similarities between the two countries is in their healthcare systems; citizens in both countries have access to healthcare services for free (Shah et al. 1996b; Goddard & Smith 2001).

1.4.1 Why this research?

There are no adequate studies on nurses' and patients' perceptions in regard to nursing care of patients with T2D in the Middle East and the Gulf Region, including Kuwait.

To date, there are no international studies about patients' and nurses' perceptions of the quality nursing in T2D management.

1.5 Type 2 diabetes care in the UK

In the UK, diabetes care is provided through a multidisciplinary team approach, which has been described as an effective and efficient method for providing diabetes care (Munro et al. 2002). The diabetes healthcare team includes physicians, diabetes nurses, dieticians and podiatrists (NICE 2008; Diabetes UK 2013). A multidisciplinary approach can improve the quality of diabetes care, compared with the individual patient-provider care model (Codispoti et al. 2004). There is continuous development in the healthcare services in T2D care in the UK, to include a broader range of healthcare providers other than merely medical involvement (Vrijhoef et al. 2002; Cuddihy et al. 2011). Effective organisation of diabetes care is an important issue which can help to overcome the rapidly increasing numbers of diabetic patients (IDF 2013).

Recent steps have been taken by policy makers in the UK relating to a service redesign for patients with T2D. Chowdhury and Huda (2016) implemented a strategy for change in managing diabetes. This involved implementing standards of the Diabetes National Service Framework at Tower Hamlets in London. The group works with patients and other stakeholders to develop a model of care based on around enhanced diabetes care in primary care, with specialist care reserved for more complex cases.

Specialist support for primary care clinicians was provided by community-based multidisciplinary team meetings held within each primary care locality (network). Structured programmes for education of patients and health professionals were provided by specialist team. The model was a success, completed care plans rose from 10% to 88% and attendances for retinal screening rose from 72% to 82.8%. Furthermore, data showed significant improvements in inpatient diabetes outcomes.

1.6 Type 2 diabetes care in Kuwait

In Kuwait, T2D care is mainly carried out by general practitioners in primary healthcare clinics (Al-Adsani et al. 2009). In some cases, T2D patients receive care at the hospital clinics under the care of a physician, and in some hospitals care is provided by a nurse with a physician's collaboration. The management of T2D in Kuwait is guided by a national policy established by the Dasman Institute (Al-Taweel et al. 2013), which offers training courses for healthcare providers about managing all types of diabetes. Essentially, T2D care is focused on glycaemic control to reduce the risk of patients developing other health conditions, such as cardiovascular and coronary artery diseases (Lu & Harris 2013) which are the leading causes of death in Kuwait (Al-Taweel et al. 2013). As a result, the IDF suggested the development of the national diabetes programme (Al-Taweel et al. 2013), which initiated the Kuwait Diabetes Care Programme to improve the quality of care available to diabetes patients (Al-Adsani et al. 2008a). Although the programme resulted in improved diabetes care, there are some areas that still need attention, including updating guidelines to ensure good quality T2D care.

1.7 Research question, aims, and objectives

To respond to the gaps within the literature, this qualitative multiple case study has been designed to answer the following research question, as well as addressing the following aims and objectives.

Research question:

To obtain a more complete picture about how nursing practice in the two countries - the UK and Kuwait - is organised and which approach improves patient outcomes the following research question was set:

"How do the different approaches to nurses' roles in diabetes care impact patients' perceived quality of nursing care?"

Research aims:

The aims of this research are:

1. To investigate the actual roles undertaken by nurses in T2D care
2. To investigate the extent to which these different roles affect the quality of nursing care as perceived by T2D patients

3. To investigate/review the guidelines that are used to guide the practice in the provision of diabetes care in the UK and Kuwait
4. To evaluate if nurses are delivering care based on these guidelines

Objectives:

1. To explore the actual role of nurses in diabetes clinics in the UK and Kuwait;
2. To compare what the guidelines offer about the role of a nurse and actual roles of nurses in T2D care within clinics in the UK and Kuwait;
3. To understand how the differences in the guidelines outlining the ideal role of a nurse, and the actual role, impact on patients' perceived quality of nursing care;
4. To identify how aspects of the actual nursing role impact on patients' perceptions of nursing care;
5. To conduct cross-case analysis based on comparison of the two case studies findings.

Through the use of documentary review, interviews and observations the roles of nurses were explored from different perspectives.

1.8 Significance of this study

The significance of this study is that it provides an insight into developing a new system of T2D patient care that could result in patients accessing good quality care. By investigating patients' and nurses' perspectives, this study seeks to provide an in-depth understanding of the influence of the quality of nursing care in managing T2D.

1.9 Thesis overview

This thesis has nine chapters. *Chapter 1* sets the scene by providing introductions to the current study and the research setting, to the successive chapters included in the thesis. Diabetes has been introduced as a major health problem, with T2D being more prevalent than other types of diabetes. Some solutions to overcome the increased numbers of cases of T2D have been outlined, as have the benefits of adopting and developing methods for the management of T2D.

Chapter 2 reviews the literature about the approaches utilised globally in managing T2D and how researchers recognised the importance of empowering

nurses to take important roles in coordinating the care of patients with T2D. Specific attention is paid to methodological issues that arise in the various research reports which have formed the foundations of this study. In the conclusion of chapter 2, identification of research gaps within the current literature are presented.

Chapter 3 presents a review of the T2D treatment guidelines utilised in the two countries of Kuwait and the UK, which included recommendations about T2D care. Chapter 3 presents the process and findings from a review of the local, national and international guidelines specifically published to offer recommendations either for general healthcare providers including nurses, or guidelines that have been specifically designed for nurses working in diabetes care.

Chapter 4 addresses the study's methodology and methods adopted in this research to achieve its aim. The utilisation of a qualitative case study approach is explained and the implications for the study, together with its limitations, are highlighted. Detailed explanations of the process of data analysis were addressed. Ethical considerations are addressed to support trustworthiness of the study. Further, a reflexivity account on the process of collecting data for this thesis is outlined in this chapter.

Chapters 5, 6 and *7* present the findings of the study. Chapters 5 and 6 present the UK and Kuwait case study findings from a series of interviews with patients and nurses and observation of the nurses' roles in patient consultations. Chapter *7* presents the cross-case analysis of the interviews and observations conducted in the two case study sites. It presents the similarities and differences between the themes presented in the previous two chapters. In this chapter, key themes of the study are identified.

Chapter 8 presents the discussion of the key findings of the study. Study findings are discussed under the guidance of the conceptual frameworks which informed this study.

Chapter 9 presents the study's strengths, limitations, recommendations and conclusions. It considers the practical implications of the study findings laying out the benefits identified in each case study regarding improved healthcare systems and patient care. This chapter concludes with recommendations.

Chapter 2: LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the empirical research studies published in peer-reviewed journals on the roles of nurses in caring for patients with T2D. The review will explore the impact of the different role models on patients' perceived quality of nursing care. The first section in this chapter presents the methodology of the review, beginning by explaining the search terms, the inclusion/exclusion criteria and the selection process for the studies reviewed. The process of appraising the evidence and the results of the literature review are presented during this chapter. The last section identifies the gaps in the literature.

2.2 Methodology for the literature review

According to Riege (2003), a literature review must be drawn within a framework that is around the research question. The current systematic approach is outlined and is addressed in the following sections.

2.2.1 Review question

What English language research has been published in peer-reviewed journals on the subject of the role of nurses in diabetes care and the impact of the role on patients' perceived quality of nursing care?

2.2.2 Search strategy

The following key terms were used to identify relevant papers:

1. Role*/duty*/skill*/practice* and
2. Quality care/quality nursing care/nurse*quality/good care and
3. Patient* perception*/patient* perspective*/perceived and
4. Diabetes/diabetes care/type 2 diabetes/diabetes mellitus or
5. Long term condition*/ chronic disease*

The literature search was conducted using the criteria outlined for carrying out a systematic approach to a literature review (Booth et al. 2011). The search for research evidence was undertaken in the following databases: EMBASE, MEDLINE

(ProQuest), OVID, CINAHL, Web of Knowledge (ISI), Web of Science (ISI), British Nursing Index, Centre for Reviews and Dissemination, and Applied Social Sciences Index and Abstracts (ASSCIA). Appendix A, demonstrates the key search terms and search strategy used.

In addition, a hand search in nursing journals was performed to ensure that significant literature was not missed. No restrictions were applied on date of publication or study type. Searches were limited to papers written in the English language. In Kuwait, research in the field of health is conducted in documented in the English language.

2.2.3 Selection of papers

The selection of the relevant papers was informed by the process of including relevant papers from the literature that met the inclusion criteria (Booth et al. 2011). The process of paper selection is illustrated in Figure 1.

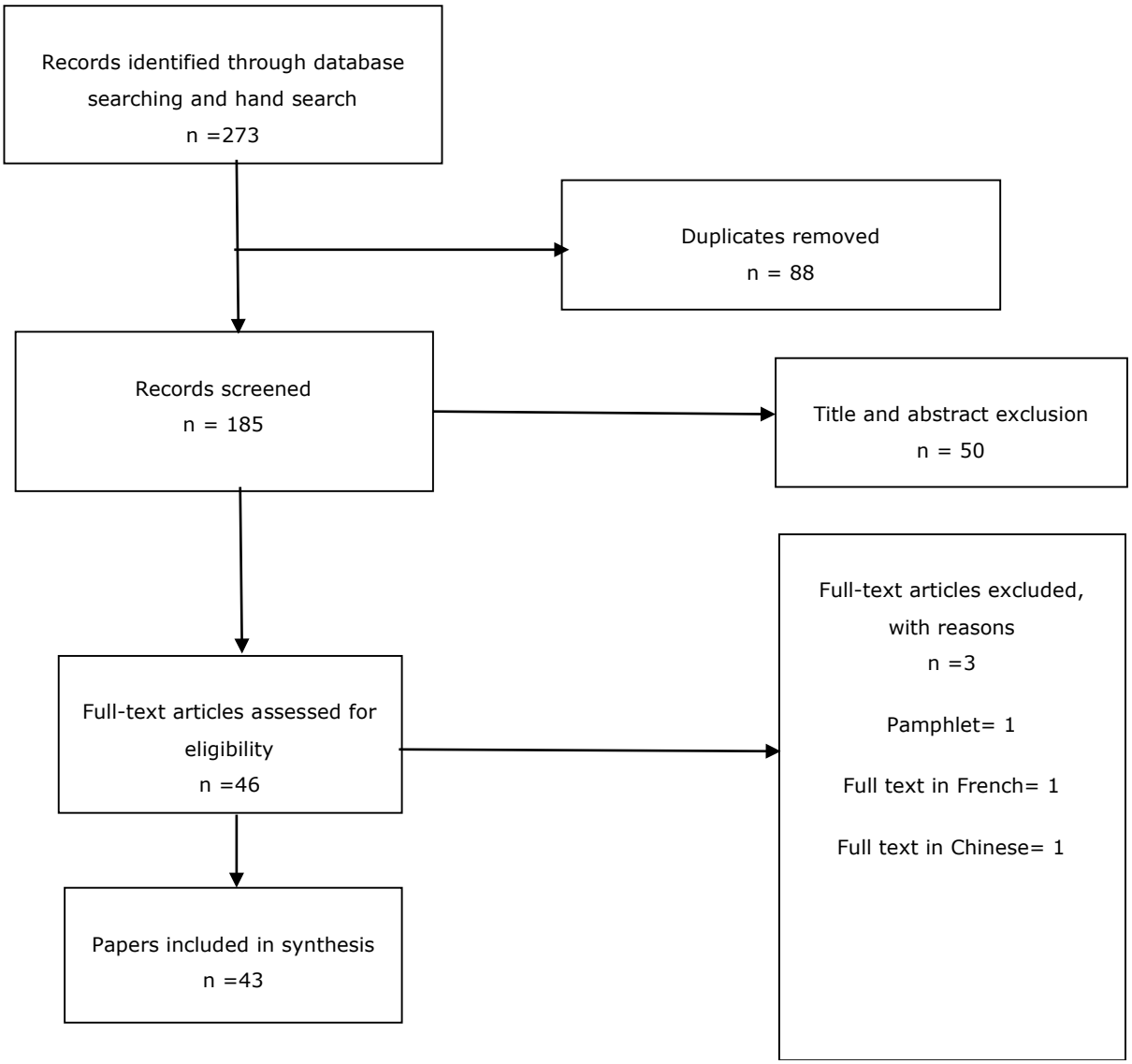


Figure 1: PRISMA flow diagram of the study selection process

2.2.4 Inclusion and exclusion criteria

2.2.4.1 Inclusion criteria

- Papers focussing on the role of nurses and T2D care.
- Papers published in English only.
- Qualitative studies, quantitative studies of any design.

2.2.4.2 Exclusion criteria

- Papers focusing on long term conditions other than T2D.
- Papers focusing on other types of diabetes than T2D.
- Papers including personal opinions or personal case accounts.
- Papers published in languages other than English.

The initial search from the databases found a total of 185 articles identified from the keyword search after identifying and filtering duplicates. Of these articles, 96 papers were finally retrieved and grouped within the Endnote software. After removing non-applicable studies, a total of 43 papers appeared to be significant to the research questions and aim of the study.

2.2.5 Data analysis and synthesis

The selected papers were tabulated in five columns including: references, focus of the study (Aims), study design, quality assessment and comments (See Appendix B) which provides a summary table of all these publications discussed in this chapter. The key themes were identified and papers were arranged accordingly (Booth et al. 2011). Table 2 presents the theme categories that emerged from the literature search. Some papers discussed more than one theme therefore, whilst 61 papers are listed in Table 3 several papers discussed points relating to more than one theme. This thematic analysis approach (Braun and Clarke 2011) helped me in constantly comparing and combining these themes to come up with the seven themes displayed in Table 3. This table 3 shows the largest category of publications to the least category of publication. In fact, these seven themes displayed are critiqued and synthesised in the following sections of the chapter.

Table 2 Themes arising from the literature review

Theme	**No of papers found**
Organisation of T2D care	13
Qualifications, experiences and skills of nurses in T2D care globally, in the UK and in Kuwait	27
Nurses roles in relation to the guidelines- nurses' actual role and guideline-informed role	3
Quality of nursing care in T2D	3
Patients' perceptions of the role of nurses in T2D care	10
Role of nurses - nurses' perceptions	4
Role of nurses in T2D- nurses' perceptions	1

Table 3 is a table of the selected papers according to the outcome themes from the systematic search of the literature including study design, methods and the country where the study was conducted. Papers that investigated the same issue and reported the same findings were grouped together. These findings were then categorised together through constant comparison and engaging with the data and subsequently themes were driven as shown on table 2. It is acknowledged that research of a qualitative nature is prone to frequent debate regarding the value and applicability of quality assessment tools (Hawker and Payne 2002). Whilst agreement on the use of tools has not been reached, the inclusion of standard quality principles was considered appropriate within this literature review in order to support judgments as to the extent to which individual publications might inform the current study. Moreover, a critical approach to address the issues of quality within the current qualitative case study research was seen appropriate (Silverman 2010). This was addressed by reference at intervals, throughout the process, to the Critical Appraisal (CASP) checklist, part of a well-respected suite of quality assessment tools, together with guidance on quality criteria developed specifically for case study approach (Stake 1995; Critical Appraisal Skills Programme 2013).

In fact, in documenting the phases of the literature review process and including a summary table of all the publications included in the literature (See Appendix

B), the current study derives from the systematic approach to the literature (Booth et al 2011) as a means of ensuring transparency.

There was a lack of research in two areas, nurses' perceptions of their roles in T2D care (only one article found) and patients and nurses' perspectives of the different approaches of nurses' role in T2D care (no articles found). Further, a summary of detailed included studies according to the themes extracted from the systematic approach to the literature is displayed in Appendix B.

Table 3 Selected papers according to the outcome themes from the systematic approach to a literature review

Themes / Author		Organisation of T2D	Qualifications, experiences and skills of nurses in T2D care	Nurses role in relation to the guidelines	Quality of nursing in T2D care	Patients' perceptions of the role of nurses in T2D care	The role of nurses-nurses' perspectives	The role of nurses in T2D care- nurses' perspective	Patients and nurses' perspectives of the different approaches of nurse's role in T2D care	Type of study	Country
1	Booth et al. (2013)	X				X				Qualitative	UK
2	Daly et al. (2013)		X							Mixed Methods	New Zealand
3	Elliott et al. (2013)	X								A Survey	Oman
4	Hepworth et al. (2013)		X							Qualitative	Australia
5	Macdonald et al. (2013)					X		X		Qualitative	New Zealand
6	Al-Khawaldeh et al. (2012)	X								Cross sectional	Jordan
7	Boström et al. (2012)						X			Qualitative observational	Sweden
8	Juul et al. (2012)		X		X					Questionnaire	Denmark
9	Peytremann-Bridevaux et al. (2012)					X				Qualitative	Switzerland
10	Shiu et al. (2012)		X							Multiple Case study	Hong Kong

	Themes / Author	Organisation of T2D	Qualifications, experiences and skills of nurses in T2D care	Nurses role in relation to the guidelines	Quality of nursing in T2D care	Patients' perceptions of the role of nurses in T2D care	The role of nurses-nurses' perspectives	The role of nurses in T2D care- nurses' perspective	Patients and nurses' perspectives of the different approaches of nurse's role in T2D care	Type of study	Country
11	Awad et al. (2011)	X								Cross sectional survey	Kuwait
12	Bloomer & Cross (2011)		X	X			X			Qualitative	Australia
13	Houweling et al. (2011)		X		X					RCT	Netherlands
14	Llahana and Hamric (2011)		X							Mixed Methods	UK
15	Partiprajak et al. (2011)					X				Mixed Methods	Thailand
16	Stenner et al. (2011)	X	X			X				Qualitative study	UK
17	Shigaki et al. (2010)	X	X			X				Qualitative	USA
18	Onishi and Kanda (2010)			X						Qualitative	Japan
19	Al-Adsani et al. (2009)	X								Quantitative	Kuwait
20	Houweling et al. (2009)		X	X						RCT	Netherlands
21	James et al. (2009)	X	X							Survey	UK
22	McDowell et al. (2009a)	X								Qualitative	UK
23	Stuckey et al. (2009)		X							RCT	USA

Themes / Author		Organisation of T2D	Qualifications, experiences and skills of nurses in T2D care	Nurses role in relation to the guidelines	Quality of nursing in T2D care	Patients' perceptions of the role of nurses in T2D care	The role of nurses-nurses' perspectives	The role of nurses in T2D care- nurses' perspective	Patients and nurses' perspectives of the different approaches of nurse's role in T2D care	Type of study	Country
24	Al-Adsani et al. (2008a)		X							Mixed methods	Kuwait
25	Moser et al. (2008)	X	X							Qualitative	Netherland
26	Mutea and Baker (2008)		X							Qualitative	Kenya
27	Alquraini et al. (2007)		X							Structured questionnaire	Kuwait
28	Siminerio et al. (2007)	X	X							Cross National	USA
29	Gabbay et al. (2006)				X					RCT	USA
30	Dijkstra et al. (2006)	X	X							Clustered RCT	Netherlands
31	Moser et al. (2006)		X							Qualitative	Netherlands
32	Mrayyan (2006)		X			X				Cross sectional comparative	Jordan
33	Chan & Zang (2007)						X			Correlational survey	Hong Kong
34	Harris and Cracknell (2005)	X	X							Cohort	UK

	Themes / Author	Organisation of T2D	Qualifications, experiences and skills of nurses in T2D care	Nurses role in relation to the guidelines	Quality of nursing in T2D care	Patients' perceptions of the role of nurses in T2D care	The role of nurses-nurses' perspectives	The role of nurses in T2D care- nurses' perspective	Patients and nurses' perspectives of the different approaches of nurse's role in T2D care	Type of study	Country
35	Vijan et al. (2005)	X								Survey questionnaire	USA
36	Wong et al. (2005)					X				RCT	Hong Kong
37	McCabe (2004)	X								Qualitative phenomenology	Ireland
38	Vrijhoef et al. (2002)		X							Comparative	Netherland
39	Peters et al. (2001)		X							Delphi study	UK
40	Vrijhoef et al. (2001a)		X							Non-equivalent control group	Netherland
41	Vrijhoef et al. (2001b)	X	X							Evaluative	Netherland
42	Al-Kandari and Ajao (1998)		X			X				Qualitative	Kuwait
43	Williams (1998)					X				Qualitative	USA

2.3 Organisation of T2D care

Establishing standards of care for diabetes, and consequently accomplishing the care plan, requires certain actions and interventions by both patients and healthcare providers. The most common methods of managing diabetes are lifestyle modifications and injectable and non-injectable therapies (Barag 2011). The ADA encourages people with diabetes to follow a healthy diet, monitor their blood glucose level, partake in physical activities, follow prescribed oral and/or injectable therapies, and control diabetes complications by undergoing annual screening tests (NICE 2008). While these diabetes control factors are evidenced-based, the number of cases of T2D continues to increase worldwide (ADA 2014b). Healthcare providers and policy makers therefore have to develop other management approaches that can improve, control and manage diabetes, including T2D, for instance patient-centred care, patient self-management, and multidisciplinary health teams.

2.3.1 Patient-centred care

A patient-centred care approach is the one that has been developed as a result of patients' wishes to be updated about their health status, to be involved in their plan of care, and to be provided with information about their progress (Anderson & Mangino 2006). Despite previous literature about the difficulties nurses experienced in the application of the patient-centred approach in practice (McCabe 2004), currently patient-centred care has become a recognised approach that is considered as a measure of the quality of the care being provided (Robinson et al. 2008). The ADA underlines a patient-centred approach with its components including patients' preferences, cost and diabetes complications (Inzucchi et al. 2012a). The patient-centred approach was previously known as, and aligned with, holistic healthcare (Epstein & Street 2011), especially in nursing textbooks (Dossey & Keegan 2012). It is a tailored and individualised approach that meets the needs of the individual patient in which the patient feels known, respected, involved, engaged and knowledgeable (Robinson et al. 2008; Epstein & Street 2011). Consideration of these patient-relevant factors would alleviate the patient's concerns resulting from his or her illness (Epstein & Street 2011).

The patient-centred approach is discussed in the literature to evaluate and examine its effectiveness, cost-effectiveness and quality of care improvement. Dijkstra et al. (2006) found that a patient-centred approach showed an

improvement in blood sugar level control from 8.0% (+/- 1.2) to 7.9% (+/- 1.1) in the nurses group, and from 8.1% (+/- 1.2) to 7.8% (+/- 1.2) in the patient group, these differences between groups were statistically significant, ($p<0.0001$). At the same time, data from this 1-year clinical trial showed that HbA1c values changed from 7.9% (+/- 1.1) to 8.1% (+/- 1.25) in the control group. The total lifetime medical costs were EUR 23,250 (+/- 15,938) in the control group, EUR 32,648 (+/- 14,872) in the professional group and EUR 32,870 (+/- 16,020) in the patient group. The higher costs for both experiment groups were mainly due to improved care and longer life expectancy. McCabe (2004) studied the patient-centred approach to find out about nurses' capabilities to communicate with patients, while Robinson et al. (2008) examined the patient-centred approach in relation to patient adherence to the treatment regimen. Robinson et al. (2008) and (Al-Adsani et al. 2008) suggested that patients' involvement in their own plan of care tends to improve their adherence to the treatment regimen of diabetes in the long-term phase. Furthermore, a patient-centred approach improves patient outcomes (Rathert et al. 2013) and it is an essential approach to healthcare (Kvåle & Bondevik 2008).

Patients with T2D continuously need education to enhance their knowledge about managing their condition. A study, which investigated the association between knowledge, diet and self-care among T2D patients revealed a knowledge deficit about diet and self-care, as participants lacked information about the healthy foods recommended for T2D patients (Al-Adsani et al. 2009). In a previous similar study, patients with T2D also needed a structured educational programme tailored to their needs (Al-Adsani et al. 2009). However, since the majority of patients in the study were more than 60 years old, it may be that low levels of knowledge could be associated with age (Trento et al. 2004).

2.3.2 Patient self-management

Healthcare providers, including nurses, are advised to engage people with diabetes in establishing their own plan of care in which patients take responsibility of their own health and lifestyles. Patients are provided with the information about the consequences of not meeting their diabetes treatment goals (Stenner et al. 2011). Diabetes self-management education is considered one of the major factors that contribute to diabetes management, which Lorig and Holman (2003) considered a lifetime daily activity. According to Funnell et al. (2012), diabetes self-management is known as the ongoing process of facilitating

the acquisition of knowledge, skills, and ability necessary for diabetes self-care. There are aspects of diabetes self-management that can be promoted in a number of ways and by various healthcare providers (Zhang et al. 2012). A study conducted by Elliott et al. (2013) in Oman used a questionnaire survey with 309 patients. The study identified that many patients displayed dangerous diabetes self-management and education knowledge gaps and lacked understanding about hypoglycaemia or hyperglycaemia. This study also identified risky interventions undertaken by patients to manage the complications they experienced with their diabetes.

Zhang et al. (2012) explored system barriers to diabetes management and identified those that inhibit healthcare providers from efficiently and effectively managing patients with diabetes. They found that self-management support is important to empower patients with long-term conditions to manage their conditions. The key aim of empowering patients is to enhance patients' adherence to a self-management process (Meetoo & Gopaul 2005). Zhang et al. (2012) suggested that strategies in diabetes management must include a focus on the quality of preventive care measures, including long-term condition management and patient-centred strategies, in order to accomplish the best diabetes management. Patients' risky behaviours can be prevented through patient engagement in prevention, in addition to giving appropriate advice and follow-up at the clinic (Lu & Harris 2013). Educating patients about diabetes care is essential, especially where diabetes can be self-managed. A study by Awad et al. (2011) in Kuwait introduced patient self-management as a successful pathway for improvement of care as an intervention to address the low level of the patients' knowledge about diabetes.

Awad et al. (2011) uncovered the issue about physicians' inabilities to spend sufficient time educating patients about their conditions. It was emphasised in the study that patients were eager to have information about their diabetes and that care was mostly provided by physicians. The literature reported that a patient's level of self-efficacy is connected with improved diabetes outcomes (Al-Khawaldeh et al. 2012). Furthermore healthcare providers including physicians, play a vital role in patients' enhancement of self-management (Coleman & Newton 2005). The literature emphasised that some patients do not follow the treatment plan to manage their diabetes and this failure was found to be related to a lack of support from their healthcare providers (Peytremann-Bridevaux et al. 2012).

However, some people with diabetes struggle with certain basic activities of diabetes self-management; for example Booth et al. (2013) has highlighted the issue of patients struggling with dietary management. In contrast to Booth et al. (2013), Al-Khawaldeh et al. (2012) in their mixed-methods cross-sectional study recruited a convenience sample of 223 patients with T2D and used a structured interview and questionnaire to measure patient self-efficacy and self-management ability. Their findings reported that patients who have a high level of dietary behaviour control are better at controlling their HbA1C than those taking insulin. Despite the importance of patient encouragement to self-manage their diabetes, Al-Khawaldeh et al. (2012) indicated that the quantity and quality of the educational programmes provided for patients with diabetes were not enough to help patients to control their glycaemic level. This might be related to other factors such as patients feeling overwhelmed with activities related to self-management of their diabetes.

Mays and Pope (2000) argued that in order to gain an in-depth knowledge about the truth in the area of research, it is important for the research design to incorporate a wide range of different perspectives. Booth et al. (2013) conducted qualitative studies using structured interviews with healthcare professionals and focus groups with 16 patients on issues about a particular issue of self-management programme. The study findings showed that changing habits and lifestyle, in addition to the lack of knowledge about living with diabetes, are considerable barriers to physical activities for newly diagnosed patients with T2D. Booth et al. (2013), in their focus group study in the UK, explored patients' experiences about self-management programmes and found that people actually do not have the motivation to perform physical activity. Patients did not comply with self-management interventions which involving lifestyle modifications (Booth et al. 2013), which Haynes et al (2008) considered as encouraging non-adherence to a care plan. Peytremann-Bridevaux et al. (2012) conducted focus groups among patients with diabetes and healthcare professionals to explore their opinions about diabetes self-management programmes. Interestingly, findings from their study indicated a lack of communication and collaboration between healthcare providers, which reflected patients' low ability to self-manage their conditions. Mutea and Baker (2008) related patients' lack of ability to self-care for their diabetes to nurses needing more education in diabetes care. Another factor reported was patients' insufficient knowledge and lack of support to engage in self-management programmes. This study was based on factors that promoted and inhibited the caring for people with diabetes by 15 Kenyan nurses.

Vijan et al. (2005) added that patients' non-adherence, as with patients' adherence, is independently correlated with patients' perceptions of their treatment. Whilst patients prefer the nurse to make decisions about suitable choices of their diabetes management care (Stenner et al. 2011), those same patients often have concerns regarding their fear of insulin injections or hypoglycaemia (Funnell et al. 2004). Other patients sometimes view treatment of their diabetes as a workload (Wolever et al. 2010), and sometimes become unable to self-manage their condition, as a result of the number of activities they have to carry out in order to maintain their health; clearly a counter-productive situation. For instance, Wabe et al. (2011) described patients' non-adherence to be a result of increased burdens for them such as taking their own prescribed medications and insulin. Vijan et al. (2005) used a survey questionnaire with T2D patients to examine their views on the burden of diabetes therapy, and adherence to self-management. Adherence to self-management was considered burdensome; however, adherence to medication was found to be high. In their study, Misra & Lager (2009) found that differences in patients' acceptance of diabetes and therefore self-management of the disease were more pronounced by gender than by ethnicity, which could explain the findings of Vijan et al. (2005), as 89% of participants in their study were men.

2.3.3 Multidisciplinary health teams

Zitkus (2012) advises that the concept of multidisciplinary health teams is appropriate in diabetes management. The literature supports the concept that a teamwork approach is a critical component in quality of care (Leonard et al. 2004). Wagner et al. (1996) suggested that organised healthcare systems that include multidisciplinary work indicate a significant role in the success of a practice. Furthermore, they suggested that multidisciplinary teamwork targeting patients with long-term conditions, leads to improved health outcomes. A contemporary report by the IOM considers the value of successful teamwork and suggests this could lead to improved patient outcomes (Mitchell et al. 2012). Nancarrow et al. (2013) conducted an empirical study of an interdisciplinary centre to investigate the efficacy of teams in professional practice. They explored the lack of understanding about the meaning of interdisciplinary teamwork and its relationship to patient care. Nancarrow et al. (2013) found that participants did not know whether interdisciplinary teamwork is similar or different to a teamwork approach. Therefore, Nancarrow et al. (2013) presented ten features underpinning effective interdisciplinary teamwork; with the proviso that a lack of

any one of these features may cause failure; (1) positive leadership and management attributes, (2) communication strategies and structures, (3) personal rewards, training and development, (4) appropriate resources and procedures, (5) appropriate skills mix, (6) improving work climate, (7) individual characteristics that support interdisciplinary teamwork, (8) clarity of vision, (9) quality and outcomes, and (10) respecting and understanding roles.

This study by Nancarrow et al. (2013) was an extension of a large project that included a systematic review about the effective role of interdisciplinary teamwork on patients' outcomes. Whilst the study was conducted among rehabilitation and intermediate care teams, the study did not specify the exact area of interdisciplinary practice where it took place. Additionally, the authors did not mention whether it was hospital-based, clinic-based or home-based care. Furthermore, the authors in the study did not classify each individual staff role in the interdisciplinary team or whether nurses or other healthcare team members were active participants.

2.3.3.1 Multidisciplinary healthcare teams in T2D care

Diabetes care can be efficient if provided through a multidisciplinary teamwork approach in which each member of the team has different perspectives and views regarding the management of diabetes (Mitchell et al. 2012). This approach has been suggested in published guidelines for diabetes care, such as those from the ADA (2013). Literature has directed its focus towards multidisciplinary healthcare teams in diabetes care (Lipsky et al. 2012). Shiu et al. (2012) identified that doctors considered nurses' advanced role practices as being fundamental in encouraging collaborative team-work attitudes in the development of multidisciplinary teams.

Parekh et al. (2015) evaluated educational programmes in diabetes care that were developed to strengthen communication between primary care networks and to support best practice for patients with diabetes. The study results suggested that educational programmes would potentially increase the effectiveness of the multidisciplinary practice if they incorporated face-to-face training, which should include a mix of healthcare professionals. This mix would allow for interactions between healthcare professionals which would enhance the multidisciplinary teamwork approach; however, the programmes were standardised and not tailored to each participant's interests and according to his/her speciality in diabetes care.

The multidisciplinary teamwork approach was mentioned repeatedly in the ADA standards for managing diabetes (ADA 2003, 2010) which probably results in enabling members of healthcare teams to share common goals in diabetes management. This approach resulted in effective collaboration between healthcare members; for instance, in terms of work distribution and work boundaries (Gask 2005).

2.3.3.2 Collaborative care/integrated care in T2D

Collaborative teamwork could improve diabetes as well as other health conditions. The literature indicates successful improvement in patients with T2D care by the employment of integrated care including a nurse as an active member in the health team (Houweling et al. 2011; Sieber et al. 2012; Daly et al. 2013; Hepworth et al. 2013). Stuckey et al. (2009) however, indicated that the diabetes nurse's role is perceived as that of coordinating the programme and/or assisting in many aspects of self-management in the continuum of diabetes and interrelated disorders. In the Stuckey et al. (2009) study, diabetes nurses were integrated into the primary care setting to work as nurse case-managers of patients with T2D. The study indicated that physicians lacked time to manage diabetes care and lacked adherence to diabetes guidelines. Therefore, nurses could take up the role in patient care and spend more time with patients on self-management education. The results of the study indicated that integrated care is evidence-based care that enhances health providers' interactions and patients' outcomes. Though the population of the study was clearly identified, the interventions provided were not explained in great detail. There was a deficiency of information when comparing outcomes for patients in the intervention group and patients in the comparison group.

Vrijhoef et al. (2002) conducted a study to assess the outcome of care for patients, referred by GPs, to diabetes nurses. The study revealed that patients' clinical outcomes such as their HbA1c levels improved. Although, there was no change in quality of life, the study confirmed the effective role of nurses in diabetes care, as indicated by high levels of patient satisfaction. Though the study reported average change scores for each patient (pre-intervention HbA1c and post-intervention HbA1c) accompanied by a value for the standard deviation of the change score, this study did not describe all the tasks performed by the nurse towards the patient or the physician's role or reasons for referring patients to the nurses in each interventional phase. This study used a pretest-posttest design, therefore we cannot exclude selection and allocation bias, therefore a

randomised controlled design could be a better option. Furthermore, the authors highlighted the high level of patient satisfaction without describing the elements contributing to this outcome. In another study, high levels of patient satisfaction were correlated with nursing care by defining patient satisfaction and explaining the professional skills of nurses to establish high levels of patient satisfaction (Mrayyan 2006).

Plans and treatment goals in the medical model often neglect patients, such as diabetes patients with multiple needs (Post et al. 2000). As a result, the medical model can lead to conflict between patients with diabetes, who also have other needs. Healthcare providers, doctors mainly, focus on pharmacological management, thereby accidently ignoring patients' other needs such as psychological needs (Meetoo & Gopaul 2005). In a descriptive, exploratory qualitative study, Moser et al. (2008) used in depth interviews and reported an empirically grounded conceptualisation of self-management in the context of autonomy of patient with T2D. Diabetes patients were allocated one of three pathways: i) physicians to meet patients with complicated health conditions, ii) nurses provide basic daily care of diabetes, and iii) special diabetes nurses who play an intermediate role between medical specialists and GPs. In this study by Moser et al. (2008), nurses were the main healthcare providers in undertaking both medical and nursing roles, where they followed agreed guidelines and protocols. Nurses in the study were undertaking the main tasks. They were supposed to organise and coordinate care, including physicians' roles; however, this aspect of the situation was not appropriately addressed. The study concluded that patient support by diabetes nurses is important in the patient self-management approach.

Looking at the US part of the DAWN study (Siminerio et al. 2007), the most common differences between nurses and physicians were that nurses were better at providing patients with health education, spending more time with them, and were better listeners and who understood their patients' needs, when compared to the physicians. Nurses reported that they were undertaking more active roles, which are advanced in patient self-management and medication adherence. The DAWN study was a cross-sectional international survey initiated in 2001 by Novo Nordisk in collaboration with the IDF and conducted in 13 countries. The purpose of the survey was to identify a broad set of diabetes attitudes, wishes, and needs (DAWN) among both people with diabetes and care providers to lay a foundation for efforts to improve diabetes care both nationally and internationally. A number

of findings were reported, however in the context of this present study a significant finding was that specialist nurses functioned at a more advanced level, and were reported as taking a more active role in self-management and medication management than generalist nurses' (Siminerio et al. 2007).

2.4 Qualifications, experiences and skills of nurses in T2D care

In order to find out about the relationship between the nurses' interventions and patient outcomes, Doran et al. (2002) conducted a cross-sectional study to collect data on structure, process and outcome variables to depict the Nurse Role Effectiveness Model (NREM). Nurse structural variables included education preparation and length of hospital service. Findings suggest that educational level and years of experience are fundamental attributes in a nurse's role performance, which in turn contributes to patient outcomes. Daly et al. (2013), suggested that diabetes nurses (DNs) are self-defined in that they have completed a variety of courses in diabetes and have proficient knowledge and skills in diabetes; however, this does not necessarily mean that they have completed formal registration. This outcome was found to impact on nurses feeling undervalued, especially in terms of having few administrative facilities including not having access to the internet.

These findings are similar to previous literature which emphasised the importance of establishing post-registration specialisations to practice, such as DNs (Daly & Carnwell 2003; Robinson & Griffiths 2007). Nurses provide patient support through patient education and providing information about diabetes, self-management, being accessible, communication skills and lifestyle changes (Peters et al. 2001). There are four key roles nurses perform in diabetes care: i) health promotion, ii) disease prevention, iii) patient care, and iv) facilitating patient adherence to care (Aalaa et al. 2012). Currently, nurses have different roles and responsibilities in order to accomplish these key roles, such as nurse-led diabetes care, nurse consultant, nurse case management and a range of job titles, including 'diabetes nurse' (Vijan et al.), diabetes specialist nurse (DSN) and nurse practitioner (Peters et al. 2001; Daly & Carnwell 2003; James et al. 2009; Freeland et al. 2011). Nurses' knowledge and skills regarding the provision of health education about diabetes are important (Chan & Zang 2007); those knowledge and skills originate from what they have learned during their education, then later during their clinical practice, and their life experience (Barnard & Nash 2005).

2.4.1 Nurses' knowledge and skills in T2D care in the UK

In the UK, there are advanced roles for nurses such as 'nurse consultant', allowing them a higher level of autonomy in certain aspects of care planning and decision-making (Aiken et al. 2011). This advanced role was established to provide better patient care by improving services and the quality of nursing care (Avery & Butler 2008; Hill 2008), an initiative which indicates the potential benefits of assigning nurses to coordinate diabetes care.

James et al. (2009) conducted a national study in the UK about the changes of the diabetes nurses' role from 2000-2007. They reported that the nurses' role has become more advanced, where nurses were increasingly involved in prescribing and managing medications for patients with diabetes. Though Llahana and Hamric (2011) disagreed with James et al. (2009) regarding the worry nurses expressed in which they might become stressed about the advances of their roles and the added responsibilities that went with them. Llahana and Hamric (2011) looked at the role development of specialised diabetes nurses in the UK and the challenges faced by those nurses during the process of that development. The majority of the participants reported shortages of staff, work overload, and lack of support and understanding of the role by their management organisations and other healthcare professionals. However, the incongruence of role expectations between diabetes nurses and other healthcare professionals was considered the prevailing factor.

Indeed, nurses' advanced roles, particularly in diabetes care, can provide nurses with the capability of practicing autonomy within the profession. Similarly, Harris and Cracknell (2005) highlighted the successful achievements of nurse-led clinics among patients with T2D. Their findings revealed that nurse-led clinics provided more individualised care with planned follow-up slots, compared to clinics led by GPs. There was a remarkable improvement in diabetes control in the nurse-led clinics, indicated by controlled blood pressure and HbA1C levels among patients. This could be related to the nurses' adherence to the guidelines; behaviour which is known to improve patients' outcomes (Houweling et al. 2011).

The studies above have highlighted the advanced and effective roles nurses perform in T2D care in the UK. These roles are extended in some approaches and more advanced in others, in which it is nurses who lead diabetes clinics. This 'elevation' demonstrates an on-going review process of the role of nurses in the UK, which is evolving and in transition.

2.4.2 Nurses' knowledge and skills in T2D care in Kuwait

Comparatively, the role of nurses in Kuwait is not well documented (Al-Kandari & Thomas 2009), and this is the same in other Arab countries, such as Bahrain (Al-Gasseer et al. 2003). Although, there are hard copies of general job descriptions for nurses at the Ministry of Health (MoH), these roles are relatively vague as the details are not clearly described. Presently, nurses work collaboratively with other healthcare professionals to ensure that appropriate standards of care are met (Al-Kandari & Ogundeyin 1998). According to the Department of Nursing Services (DoNS) at the MoH, the main role of nurses in Kuwait is to care for patients suffering from different diseases until recovery (Al-Mailam 2005). They support patients with care planning and carrying out different evaluations and procedures ordered by attending physicians, while managing the patient's recovery and assuring continuity of care. Nurses in Kuwait have also demonstrated a great deal of dedication to service. For instance, during the Iraqi invasion of Kuwait in 1990, nurses did not stop providing care to patients with long-term conditions, including diabetes. At that time, due to a shortage of nurses, some nurses accepted to work 24-hour shifts followed by 48-hour break (Baggs 1991), indicating their strong commitment to caring for the sick under extremely challenging circumstances.

In fact, the standard of care nurses practice in Kuwait is driven by the application of the nursing process regarding chronic care conditions, including assessment, planning, implementation, and evaluating outcomes of nursing care (Al-Kandari & Ogundeyin 1998). It is important that nurses have a wide professional knowledge, even taking a role in new technologies (Al-Jarrallah et al. 2009); however, there are other emerging health needs that require the involvement of nurses. For instance, it is reported that the number of patients with diabetes in Kuwait is increasing (Al-Adsani et al. 2009), which causes other consequences, such as the increasing use of health care services which, in turn, creates a need for more strategies to manage these increases.

The literature suggests that appropriately trained nurses are perceived as high-quality care providers who can maintain good health outcomes for patients (Laurant et al. 2005). There are four levels of basic nurse education in Kuwait: (1) a three to four-year education programme, which follows intermediate school education (after grade 8). At this level, the student is granted a nursing diploma and the title of 'assistant nurse' after graduation; (2) a two-year education programme, following high school education, whereby the student is granted an

Associate Degree in Nursing (ADN) and the title of 'staff nurse'; (3) a four-year BSN programme, which follows high school, whereby the student is granted 'special nurse' status, and (4) a post-basic programme, which comes after the diploma, whereby the student is granted a Bachelors degree after graduation.

The nurses working in diabetes care in Kuwait received training in a specialised training centre in the Kuwait - Dasman Institute. This institute works in partnership with highly qualified personnel from developed countries, who provide training and education for multidisciplinary healthcare providers, including nurses (AlHuwail & Barnes 2011; Behbehani 2014). From personal experience, there are nurses in Kuwait who have received training and international courses about diabetes in Egypt and the UAE and have received certificates as qualified diabetes educators; however, these are not approved by the MoH in Kuwait.

In Kuwait, diabetes nursing as a specialty has not yet been established. Whilst nursing care for people with diabetes is provided by qualified nurses trained by qualified personnel from both Kuwait and abroad, these nurses are not given a grade or a title which specifies their role. This situation is contrary to the international vision, where titles for nurses working in diabetes care vary between countries. Examples of these titles are: nurses' educator, diabetes specialist nurse, and diabetes nurse, based on their duty caseloads (Funnell et al. 2009). From personal experience as a nurse instructor, nurses demonstrate great contributions in diabetes clinics and are considered leaders in the practice of their specialities. Raja-Jones (2002) conducted a literature review to identify factors relating to the role components between two groups of nurses (clinical nurse specialist and clinical nurse researcher). She found that nurses can plan and make decisions about care provision for the patients Nurses follow particular standards of care, achieve comparable outcomes, such as similar decision-making skills, to those achieved by GPs (Raja-Jones 2002). However this literature review, the review failed to provide any useful detail about the relationship between clinical and research specialist nurses in terms of role workload and role boundaries which indicates the need for further research in this area.

Nurses in Kuwait perform a significant role in collaborating with other healthcare professionals (Al-Jarrallah et al. 2009), which might be more than the role informed by the guidelines. This issue has been addressed in the literature, in that nurses are doing work that is not part of their expected role (Raja-Jones 2002; Lu et al. 2008). These activities have not been endorsed to ensure

effectiveness. Thus, nurses' roles, including their role in diabetes care, are undervalued in Kuwait as indicated by the limited support from the public (Al-Enezi et al. 2009). In a qualitative study to describe the problems of recruiting and retaining student nurses in Kuwait, Al-Kandari and Ajao (1998) conducted interviews with a convenience sample of 54 respondents made up of n= 25 final year high school students, n=20 adults from the community and n=9 nursing students who dropped out of the program. A comparative analysis of the data from the three groups was used. Constant comparative analysis yielded one major societal proposition on which the recruitment and retention behaviors are anchored. Findings show that nursing in Kuwait is a low status and non-respected profession. They conclude that this is the result of a lack of support and lack of information about the nursing profession. In order to support the role of nurses, Llahana and Hamric (2011) suggest that the role of diabetes nurses must be well defined and clearly written to precisely state what diabetes nurses are actually providing in diabetes care. Despite Llahana and Hamric's claim, there is lack of information about the nursing profession in Kuwait (Al-Kandari & Ajao 1998).

Furthermore, the nursing profession in Kuwait is not attractive to Kuwaiti nationals (Al-Kandari & Thomas 2008) as a result of the uncertainty of the role, lack of clarity about the role, and limited support from the public for the profession. The WHO identified the health human resource profile in Kuwait as 11% Kuwaiti nurses and 40% Kuwaiti doctors (WHO 2011). If the healthcare system in Kuwait seeks to achieve quality of care, in order to improve the health of patients with diabetes, then nurses with unique skills will be needed. In fact, if nurses' roles in diabetes clinics could be extended, patients might benefit (Vrijhoef et al. 2002). An audit study was conducted to measure the quality of diabetes care in Kuwait, by reviewing the administrative structure at selected clinics in the country (Al-Adsani et al. 2008). This structure included the diabetic nurse educator as part of the health team who works on the provision of structured education/ treatment programmes for patients with diabetes. The study concluded that there was a need for further improvements in the quality of diabetes care that could be achieved by structured education programmes.

2.5 Nurses' role in relation to the guidelines

In some healthcare systems, nurses seem to experience confusion related to their expected role(s) and actual role(s) regarding diabetes care in terms of what to perform based on specific guidelines and what not to perform as being beyond

their scope of practice. Onishi and Kanda (2010) recruited nine nurses in their qualitative study. They used focus groups to explore: the expected roles of nurses in Japan and nurse administrators' experience-based management strategies for effective implementation of these roles. Onishi and Kanda (2010) found that nurses are expected to carry out three major roles: (1) facilitating the general nurses' learning, (2) monitoring and improving the standards of care, and (3) creating new roles in nursing career. They found that these roles were enhanced as a result of two main factors adopted by their managers to help nurses fulfil their expected roles. These factors were: (1) enhancing nurses' influences by nurses gaining organisational recognition, though this was a concern for some nurses because they had a lack of identity about their own role and (2) motivation in practice by means of rewards from their organisation.

Whilst nurses' titles were based on their advanced role(s) and characterised by having autonomy in practice, some nurses reported their concerns about lack of performance appraisals and conflicts about the distribution of roles between nurses with different specialisations and other professionals. There was a lack of a specific performance appraisal system for nurses, which resulted in many nurses performing heavy workloads. However, the Onishi and Kanda (2010) study has a limitation. The researchers conducted three focus groups of three nurses in each group. Although, it is beneficial to have small numbers of individuals in a focus group, Krueger (1997) advises to have between six and eight participants to gain a variety of perspectives; therefore, arguably three is too small a number.

The seminal work of Juul et al. (2012) assessed whether nurses' involvement in general practices of T2D care was associated with better adherence to national guidelines in T2D care. Another study showed that nurses working in diabetes care, following national guidelines (Dutch College of General Practitioners and Dutch Diabetes Federation), were able to provide effective T2D care for patients (Houweling et al. 2009). This study by Houweling et al. (2009) identified the main outcome as patient satisfaction about the care provided by nurses compared with the care provided by GPs (Houweling et al. 2009; Houweling et al. 2011). Both groups HbA1c, cholesterol, LDL and HDL levels were significantly improved though they were significantly better in the nurse group (Houweling et al. 2009). One of the recommendations in the Dutch national guidelines was the obligation for patients to attend GP consultations. This resulted in decreased numbers of patient visits in the intervention group with nurses. Most patients in the study switched to insulin therapy but the reason for that was not mentioned. In fact,

there are beneficial factors for switching patients from oral to injectable therapies, as recommended in some of the guidelines (ADA 2003; IDF 2014), as well as by the CDCP. This recommendation applies especially to patients with T2D, as they have other diseases associated with age (CDCP 2011).

It is worth noting here that the studies by Juul et al. (2012) and Houweling et al. (2009), which included two groups of patients, reported that nurses were increasingly providing most of the care for diabetes patients. However, T2D patients without complications also received care from nurses. Nurses in the study were following the guidelines which provided them with information about the dose of medication to lower cholesterol levels. GPs were prescribing medication for cholesterol without following any guidelines but were informed by their biomedical information. The findings showed that nurses following the guidelines achieved similar results to the group led by GPs (Houweling et al. 2009).

Much of the literature has highlighted the importance of nurses following guidelines that provide effective services to enhance the promotion of patient care (Aalaa et al. 2012). However, some nurses found it difficult to follow the guidelines during daily work because they did not know if the guidelines were regularly used in practice (Onishi & Kanda 2010). This lack of literature in the area of exploring what nurses actually do in real practice, and what has been recommended or publicised in the guidelines about the role of nurses in diabetes care, indicates the need for research in this area in order to improve the quality of nursing practices in diabetes care.

2.5.1 Nurse-led role in diabetes care (nurse extended role)

Shortages of healthcare providers led policy makers in healthcare systems to extend the role of nurses (Naylor & Kurtzman 2010). Nurse-led care has been shown to improve patients' outcomes (Peeples & Seley 2007) as they can safely coordinate and lead diabetes care (Vrijhoef et al. 2001a; Wong et al. 2005; den Engelsen et al. 2009; Partiprajak et al. 2011). Nurses' advanced roles were established, in order to provide ongoing support for people living with diabetes (James et al. 2009). In general, improved care is highly related to nurses' skills in communication, work coordination, and inter-professional relationships (Onishi & Kanda 2010). A nurse's role is an evolving process which indicates the need to be constantly updated to be able to handle new and extended roles (Currie et al. 2009).

In Hong Kong, Shiu et al. (2012) conducted a multiple case study which included observations and interviews to explore the development of expanding advanced nursing practice in nurse-led clinics. The study found that the advanced role of nurses contributed to better patient outcomes and cost-effectiveness of services. This result was analysed when the cost of specialised nurses was annually calculated, though nurses were performing some clerical roles by arranging patients' appointments alongside their more specialised roles. The study suggested a policy to implement nurse-led clinics to conduct consultations, medication reviews, condition assessments, and advice on lifestyle modifications.

Furthermore, in Sweden, Bergman et al. (2013) studied patient satisfaction about nurse-led advanced roles and found overall high levels of patient satisfaction in areas such as professional treatment and competency of nurses as indicated in patients' reports about increased nurse availability and continuity in healthcare. However, most of the patients in Bergman et al. (2013) study who reported high levels of satisfaction were informed prior to consultations about the advanced role of nurses, which may have influenced the study's results.

In Thailand, Partiprajak et al. (2011) compared patients who attended a nurse-led group and patients who did not attend such a group, and found that members of the nurse-led group had higher levels of satisfaction with the care received, indicated by improved healthcare outcomes compared to patients who did not attend. Partiprajak et al. (2011) mixed method study identified the roles nurses undertook in the nurse-led group which were: monitoring and managing health problems, facilitating group exercises, providing self-management education, collaborating with multidisciplinary team members, establishing continuity of care and holistic care services, and consulting with patients and healthcare providers. The study concluded that the nurses were in a position to lead and coordinate diabetes care and support diabetes patients by continuity of care.

Diabetes care services in the UK have been derived from multiple guidelines designed to provide standards for diabetes care, for instance the NICE guidelines (Home et al. 2008). There has been a debate about whether the UK follows its own guidelines, such as the NICE, Nurse Competency Framework, or others coming from the UK diabetes management standards. However, it has been shown that some counties in the UK use other models of care which fit within the practices of diabetes care. For instance, the Kaiser Permanente Model (KPM) was suitable to establish a nurse consultant model in Birmingham-UK; the main principle of this model is to have the right person in the right place at the right

time (Hill (2008). This exchange of models between countries contributes to the debate about whether or not the UK uses other models or guidelines in managing diabetes. The UK adoption of other models of care from other countries indicates that the UK, as in Kuwait, has adopted international guidelines; a move which is probably related to the fact that they include more advanced roles in diabetes care that such guidelines include more advanced roles in diabetes care that can be performed by 'nurse consultants'. The Kaiser Permanente system is designed for medical staff (Hill 2008), which might indicate that the UK is advancing the role of nurses in diabetes care to become similar to the roles currently filled by doctors.

2.5.1.1 Nurse in consultation role

Nurses' contributions in diabetes care provoke healthcare system workforces to initiate advanced roles for nurses, as nurses have proved their abilities to guide and coordinate diabetes care in many situations on many occasions (Carey & Courtenay 2007). The views of Carey and Courtenay (2007) were later explored by Edwall et al. (2010) through in-depth interviews among patients with T2D to explore their experiences of consultations with diabetes nurses. The study concluded that patients rely on diabetes nurses for support in times of their critical needs. This study effectively described the meaning of consultation from the patient's perspective as being guided, open, relaxed, and prepared to self-manage diabetes, as patients described these factors as part of learning about dealing with diabetes.

The nurses perceived their role in consultations as complex and diverse. Bloomer and Cross (2011) suggested that nurses can challenge the existing practice and guide future directions in care delivery for diabetes. However, the availability in the role emphasises that organisational agreement of the role, scope and purpose of the nurse's role in consultation have not yet acknowledged, resulting in lack of support systems, and an underutilisation of the nurse's role as a leader in consultations (Bloomer & Cross 2011).

In the UK, there has been a move towards advancing the role of nurses working in diabetes care as nurses have proved their qualifications enabled them to become nurse consultants in diabetes care (James et al. 2009). Nurses are considered as the frontline personnel to provide patients with direct and expert diabetes care (Hill 2008). In fact, nurses, beside their basic roles in diabetes care, contribute to

providing patients with effective consultations in which patients experience positive outcomes regarding their diabetes (Edwall et al. 2010).

A qualitative study using interviews, conducted in the UK among patients who attend consultations with nurses (Stenner et al. 2011), suggested that nurses frequently considered nursing values during communicating with their patients. Nurses reported that they provided patient-centred care and this motivated those to use different consultation styles, compared to the traditional consultation conducted by doctors. Patients in the Stenner study reported nurses' tendencies to broaden the consultation time to involve other issues including lifestyle and health. This action by nurses might impact on their consultation time with other patients, as nurses have limited working hours (Casey 2007) and each patient has an appointment. This suggests that the study by Stenner et al. (2011) should have included nurses, as the nurses' views are considered an important care-relevant factor, especially when workload is an issue, as identified in previous studies (Aiken et al. 2002; Al-Kandari & Thomas 2009b).

2.5.1.2 Nurse prescriber

The ADA recommends that patients with diabetes need to adopt strategies in lifestyle changes, including diet and exercise, as an initial stage for managing their diabetes (ADA 2013). Nurses have demonstrated their capabilities to play a vital role in providing patients with proper education about their conditions (Stenner et al. 2011) including medication advice (Courtenay et al. 2010). Therefore, if the strategies referred to above are not successful, patients would need to move to a combination therapy, in which they would need to change their medication (Bartol 2012).

Despite the contributions mentioned in this literature about nurses' advanced and specialist roles in different areas of diabetes care, the literature has indicated that nurses have insufficient pharmacological knowledge to enable them to prescribe resulting in nurses' lack of confidence to do any prescribing (Offredy et al. 2008). In contrast Courtenay et al. (2007b) argued that one of the reasons to establish a nurse prescriber programme in the UK is the insufficient pharmacological education received by patients. As a result Courtenay et al. (2007a), in an earlier study, proposed a change in the policy of nurse prescribing, treatment regimen of diseases, and pharmacological factors. Consequently, research moved toward introducing nurse prescribers in the field of diabetes. Carey and Courtenay (2010) advised employing nurse prescribers and used the term 'non-medical prescribing'

to mean nurses and other non-medical professionals who, once they completed an approved programme of education, would have the authority to prescribe for patients. Courtenay et al. (2007b) however, introduced the nurse prescriber role as a 'supplementary' role in which prescribing takes place after performing basic tasks such as assessment and diagnosis and after a medical regimen has been drawn up for the patient. Combining nurses' skills and experience with prescribing can result in the individual's increased knowledge about medication (Courtenay et al. 2010).

Courtenay et al. (2007b) conducted a study across six wards in UK general hospitals to evaluate the outcomes that occurred after the interventions of nurse prescriber incidences. They found that nurse prescriber intervention reduced prescribing errors and this was found to impact positively on the length of a patient's stay in hospital. Though the study lacked significant statistical results after the nurse prescriber intervention, the study reported the cost-effective benefit of the nurse prescriber role. However, this outcome was limited to the study, as only one nurse participated in the study. Whilst a previous study by Peters et al. (2001) did not support the nurse prescriber role; the participant nurse believed in their capability to prescribe, which could have a positive implication on the outcomes for patients with T2D.

These reviewed studies have demonstrated evidence of the effective role of nurses who could be actively involved, direct and lead the care of patients with T2D by being an accessible, supportive, and knowledgeable healthcare provider.

2.6 Quality of nursing care in T2D care

Quality of care is considered a hard concept to define. Donabedian (1966) introduced 'quality of care' as an issue perceived from different individuals' perspectives, which made it a multidimensional concept (Campbell et al. 2000). According to the literature, there are dimensions of quality care including accessibility, effectiveness, efficiency (Campbell et al. 2000; Kelley & Hurst 2006), continuity of care (Van Servellen et al. 2006) and patients' perspectives (Lu & Harris 2013). Campbell et al. (2000 p. 1614) proposed a definition of quality of care for individuals as: "whether individuals can access the health structures and processes of care which they need and whether the care received is effective."

The number of patients with diabetes is increasing, which highlights the importance of providing high quality care (Boström et al. 2012). Most of the

literature, regardless of specification of the items of quality care, report improved patient care and better outcomes (Mrayyan 2006; Stenner et al. 2011), when nurses are providing a large part of this care (Irvine Doran et al. 2001; Aiken et al. 2002). In their study to examine the outcomes of assigning diabetes care from GPs to nurses in primary care, Houweling et al. (2011) revealed that the majority of the patients' blood pressure, glucose, and lipid levels were well regulated. Additionally, patients in the nurse group were found to be more pleased about the method of care they received, than the patients in the GPs group.

A key finding in the study was that patients who were allocated to the nurse group became more aware about the long-term complications of T2D (Houweling et al. 2011). This finding possibly indicates that nurses in the study spent more time with patients and had more frequent visits than those assigned to the GPs. A similar finding was observed by Gabbay et al. (2006) relating to the impact of nurse case management on blood pressure, HbA1C, and screening for diabetes complications, when compared to GP management. The nurse case management programme was found to achieve significant diabetes treatment goals, if and when quality nursing care was provided. Additionally, the programme developed an individualised care plan, behavioural goal setting, close observation of patients, and strengthening of healthy lifestyle modifications.

Several authors have confirmed that nurses play a key role in ensuring quality in patient care (Bodenheimer et al. 2005; Zhao et al. 2009; Heale & Pilon 2012) as nurses can work independently to improve the general quality of care on offer (Horrocks et al. 2002) and specifically in diabetes (den Engelsen et al. 2009). In an attempt to define the concepts of quality of care, Jackson-Frankl (1990) recruited nurses from different levels and signposted the intimate relationship between quality of care and quality of nursing care. In addition, Attree (1993) identified nurses as great contributors to quality. Essentially, there is a need for more reliable measures about the quality of nursing care and that challenge seems to be difficult to deal with until there is a clear and broadly accepted definition of the concept. Arguably, both the concepts of are probably within the context of quality of nursing care.

The quality of nursing care depends on certain contextual and intervening conditions pertaining to the organisation involved. For instance, Irurita (1999) perceived quality as being informed by personal factors affecting patients and nurses. Describing quality is unexpectedly problematic, though Attree (1993) defined it as a notion that is related to modern nursing care. Quality of nursing

care includes professional skills, caring behaviour and attitudes, proper communication, as well as effective organisational and management systems (Redfern & Norman 1999; Mrayyan 2006). Quality also includes several characteristics that are measured by different roles such as nurses, physicians, and patients (Donabedian 1969). These various characteristics might be related to the lack of significant indicators that are used to measure quality of nursing care. Phaneuf (1969) described quality of nursing care as a concept that is hard to measure because existing explanations about quality of nursing care are less conclusive than anticipated and no universally accepted explanation exists.

Taylor et al. (1991) studied patients' and their significant others' perceptions of quality care and found that participants have high expectations about quality of nursing care. The definitive measure about failure or success of the expected outcomes for patients is the delivery of quality of nursing care (Taylor et al. 1991). Den Engelsen et al. (2009) examined the effect of the introduction of practice nurses on the quality of T2D care in Netherlands and found that though nurses were working collaboratively with GPs, diabetes care can be transferred safely to nurses, as evidenced by the significant improvements in patients' conditions. In line with these studies about the introduction and identification of the quality of nursing care, Mitchell and Lang (2004) highlighted that "within this burgeoning agenda for research, the quality of nursing care and its contribution to patient outcomes remains relatively understudied" (p.114).

2.7 Patients' perceptions of nurses' role(s) in T2D care

Patients sometimes do not express clearly that what nurses are doing in diabetes care is considered as quality nursing care. This inability is probably related to the fact that patients have different expectations regarding their perceptions of the quality of nursing care (Zhao et al. 2009). The literature has discussed patients' positive outcomes related to quality care, but not specifically the issue of 'quality nursing care' (Wolf et al. 2008). One key factor for understanding patients' perceptions of the quality of nursing care provided to them is by understanding their level of satisfaction. Shigaki et al. (2010) examined levels of patient satisfaction and acceptance of the role performed by nurses in managing their diabetes; the patients valued the complementary care delivered by nurses through help and guidance. This outcome supported being involved in the self-management of their disorders. There were some methodological limitations in the study that weakened the introduction of the nurse role in some areas, such as

diabetes care. The sample size was relatively small (13 patients were recruited). In the sample selection process, it was mentioned that the last participant was intentionally chosen so as to introduce data that guides the results. This selection might be biased, as the participant was described as neglecting appointments and having difficulty managing their own health. None of the participants gave negative evaluations of the role of nurses in the clinic. Patients knew the nurses at this clinic as they received health education and support from them. Patients' perceptions regarding the role of nurses included nurses as cooperative and being there when they need them.

McDowell et al. (2009) and Booth et al. (2013) argue that patients have different expectations of care from healthcare providers. This issue was highlighted by a study of patients' views and perceptions about self-management of dietary intake and physical activity compared to health professionals' views and perceptions (Booth et al. 2013). The key findings in the study related to patients' worries about changing their lifestyle, together with the changes they had to make to their diet. With this in mind, one of the healthcare professional's responsibilities is to ease these changes. These changes should be encouraged, be more attractive, and attainable and considered as part of a healthcare professional's accountability (Booth et al. 2013). Despite that, patients described themselves as 'left in the dark' about being neglected after being first diagnosed with diabetes and left without information about their diet. Overall findings of the study revealed patients' and healthcare professionals' different expectations in relation to diabetes care. There is evidence in the literature highlighting patients' preferences to be looked after by nurses, as patients found nurses have more time for them than do their doctors (Houweling et al. 2011; Stenner et al. 2011; Peytremann-Bridevaux et al. 2012).

Reutens et al. (2012) conducted a study about GPs providing diabetes patients with a structured educational programme to improve HbA1C; the findings revealed that patients assigned to the GP group did not register any changes in their HbA1C. However, patients assigned to nurses' groups in a study by Wong et al. (2005) had a greater decrease in HbA1C, higher adherences to blood monitoring and higher exercise adherence compared to patients with other groups. These two studies offer evidence supporting patients' preferences to receive care from nurses rather than doctors.

Mrayyan (2006) defined patient satisfaction as the point at which nursing care covers patients' perspectives of professional care, physical surroundings,

continuity of care, and the positive outcomes. Patients were found to be satisfied with nurses who established and showed professional skills in the different procedures and tests, besides administering medications and demonstrating clinical knowledge. Despite the significant role nurses played in patient care, patients were less satisfied about nursing continuity of care; also, nurses were found to be less satisfied with their role (Mrayyan 2006). This outcome indicates that patients and nurses might perceive nursing care differently. Thus, patient outcome is the most accurate indicator to evaluate quality of nursing care (Mrayyan 2006).

Patients' perceptions of nursing care have been addressed in the literature (McAllister & Moyle 2008; Bloomer & Cross 2011; Bergman et al. 2013), and specifically in the UK (McCabe 2004; James et al. 2009; Booth et al. 2013). However, there is a dearth of literature related to this issue in Kuwait. This absence of information is probably related to the fact that physicians conduct the majority of research in the country. The literature search retrieved only one study by Al-Kandari and Ogundeyin (1998) that discussed patients' and nurses' perceptions about the quality of nursing care in Kuwait. The study employed an exploratory research design to investigate the quality of nursing care rendered. The study documented the perceptions of patients and nurses in the six general hospitals in Kuwait. This study revealed that the role of the nurse is the most significant factor in high quality care regarding the routine nursing processes of assessment, planning, diagnosis, implementation, and evaluation. The overall findings of the study were that both patients and nurses have similarities in perceiving quality of nursing care.

The findings of the Kuwait-based research by Al-Kandari and Ogundeyin (1998) seem to contradict the studies of Williams (1998) and Zhao et al. (2009), who asserted that patients and healthcare professionals perceive quality nursing care differently. It has been argued that healthcare professionals view patients as not being capable to decide about nurses' skills (Eriksen 1995). Williams (1998) argued that nurses are required to over-cover aspects that are not under the umbrella of care nor in their published role. For instance, Williams claimed that nurses must be given more time outside clinical areas to discuss patients' spiritual needs. The debate about nurses extended working hours leads to another issue that is beyond the scope of this current thesis. Nurses were found to work for more than 12 hours a day and for more than 40 hours a week. Trinkoff et al. (2006) discussed nurses' recruitment and retention in the

profession. It may not be valid to judge the quality of nursing care solely on perceptions of nurses' behaviour; although a nurse's caring behaviour is an important part of the way caring might affect a patient's psychological status.

2.7.1 Patients' perceptions of nurses' role(s) in consultations

In the study by Stenner et al. (2011), 41 patients with diabetes were interviewed about their views of nurses' consultation styles. Patients described the nurse's role in consultations as: non-hurried, caring, with an established rapport, providing continuity, approachability, clear understandable information, knowledgeable and experienced, with broad areas to cover. Actually, patients in the study by Stenner et al. (2011) noted a contrast between the nurse's role and doctor's role, as indicated by their responses. Patients reported that access to their appointments improved after they started to see nurses. In fact, some of these positive experiences were reported by other authors on quality of nursing care (Johansson et al. 2002; Mrayyan 2006; Van Servellen et al. 2006). Some patients in the studies were newly diagnosed (9 months) which might make their experiences less significant, as nine months is not a long enough period to provide sufficient information relating to their views about nurses' skills in consultation. Furthermore, the authors mentioned that some patients met the nurse only once.

In contrast to the studies on patients receiving sufficient information about their diabetes and duration of consultations discussed above, Macdonald et al. (2013) found patients overwhelmed by the amount of information provided by nurses during consultations. Furthermore, the researchers identified that nurse consultation periods were typically longer than consultations with other healthcare professionals, and patients were found to have other expectations than receiving extensive tasks of to do checklist.

2.7.2 Patients' perceptions of nurses' role(s) in prescribing

In research by Stenner et al. (2011), patients attended clinics with seven nurse prescribers. The patients viewed the nurse prescribing role as beneficial. Overall findings of the study were that patients gained more understanding about their treatment regime regarding their medications, as the nurse was available to provide medication advice and treatment. The patients were confident in the nurse's ability to prescribe and decide about their treatment plan, which was individualised and patient-centred. However, the method used to collect data was

interviews only, which limits the rigour of the findings. Perhaps the authors should have considered data triangulation by conducting non-participant observations. Observation is a common approach in research, which is designed to add more depth and breadth to a study's findings (Stake 1995; Gerring 2006). Patients talked about communication styles and the knowledge nurses have, as well as their abilities to prescribe but observations could have confirmed or identified other factors which the patients did not mention.

2.8 The role of nurses - nurses' perceptions

Although the evidence on the significant role the nurse plays in patient care has been highlighted in this literature review, there is little literature about exploring the role in detail and how the different elements of that role contribute to the quality of nursing care (Juul et al. 2012; Bergman et al. 2013). Nurses might wish to provide care befitting a patient's perceptions about the quality of nursing care that is consistent with the nursing philosophy of the patient-centred model (McCabe 2004; McCormack & McCance 2006; Wolf et al. 2008). Most of the studies about nurses' perceptions of their roles have focused on:1) nurses' job satisfaction (Spence Laschinger et al. 2002; Lu et al. 2005), 2) nurse retention (Jones & Gates 2007), 3) nurse / physician relationships or substitutions (Laurant et al. 2005), 4) nursing staffing and skill mix (Aiken et al. 2001; Buchan & Dal Poz 2002; Needleman et al. 2002; Currie et al. 2005), 5) burn out (Piko 2006; Leiter & Maslach 2009), 6) role confusion (Kleinman 2004; Piko 2006; Lu et al. 2008) and 7) nurses taking up more duties than was expected, as roles overlapped (Raja-Jones 2002; Daly & Carnwell 2003).

2.8.1 The perceived ambiguity of nurses' role(s)

The conflict about nurses' roles could create fragmented care that might lead to poor patient outcomes. Nurses are performing various roles which sometimes lead to role ambiguity which, as a result, can have a negative impact on nurses' attitudes (Boström et al. 2012). Lu et al. (2008) addressed this issue in their study on exploring nurses' perceptions regarding their working roles and found a gap between nurses expected roles and actual roles. This difference can impact on a nurse's job satisfaction and create role uncertainty and conflict. This role confusion might be related to nurses undertaking some of the medical roles, as reported by some of the participant nurses in the study. The results indicated job dissatisfaction among 9.8% of participants with Bachelor degrees. In another

study, nurses with Bachelor degrees were found to have high expectations in the profession. However, all the participants were females; therefore the results should be interpreted with caution and may not be applicable to other settings where participants may not only be females (Lu et al. 2007).

There is no clear definition about the roles of nurses, including their advanced roles, such as leading roles in diabetes care in New Zealand (Daly et al. 2013) and in consultation roles in Australia (Baldwin et al. 2013). Whilst nurses in the study by Boström et al. (2012) viewed their roles as complex, incorporating the roles of expert, fosterer, executive, leader and role model, they viewed their roles as unclear and ambiguous, a conclusion which was perceived as putting them in a less powerful position in their careers. Boström et al. (2012) emphasised that role ambiguity impacts on patient-centred care and self-management of diabetes. In the study, the nurses' need for professional autonomy in diabetes care was obvious. The authors of the study mentioned that some nurses did not clarify their expressions about the ambiguity of their role. This might be related to the adoption of a focus group approach. Morgan (1993) highlighted that the focus group approach known to inhibit disclosure from participants who might be extremely reluctant to speak about own concerns in the presence of others.

In summary, in Kuwait no nursing qualifications have been established beyond the level of registered nurse (Al-Kandari & Thomas 2008). Furthermore, the title ‘diabetes nurse’ has not yet been implemented, whereas the presence of nurse-led programmes in diabetes care in the UK is well-established (Carey & Courtenay 2007). Whilst nurses in diabetes care perform a wider range of roles within their areas of practice than general nurses do, their level of clinical authority is the same. Physicians however, might think that nurses are doing the expected tasks in diabetes care, while what the nurses are actually performing is perhaps more than their expected roles. The expected roles of nurses in diabetes care seems to be ambiguous, though roles are described in general and according to the nurse's hierarchical position (See Appendix C: Nurses job descriptions in Kuwait). These documents have not been updated to include new roles for nurses, such as their role in diabetes care. Additionally, these documents are too general and not sufficiently accurate, and can only provide a broad specification for different grades of nurses.

2.8.2 Nurses' professional needs

Whilst nurses think that they are undertaking more than what they should be doing in practice (Raja-Jones 2002; Daly & Carnwell 2003), Chan & Zang (2007) reported that nurses need suitable training to prepare them to provide effective diabetes care. Their study focused on nurses perceived and actual knowledge about diabetes management, which the authors considered important for the nurses' overall performance in diabetes care. Whilst Chan & Zang (2007) confirmed the heterogeneousity of the study population, with respect to diabetes knowledge, variations of the three groups of participants were related to the lack of homogenousity of the participants' levels of training, education and experience. However, most of the participants received training in the hospital setting, which reflected good nursing skills as they received their training in natural settings (Chan & Zang 2007).

2.9 Summary of the literature review

In this literature review I have analysed studies in the areas of approaches in T2D care, approaches to the role of nurses in T2D care, patients' perceptions of nurses' roles in T2D care and nurses' perceptions of their roles. Development of the role of the diabetes nurse in the UK might be related to continuing research in the UK that seeks to identify issues influencing the quality of nursing care. In Kuwait, healthcare professionals other than nurses mainly conduct the research, so very little is conducted by nurses. Examples of research in Kuwait include patients' perceptions of quality of nursing care (Al-Kandari & Ogundeyin 1998), nurse workload (Al-Kandari & Thomas 2009b; Al-Kandari & Thomas 2009a), nurse retention (Al-Kandari & Ajao 1998), job satisfaction (Shah et al. 2001; Al Otabi et al. 2004; Al-Enezi et al. 2009), nurse turnover (Alotaibi 2008) and nursing workforce (Al-Jarallah et al. 2009).

2.10 The gap in knowledge

- There is limited evidence on research exploring the quality of nursing care in T2D. Previous studies reviewed nurses' and/or patients' perceptions of quality of nursing care (Williams 1998; Attree 2001; Lee & Yom 2007; Clendon et al. 2013), but the evidence is not conclusive. A few studies compared the actual role and expected role of nurses in diabetes care and identified the issue of role confusion and nurse's dissatisfaction with their

roles. A number of issues were identified from the literature in the area of the role of nurses and approaches to that role in T2D care. To date, there is a lack of studies about the role of nurses in T2D care and the impact of this role on patients' and nurses' perceived quality of nursing care, particularly in the UK and Kuwait. This result points to the first identified gap in the literature: No study was found, which compared these roles across two countries with different models of care and similar nationalised healthcare systems.

- From the literature reviewed, I believe that there might be some variation between what the guidelines inform about the idealised role of nurses and actual role of a nurse in a diabetes clinic. There were studies that included the implementation of ward level guidelines and protocols (Burgers et al. 2002; Davidson et al. 2007; Houweling et al. 2011) but there were no studies that have explored how nurses react to the guidelines and how the guidelines are established regarding a nurse's role in diabetes care. This finding informs the second and third gaps in the literature; the divergence between what the guidelines inform about the role and what is actually happening within this role would enrich the knowledge regarding which aspect or aspects of a nurse's role impact on the perceived quality of nursing in T2D. There is a lack of research about what the guidelines inform on the role of nurses and the actual role undertaken by nurses in T2D care and how the differences between these roles influence perceived quality of nursing care.

- Differences in a nurse's role (actual and expected as informed by the guidelines) naturally found in a variety of healthcare systems, leads me to think about the impact of these differences on perceived quality of nursing care. In comparison with the number of studies about the quality of nursing care in T2D, limited research was identified about understanding this concept from the viewpoint of patients. This perspective is valid as patients are the recipients of the care, nurses' perspectives are equally valid as they are the providers of that care. These observations points to the fourth identified gap in knowledge: it is expected that patients' perceptions about quality of care might be questionable as some patients may appreciate nurses' work even if not as expected. However,

understanding patients' perceptions about quality of nursing care is meaningful as a guide to quality of care received.

Consequently, the current research attempts to fill these gaps in knowledge relating to T2D nursing care.

2.11 Theoretical framework

Morse and Field (1995) assert that a study is considered without structure if it is not theory-based, as it would not be well connected to the main body of knowledge. There is an abundance of literature that could be drawn upon to help understand the differences between the role of nurses and how these affect perceived quality of nursing care. Polit and Beck (2004) assert that there are a number of sociological theories that are suitable as theoretical frameworks that help us to understand a phenomenon within an organisation. Furthermore, the literature indicates that theories have linked qualitative research findings to practice in order to investigate phenomena and relationships in valid and reasonable ways (Polit & Beck 2004). I searched critically for a suitable theory which underpins some of the factors that help in investigating the issue under study - the role of a nurse in T2D care.

The literature included a number of theories which could be used to describe and explain the role of nurses with other practices or outcomes within organisations. Such theories deal with organisational change (Rhydderch et al. 2005; Burke 2013); theories of motivations such as the self-determination theory (Ryan & Deci 2000), theory of empowerment (Laschinger et al. 2001); role theory (RT) (Katz & Kahn 1978; Biddle 1986; Floyd & Lane 2000) and learning contracts such as the psychological learning contract theory (PLC) (Rousseau 1995). Role theory has been used in nursing research (Murray 1997). The American Association of Critical Care Nurses (AACN) suggested that roles are explained by assuming that individuals hold possibilities for their own actions and other actions as well (AACN 2005). That means a role is an action or set of actions expected from individuals in certain contexts (Katz & Kahn 1978). These various individuals' actions might expose individuals to role conflict and role ambiguity if their roles (expected and actual) are not clearly defined which, as a result, leads to individual distress (Floyd & Lane 2000).

The PLC theory is about individuals' viewpoints about terms and conditions of a mutual exchange contract between them and the organisation (Rousseau &

McLean Parks 1993). Rousseau (1995) outlines that job attitudes and performance can be influenced by the employee's psychological contract with an organisation; in other words, how employees feel about the work role they undertake. The aims of the present research encompass none of the above; the aims are about nurses' relationships with T2D care guidelines and patients' perceptions of the quality of nursing care they receive in T2D care. So therefore, what I consider to be needed is a theory that will assist in explaining and exploring these aims.

In order to understand or explore a phenomenon in a reasonable strategy, a conceptual framework is needed to guide the research (Polit & Beck 2004). A number of studies have used the Donabedian model as a framework to evaluate the quality of nursing services in different contexts. For example, a study by Gardener et al. (2012) evaluated the safety and quality of nurse practitioner service. The results identified that adequate and detailed preparation of structure and process is essential for the successful implementation of a service innovation. The study further concluded that the Donabedian Model, as a framework, proved to be a valuable approach to examine the quality of a service.

The utility of conceptual models is in their ability to simplify reality in a way that leads to valid predictions and understanding of relationships among complex phenomena. The Nursing Role Effectiveness model provides a way to conceptualise nurses' contributions to health care and has proven useful for understanding the influence of both unit and nurse structural variables on nursing practice and patient outcome achievement (Doran et al. 2002).

The Nursing Role Effectiveness Model (NREM) by Irvine et al. (1998b) was established based on the Donabedian model and has been adopted as the conceptual framework for this study current study (Irvine et al. 1998b). As this research concerns nurses' roles in practice as defined by the guidelines and patients' perspectives on the quality of nursing care, there is a need for a conceptual model that can accommodate the data obtained from this study. The aim of this research is to investigate how the difference between the nurses' actual role in T2D care (what the nurse is actually be doing) and the guideline-informed role (what the nurse might be doing) affects the perceived quality of nursing care in two different nursing systems - the UK and Kuwait. In the following sections, the Donabedian model and the NREM are discussed.

The Donabedian model provides a framework for examining health services and evaluating the quality of the healthcare provided. This model has three components: structure, process, outcome, as shown in Figure 2.

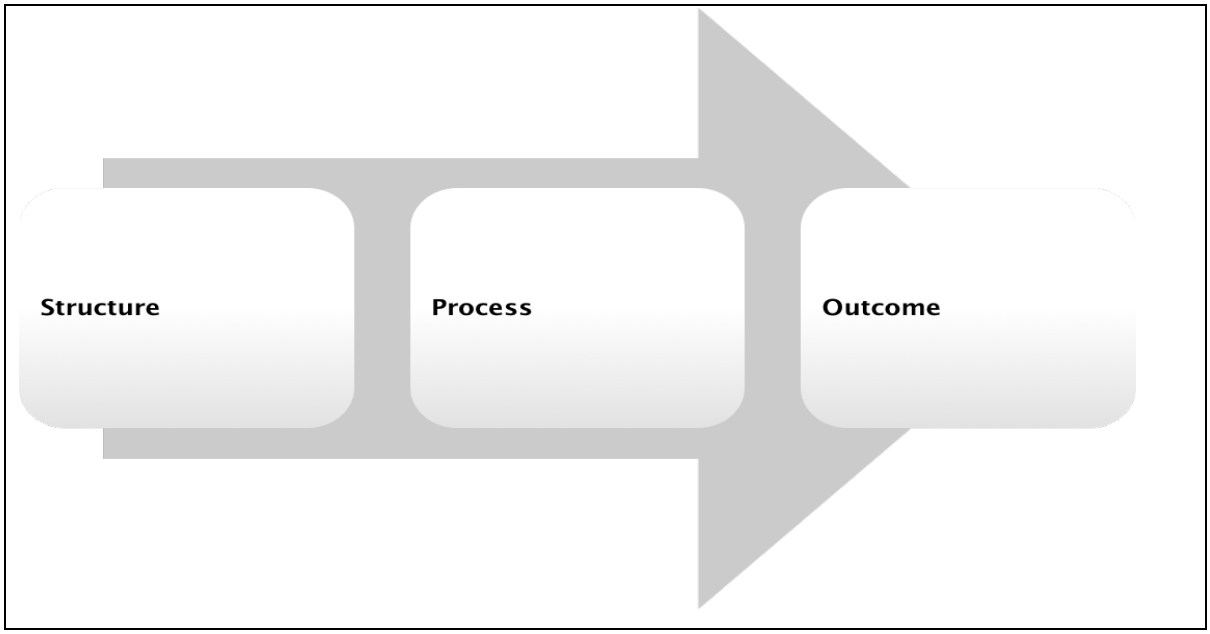


Figure 2 Structure, Process, and Outcome

It was asserted by Donabedian (1988) that in order to reach quality, these three components must be used concurrently besides examining their relationships with each other (see Figure 3). This interrelationship was established to direct investigation of the influence of nursing within the healthcare system (Doran et al. 2002). The structure of an organisation influences the processes within it and the outcomes from both itself and these processes.

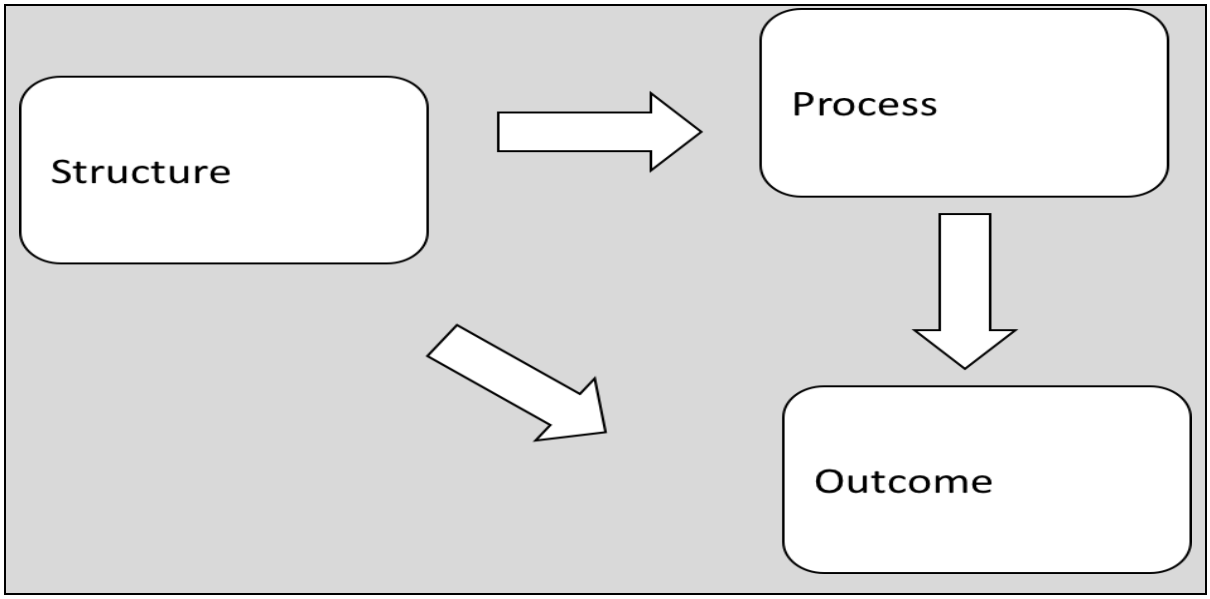


Figure 3 Relationships between Structure, Process, and Outcome

In the Donabedian model, structure refers to the setting in which care is delivered, and includes the attributes of material resources (e.g. facilities, equipment), of human resources (e.g. number and characteristics of personnel), and of organisational structure (e.g. medical staff organisation, methods of peer review). Process refers to the approaches or means of providing healthcare, and includes the services and treatments the patients receive. Outcome refers to the results or impact of care on the health status of patients and populations. It may also involve improvements in patients' knowledge and behaviour and degrees of patient satisfaction; as shown in Figure 4.

In the current study, the structure is a way of studying the setting in which nursing care is taking place in addition to the various individuals, administrative and organisational factors. The Process is concerned with nurses' three variables; independent, dependent and interdependent. The concept describes various roles that some nurses are performing with minor contributions from other individuals in the healthcare setting, coordination between nurses and other individuals in the healthcare setting and total nurse dependence on other individuals in the healthcare setting. The outcome is looking at the patients' health status and nurses' positions.

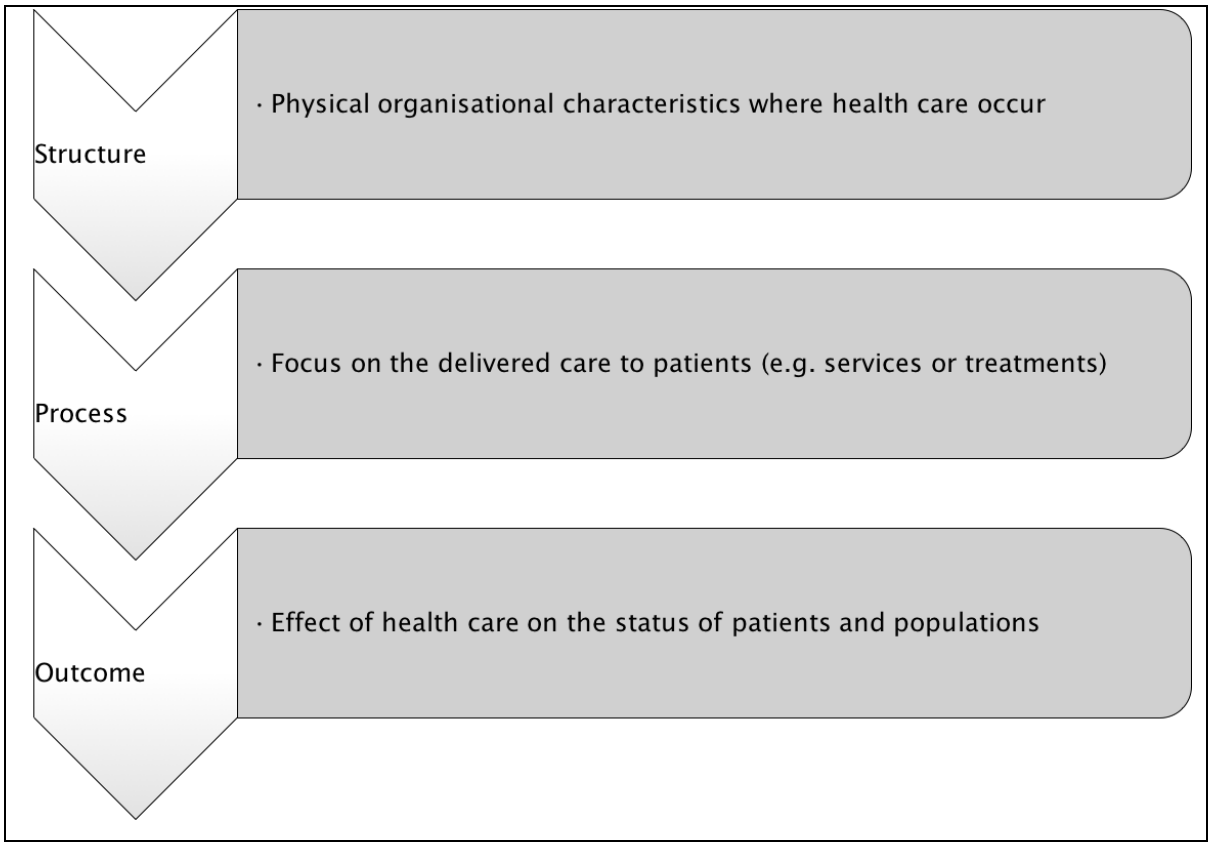


Figure 4 The elements of evaluating quality of healthcare

Donabedian (1988) highlighted the importance of linking the outcome clearly with the process that caused it. In the current study, the outcome is evaluated on two variables; (1) the perceptions of patients with T2D on the quality of care they received and (2) nurses' practices that are performed independently and or interdependently.

To identify the impact of nursing care on patient outcomes and the quality of care patients receive, it is necessary to describe and define nursing actions to ensure that the outcome is a result of nursing care (Doran et al. 2002). However, to do this is difficult as the nursing role is complex. It is also closely contextually aligned with the hospital or clinic as well as the patient's healthcare experience.

The NREM was based on the structure-process-outcome model of quality care (Irvine et al. 1998a; Irvine et al. 1998b). The model was developed to guide the assessment of nurses' contributions to healthcare (Irvine et al. (1998b). The NREM provides a conceptual view of nursing practice in terms of the roles nurses play in patient care (Doran et al. 2002) and provides a framework that can assist in identifying and describing the impact of nursing care. The NREM has been widely used in the nursing discipline, as it illustrates the various roles of nurses and their implications for patients' outcomes. In this particular study, the focus is on nursing practice outcomes.

Nurses different roles in diabetes care, and how these different aspects are perceived by patients, can be underpinned and understood through the lens of the NREM, in addition to organisational factors that will be explored in the fieldwork. Within the NREM, Irvine et al. (1998b) classified the role of nurses' and patients' outcomes into categories. Within the process domain the categories are: nursing's independent role, nursing's interdependent role, and nursing's dependent role. This classification enables the distinction of nursing's roles, based on the process domain. The classification also assists exploration of the nurses' contributions to patients' improved care and improved nursing practice, which reside within the outcome domain. These models, initially from Donabedian and then Irvine et al., focus on nursing functions which enabled initiating a more specific approach to an examination quality of nursing care.

Following the review of literature, Table 4 identifies the possible components within the NREM that might emerge in this study.

Table 4 Possible components within the NREM

Structure	**Process**	**Outcome**
Environment	Clinical approach	T2D patients' perceptions of improvements in quality of care they receive
Guidelines	Nurses approach to patients	Improvement in quality of care in T2D nursing
Nurse attributes	Nurses management of patients	Patients and nurses, changed perceptions
Organisation	Patients responding to nurses and nursing care	
Patients	Learning and implementing new practice	
	Nurses self-development	

In practice, the roles nurses are required to undertake need authority, autonomy, recognition, and support from their organisational hierarchy in order to achieve positive outcomes. In my professional experience, I have noticed that nurses invent their own ways of performing some of the tasks needed which cannot be delayed, such as addressing particular patients' needs; a strategy in line with the view of (Aalaa et al. 2012). If nurses are not encouraged to adequately perform their job through lack of organisational support, in order for them to effectively perform their role, they could become what Lipsky (2010) refers to as 'street-level bureaucrats'.

Nurses can be considered as street-level bureaucrats (Lipsky 2010) as they deliver front-line services in diabetes care, as has been discussed earlier in this chapter. Nurses are considered front-line personnel because they actually carry out and implement decisions (Lipsky 2010). In the street-level bureaucracy theory, people working in the public sector and who are interacting with people to deliver services, are considered actors on the front-line in the organisation in which they may contribute to policy change practices (Lipsky 2010).

Lipsky (2010) argues that street-level bureaucrats and the strategies they adopt in practice, in order to facilitate the fluency of their career, later became embedded in some of the public practices they undertake. In this study, Lipsky (2010)theory can guide the study's discussion to assist in making sense of the impact of

nurses' relationships and attitudes with the guidelines. The theory of street-level bureaucracy could be embedded in the NREM process domain to provide a modified conceptual model that may include the implementation of new guidelines specifically designed for nurses involved in providing T2D care. Nurses are expected to follow the guidelines which are established in evidence-based practice; however, at this point I suggest that nurses can be seen as street-level bureaucrats who can contribute to the guidelines by modifying or creating their own guidelines that are applicable to their scope of practice.

2.12 Chapter summary

T2D still remains a disease of public health importance in all parts of the world, as it makes significant social, psychological and economic impacts on society. T2D affects the most productive section of the population (15-49 years). T2D is a chronic illness and therefore requires a multidisciplinary approach in order to meet the physical, social, psychological and spiritual needs of patients and their families.

Studies have shown the various approaches followed in healthcare systems that are important in the organisation of T2D care. One of the key approaches was found to be nurses' involvement, in which nurses made effective contributions in T2D care based on their qualifications, experience, knowledge and skills. Nurses' roles were found to be based on evidence-based guidelines, helping them to undertake advanced roles such 'nurse consultants' and 'nurse prescribers'. Most importantly, and in addition to nurse's contributions in T2D care, patients were found to appreciate the role of nurses in managing their diabetes.

Finally, in spite of patients' views and perceptions about nurses' roles, the literature has revealed that nurses complained about their unclear roles; especially if or when nurses were implementing doctors' roles. The next chapter contains a review of the guidelines that inform the role of nurses.

Chapter 3: GUIDELINES-INFORMED ROLE OF A NURSE: A REVIEW OF THE DOCUMENTS

3.1 Introduction

This chapter presents an overview and discussion of the results of a documentary review regarding Case Study 1: the UK, and Case Study 2: Kuwait. The following issues are explored: 1) the guidelines that inform the role of nurses in diabetes care; 2) the similarities and differences between the national and the local guidelines and the international and local guidelines in both case studies; 3) the similarities and differences between the guidelines in both case studies. This documentary review is presented in two sections. In section 3.3 there is a review of four national and local guidelines utilised by nurses working in diabetes care in the UK. In section 3.4 there is a review of four international and local guidelines utilised by nurses working in diabetes care in Kuwait. Based on the series of guidelines (for diabetes) searched for by the researcher, both sections show how the guidelines inform the role of nurses and what their responsibilities are in diabetes care. A pragmatic decision was taken by the researcher and her supervisors to gather preliminary data about which guidelines followed in diabetes clinics in the two study sites. Therefore, nurse in-charge in the diabetes clinics emailed the researcher with a list of the guidelines utilised in diabetes care and provided a hard copy for the local and national guidelines. Table 5 presents the guidelines reviewed in the UK case study: i) the national guidelines, established generally for all regions in the UK and ii) local guidelines confined to the specific region of Nottingham.

Table 5 Guidelines adopted in the UK

Originators	Year	Type	Authors	Target population	No. of pages
Competency Framework for Diabetes Nursing (NCF)	2005	National	Professional bodies representing nurses who work in diabetes care	Nursing staff with different levels of knowledge, experience and education providing diabetes care	36
National Institute for Health and Care Excellence (NICE)	2015	National	Professional bodies representing general healthcare professional including nurses who work in diabetes care	Health care professionals providing care to people with diabetes	57
Royal college of nursing Guidelines for Diabetes (RCN)	2006	National	RCN nurses, Paediatric and Adolescent Diabetes Group, other disciplines and people with diabetes	Nursing staff providing diabetes care	16
The Nottingham Diabetes Service Advisory Group (NDSAG)	2006	Local	Professional bodies including physicians, dieticians, and nurses representing general healthcare professionals including nurses who work in diabetes care in Nottingham	Nursing staff providing diabetes care	39

Table 6 presents the guidelines reviewed in the Kuwaiti case study: i) the international guidelines established globally across many countries including Kuwait and ii) the local guidelines established by doctors at diabetes clinics in Kuwait, which include the role of a general nurse in diabetes care.

Table 6 Guidelines adopted in Kuwait

Originators	Year	Type	Established by	Established for	No. of pages
American Diabetes Association (ADA)	2013	International	Professional bodies representing health care professionals including nurses	Health care professionals providing care to people with diabetes	41
International Diabetes Federation (IDF)	2015	International	Professional bodies representing health care professionals including nurses	Health care professionals providing care to people with diabetes	132
Canadian Diabetes Association (CDA)	2013	International	Professional bodies representing health care professionals including nurses	Health care professionals providing care to people with diabetes	227
Doctors' guidelines	2003	Local	Doctors and nurses working in endocrinology and diabetes care	For nurses providing diabetes care	10

3.2 Selection of documents

Nurses in charge, the head nurse in Kuwait and the matron in the UK provided the researcher with a list of guidelines followed in each clinic including hard copies of the national and local guidelines. They identified the international, national and local guidelines used in their respective clinics. Through internet searches, the website for each organisation was located and the named guidelines were found. In both the UK and Kuwait, the national guidelines (NCF) and the local guidelines were collected from nurses in-charge.

The national guidelines used in the UK (see Table 5) are: a) the Competency Framework for Diabetes Nursing (NCF) and b) the Royal College of Nursing (RCN) Guidelines for Diabetes (Diabetes UK 2015). These guidelines present general roles for nurses that cover most districts in the UK; however, the National Institute for Health and Care Excellence guidelines (NICE) also present recommendations for general healthcare providers working in diabetes care. In

the UK case study the local guidelines were established by the Nottingham Diabetes Service Advisory Group (NDSAG), a multidisciplinary group of healthcare professionals, including nurses, specifically designed for the county of Nottinghamshire. The NDSAG guidelines were derived from a number of sources including international guidelines such as those from the ADA; the IDF; as well as UK-centric sources such as NICE and the Diabetes UK website.

The international guidelines used in Kuwait (see Table 6) are based on: a) the ADA; b) the IDF; and c) the Canadian Diabetes Association (CDA). These international guidelines present general roles for various healthcare team members working in diabetes clinics. For instance, the ADA guidelines specify the roles of physicians, diabetes educators, registered dieticians, and other specialised staff in other areas (ADA 2014a; ADA 2014b). The ADA considers the diabetes educator to be a nurse, unlike the CDA, which includes diabetes educators and nurses as healthcare team members, all of whom provide diabetes care. The local guidelines in Kuwait, set down the nurse's role and describe what a nurse is supposed to do in diabetes care according to the established, published guidelines.

Collection of the documents for this research began before the study commenced. The primary aim of this documentary review was to investigate all the identified guidelines, which informed the role of nurses in diabetes care. Some of the guidelines were specifically designed for nurses, while others were designed for both nurses and other healthcare professionals who were providing diabetes care, such as doctors and dieticians. Variations between the guidelines were identified and these are discussed in each section in this chapter. Some of the guidelines pertaining to diabetes care provide general recommendations and suggestions relating to all types of diabetes, including type 2. The analysis has been mainly focused on the information relating to T2D, which is the focus on this thesis.

3.3 Findings from the documentary review: case study 1- the UK

3.3.1 Guidelines-informed role of a nurse

The review of local and national guidelines that are used in the UK, was undertaken for two reasons. Firstly, to gain a wider understanding about what the

guidelines provide on the role of diabetes nurses in diabetes care. Secondly, to corroborate the findings in this chapter with the findings of the two case studies (UK and Kuwait) that investigated the actual role of a diabetes nurse (see Chapters 5 and 6). It was identified that the guidelines stated that nurses are required to provide patient-centred care in which patients' needs should be covered according to each individual patient.

3.3.1.1 Various practices informed by the guidelines

In the UK, the guidelines used by nurses provided guidance, or a scenario, for nurses about how they should deliver diabetes care. However, sections of these guidelines reflected general practices in which some contents are related to nurses, while others are related to both nurses and other specialties (see Table 5). For instance, the NCF guidelines covered the wide range of duties that are carried out by practice nurses, diabetes specialist nurses, nurse consultants, and diabetes facilitators. These duties included:

> *Screening, prevention and early detection of type 2 diabetes, promoting self-care, mental health, nutrition, urine monitoring, blood glucose monitoring, oral therapies and injectable therapies, hypoglycaemia, hyperglycaemia, intercurrent illness, managing diabetes in the hospital, pregnancy, hypertension and coronary heart disease, neuropathy, nephropathy, retinopathy ...* (NCF-NUH p.9)

The NCF guidelines also extended to include locations where diabetes care is needed, such as:

> *Prison and young offender units, residential and nursing homes, and end-of-life care ...* (NCF-NUH p.32)

Equally, the RCN guidelines stated similar recommendations to those mentioned in the NCF:

> *Preventing type 2 diabetes, identifying people with diabetes, empowering people with diabetes, clinical care of adults with diabetes, clinical care of children and young people, diabetes emergencies, caring for people in the hospital, diabetes and pregnancy, and detecting and managing complications.* (RCN-NUH p.5)

The NCF guidelines however included nurses' roles set out according to their grades and qualifications. The NCF ranked nurses from unregistered practitioners, undertaking basic nursing practices to consultant nurses undertaking more critical and advanced roles in diabetes care (Trend UK 2010 P.9-P.34). In fact, other guidelines stated the role of a nurse in arranging and

presenting some of the previous duties mentioned in the NCF, but using different names for nurses. For instance, the NICE guidelines stated the different responsibilities for providing diabetes care.

> *Provide patient education, dietary modifications, blood glucose lowering therapy, managing cardiovascular risk, managing blood lipids, anti-thrombolytic therapy, managing blood pressure, identifying and managing long-term complications, and care for people in the hospital.* (NICE-NUH p.7)

However, the NICE guidelines did not clearly demonstrate the responsibilities of each healthcare provider in the diabetes team. The documentary review in this study reviewed the NICE guidelines, which were recently updated in 2015; however, they had not been updated to specify healthcare providers' responsibilities in each of the standards mentioned. In fact, the updated version of the NICE guidelines concluded with the need to update some of its recommendations in two years' time, as their contents had not been updated since they were established in 2008 (NICE 2016). The areas that have been updated were the only areas identified according to a review process and stakeholder feedback. However, there was no mention about adding specifications or details to each intervention or task to be accomplished by which member of staff.

3.3.1.2 Patient education

The role of nurses in health education and health promotion was clearly stated in the guidelines.

> *Offer structured education to adults with type 2 diabetes and/or their family members or carers (as appropriate) …* (NICE-NUH p.7)

These guidelines emphasised the requirement of nurses' participation in arranging patient educational programmes which should be structured to meet the patients' needs. The NCF guidelines supported this recommendation by indicating that educational programmes should embrace all patients to:

> *Meet the local cultural, linguistic, and cognitive and literacy needs; programmes are integrated with the care pathway.* (NCF-NUH p.19)

Patients from different cultural backgrounds might have difficulties in understanding health education. The guidelines therefore stated that nurses should also provide education to the patient's caregivers, as they might help in facilitating a patient's health education.

> *Participate in educating the people with diabetes, other HCPs and carers of people with diabetes.* (NCF- NUH p.31)

The NCF also added that these programmes should be incorporated within each individual patient's care pathway, so as to be more patient-centred. Nurses' obligations towards these schemed programmes, according to the NCF guidelines, must include information about symptoms resulting from uncontrolled diabetes. Therefore, nurses were advised to follow strategies which included controlling, managing and prevention of diabetes complications. As prescribed in the NCF guidelines nurses should:

> *Participate in … the identification, treatment and prevention and on the impact that hypoglycaemia or hyperglycaemia has on the individual; identify and teach appropriate strategies for prevention of hypoglycaemia during and after exercise.* (NCF-NUH p.18)

Most practices stated in the NICE guidelines aim to ensure the effectiveness of up-to-date education and that it should be:

> *Evidence-based, and suits the needs of the person.* (NICE-NUH p.7)

Lifestyle modification was one of the practices stated in the guidelines, in which nurses should be involved in providing suggestions about dietary advice according to patients' specific issues, taking into account their needs, their cultural beliefs, and their willingness to follow a plan of care. In fact, there was an abundance of advice included in the guidelines concerning nurse participation in encouraging patients' behaviour modification, in terms of diet and exercise:

> *Provide dietary advice in a form that is sensitive to the person's needs, culture and beliefs, being sensitive to their willingness to change …… . Integrated dietary advice with diabetes management plan, including other aspects of lifestyle modification, such as increasing physical activity.* (NICE-NUH p.4)
>
> *Increase activity levels within the patient capability and reduce sedentary behaviour at home and increasing walking … .* (NDSAG-NUH p.16)

Another practice the nurses were expected to be involved in was 'awareness creation' in which nurses teach patients different health management approaches included in the educational programmes. These approaches included understanding the normal ranges of glucose measurement levels, including the signs and symptoms of high and low glucose levels, which can be achieved by the appropriate use of self-monitoring tools and following local guidelines:

> *To promote understanding and raise awareness of diabetes; state the normal blood glucose range; describe the signs and symptoms; demonstrate competent use of blood glucose monitoring equipment; offer appropriate treatment as per local guidelines.* (NCF-NUH p.5)

Some of the nurses following the RCN guidelines were found to be prescribing; however, the RCN guidelines suggested a future plan in which:

> *Many more nurses will be able to prescribe medications within the framework of supplementary prescribing.* (RCN- NUH p.2)

In other guidelines, such as those of the NDSAG, nurses had a significant influence on prescribing and adjusting medications according to the nurse's scope of practice; under both legislation and local guidelines:

> *… prescribe medications, as required, within own competencies and scope of practice according to legislation and local guidelines … . Adjust insulin treatment according to age, diagnosis and individual circumstances as appropriate, following local policies or individual clinical management plans.* (NDSAG –NUH p.31)

3.3.1.3 Delivery of care

The delivery of care included providing patient follow-up care and keeping the patient informed about their own plan of care. This goal can be achieved by patient empowerment that ensures quality of care indicated by providing a more holistic approach for diabetes management. For example, the patient might have good, genuine reasons for not attending their appointments. The RCN obliges nurses to identify these individuals and to plan follow-up sessions with them:

> *Identify those people who are not attending hospital or clinic appointments and follow-up non-attendance.* (RCN-NUH p.11)

Follow-ups with patients will promote ongoing support to the patient, who would be requested to attend regular follow-up care sessions:

> *Patients need regular follow-up and recall for review of their conditions, and ongoing education and support.* (RCN-NUH p.2)

Delivery of care should be patient-centred:

> *To provide high-quality, person-centred care and services … . To ensure consistently good quality care for people with diabetes.* (NCF-NUH p.3)

To ensure ongoing patient support, nurses are required to:

> *Ensure that the person with diabetes knows what care to expect from the time of diagnosis onwards and that they understand why this care is being given, for example, how it is likely to affect their condition.* (RCN-NUH p.5)

Such an approach would promote patient's understanding about the care and the rationale for each procedure followed in the care plan, which would lead to high quality patient-focused care.

The guidelines indeed supported the need to involve patients in their own care plans and to know about how their results can contribute to the effective or ineffective control of diabetes. For instance, the NCF states:

> *Facilitate the development of an agreed care plan*. (NCF-NUH p.7)

A patient's psychological support was considered a key factor in providing patient-centred care in two of the guidelines: the NCF and the RCN. These guidelines considered a holistic approach as the most appropriate approach to meet most patients' needs, including psychological ones. In these instances, the nurse should be aware of any changes in the patient's mental health status and should confirm that the patient, who is taking medications, is aware of how to take the medications and be aware about the effect of these medications on their diabetes. Sometimes, if the patient is prone to changes in their normal mental health, the nurse should report this and recognise if the patient needs referral to a specialist:

> *Have an awareness of how mental health issues, such as depression and anxiety, affect people with diabetes; Report any potential changes in the person's normal mental health …; Ensure people with diabetes and mental health problems understand how to take medication, recognise common side-effects and how to report them; Demonstrate knowledge of the psychological impact of diabetes and facilitate referral to psychological support or mental health services, as required; Refer or ensure an appropriate mental health practitioner is involved in the person's care if they are demonstrating mental health difficulties.* (NCF-NUH p.11)

> *Identify people with complex emotional needs and offer referral to a psychologist.* (RCN-NUH p.10)

In fact, the NCF guidelines stated that a patient's mental health support should be evidence-based and cost-effective, where the nurse should:

> *Work with stakeholders to develop and implement local guidelines for management of diabetes in those with mental illness, promoting evidence-based practice and cost-effectiveness.* (NCF-NUH p.23)

3.3.1.4 Promoting self-care: patient empowerment

Patient empowerment was included in the four national and local guidelines, in which nurses were recommended to participate in promoting the patient's self-management. Nurses were recommended to encourage patients with diabetes and their family caregivers to decide about their care plans and the options of care which would impact on their quality of life, as stated in the guidelines:

> *Be partners in decision-making …, to give them more personal control over their day-to-day diabetic management, and to ensure the best possible quality of life.* (RCN-NUH p.7)
>
> *To help people with diabetes to be confident to self-manage their condition and to be as independent as possible.* (NCF-NUH p.5)
>
> *Discuss the purpose of self-monitoring and how to interpret and act on the results.* (NICE-NUH p.8)
>
> *The ability of the person with diabetes to self-care and work with them or their carer to optimise self-care skills.* (NDSAG-NUH p.34)

A patient's ability to self-manage their diabetes should be assessed by a nurse, as some patients are not able to achieve self-care. Once the nurse has established preliminary information about the patient's ability to cope with the idea of self-management, the nurse should educate the patient about how to self-manage their own diabetes care. These skills were identified including enhancement of the patient's overall knowledge and experience needed in managing and controlling diabetes:

> *The ability of the person with diabetes to self-care and work with them or their carer to optimise self-care skills; … encourage informed decision-making about living with diabetes and managing life events; … setting realistic goals and in the achievement of those goals.* (NDSAG-NUH p.32)
>
> *… provide tailored, structured education and support to optimise self-care skills and promote informed decision-making about lifestyle choices; … make informed choices about controlling and monitoring their diabetes … ; risk reduction; monitoring control; and complications; Develop and ensure delivery of educational materials; work with the person with diabetes to facilitate lifestyle adjustment in response to changes in their diabetes or circumstances.* (NCF-NUH p.10)

Based on what was stated in the guidelines, it was identified that nurses were required to play a significant role in patient support, including 'patient empowerment', in which the patient must be involved in planning and sharing plan(s) of his or her treatment. It was indicated that this approach of patient self-management of diabetes would allow the nurse to enhance and support the

patient's needs in a holistic manner. Significantly, all the guidelines highlighted patient empowerment, as this can benefit patients, nurses and healthcare services.

3.3.1.5 Multidisciplinary work

An important approach identified in the national guidelines was teamwork. This model included the provision of patient care that would ensure an appropriate quality of life through collaborative work; firstly, between nurses and secondly between nurses and other healthcare professionals.

According to the standards in the national guidelines, a teamwork approach would minimise and control long-term diabetes complications, as teamwork adds quality to the guideline-driven approach. In order to confirm the provision of effective patient care, collaboration between nurses in different specialisations is important:

> *Teamwork is vital – there should be good liaison between the ward nurse, practice nurse, district nurse or diabetes specialist nurse. This will ensure more effective care and that the advice offered to patients is consistent.* (RCN-NUH p.11)
>
> *Optimise quality of life for people with diabetes and to reduce their risk of long-term diabetic complications. A team approach is likely to provide the best outcomes.* (RCN-NUH p.7).

Indeed, as stated by the RCN guidelines, achieving this standard of improving patient care through a teamwork approach relies on the recognised guidelines and the stability of education for healthcare providers involved in diabetes healthcare teams:

> *… Establishing and implementing guidelines and protocols, and on the continuing education of all health professionals involved in the diagnosis and care of people with diabetes.* (RCN-NUH p.8).

A teamwork approach is an effective method in diabetes care, which occurs between nurses and different healthcare providers within a diabetes care setting; the interaction should be collaborative so as to maximise patient-positive outcomes and minimise any deficit in patient care.

Nurses are the key staff to link their diabetes care knowledge and who sign-post this to other healthcare professionals, as required by the patient. The RCN's stated standards to ensure good quality care and that nurses have active roles in

working with other health team members, is a vital step in achieving these standards:

> *Teamwork is vital- there should be good liaison between the ward nurse, practice nurse, district nurse or diabetes specialist nurse. This will ensure more effective care that the advice offered to patients is consistent.* (RCN-NUH p.11)

3.3.1.6 Practice driven guidelines

In the RCN guidelines nurses are advised to consider other guidelines as a source of information for specific topics. The following extract from the RCN guidelines refers to the NICE guidelines:

> *Use national guidelines, for example, NICE, to underpin care to optimise control of blood glucose, blood pressure and other risk factors.* (RCN-NUH p.8)

The tasks recommended by the RCN were not included in its 'standards in care delivery for diabetes patients'; however, the RCN indicated the interrelationship between different guidelines. Some items not mentioned in one particular set of guidelines can be located in standards elsewhere.

Likewise, it was found that the NDSAG suggested that nurses should follow some recommendations at the local level, such as local policies and individual clinical management plans that consider patients' conditions and circumstances. Nurses were also guided to act within the scope of their practice in instances such as prescribing medications:

> *… Prescribe medications, as required, within own competencies and scope of practice according to legislation and local guidelines … . Adjust insulin treatment according to age, diagnosis and individual circumstances as appropriate, following local policies or individual clinical management plans.* (NDSAG-NUH p.31)

The NCF suggested that nurses should participate collaboratively with others to plan and establish local guidelines that are evidence-based and cost-effective in all the recommendations listed in the NCF guidelines:

> *… Promoting evidence-based practice and cost-effectiveness.* (NCF-NUH p.5)

As identified from the findings in this section of the review, the role of nurses in diabetes care appeared to be complex, with various approaches. The role involved providing health education and health promotion in which nurses

provided structured educational programmes to include patients, caregivers and healthcare professionals. It further involved providing patient support, in which patient empowerment was a key aspect of care. A teamwork approach was highlighted, in which 'two or more way' communication between nurses and other healthcare professionals was conducted. Finally, the use of the guidelines, such as the NICE and the NCF, was a vital approach to nurses to rely on in their practices as most of these guidelines were theory driven and evidence based.

3.4 Findings from the documentary review: case study 2- Kuwait

3.4.1 Guidelines-informed role of a nurse

The review of the international and local guidelines used in Kuwait was conducted for two reasons. Firstly, to gain a wider perspective on what the guidelines informed about the role of a nurse in diabetes care. Secondly, to corroborate the research findings in this chapter with the findings of the two case studies (UK and Kuwait) that investigated the actual role of diabetes nurses in both countries (see Chapters 5 and 6). The guidelines stated that nurses are required to provide patient-centred care in which patients' needs should be covered according to each individual patient.

3.4.1.1 Various practices informed by the guidelines

In Kuwait, it was found that the nurses used the guidelines as they provided guidance or a scenario for nurses about how they can, for instance, deliver diabetes care. However, some of these guidelines reflected general practices in which some were related to diabetes nurses, whilst others related to nurses in other specialties (see Table 7). For instance, whilst the IDF, ADA, and CDA covered a wide range of duties carried out by general healthcare providers working in diabetes care, the doctors' guidelines in Kuwait only addressed nurses' duties in diabetes care.

Some guidelines were evidence-based so as to ensure their quality, which is why they were suggested by doctors for nurses to follow in their diabetes care. For example, the IDF assured readers / users that their guidelines, which were established in 2005 and have been updated every five years from that time, are evidence-based and theory driven in the same way as the ADA and the CDA guidelines:

> *Provides a practical approach to promote the implementation of cost-effective evidence-based care in settings between which resources vary widely.* (IDF-MoH p.2)
>
> *Treatment decisions should be timely and founded on evidence-based guidelines that are tailored to individual patient preferences, prognosis, and comorbidities.* (ADA-MoH S17)
>
> *These strategies have the best evidence for improved outcomes and should be used: promotion of self-management, inter-professional team-based care ….* (CDA-MoH p.35)

Actually, some guidelines were updated within a 5-year period in order to ensure that new events and any issues arising were covered. For instance, in 2016 the IDF and the Diabetes and Ramadan (DAR) International Alliance jointly delivered comprehensive guidance about fasting during Ramadan. The IDF-DAR Practical Guidelines provided healthcare professionals with relevant information and practical recommendations to enable people with diabetes to participate in fasting during Ramadan (IDF 2015). Depending on the country, the daily fasting period may vary greatly during this period for the Muslim population, including diabetics, who fast from food and water during daylight hours. The IDF-DAR guidance aimed at minimising the risk of complications arising from diabetes and fasting:

> *The guidelines cover several key topics, including … nutrition advice, medication adjustment, and the implementation of recommendations.* (IDF-MoH p.84)

3.4.1.2 Patient education

It was identified that both the international and local guidelines covered a variety of education-related functions carried out by a nurse, including arranging for educational sessions that are structured, individualised, and in-group education with detailed descriptions about the education provided by nurses. Additionally, the guidelines specified about group education, in which the nurses were required to include patients with similar conditions in each session. Based on these guidelines, nurses were expected to undertake additional roles in health promotion by being involved in teamwork and providing suggestions and advice to patients on lifestyle modification and medications.

The international guidelines required nurses to arrange and provide the patient with structured, individualised and/or a group-based education addressing the patient's condition and needs. In this regard, nurses were expected to consider

patients' cultural backgrounds and beliefs, together with other issues related to their psychological and disability needs, in order to access the appropriate needs of the patients. Nurses were also expected to use techniques to facilitate education according to patients' learning styles, particularly those patients who have specific needs and requirements. The international and local guidelines covered a variety of functions of a nurse, including arranging for educational sessions that are structured, individualised, and in-group education with detailed descriptions about the education provided by nurses. Additionally, the guidelines specified about group education in which the nurses were required to include patients with similar conditions in each session. Based on these guidelines, nurses were expected to undertake additional roles in health promotion by being involved in teamwork and providing suggestions and advice to patients on lifestyle modification and medications.

The international guidelines required nurses to arrange and provide the patient with structured, individualised, and or a group based education on the patient's condition and needs. In this regard, nurses were expected to consider patients' cultural backgrounds and beliefs together with other issues related to their psychological and disability needs in order to access the appropriate needs of the patients. Nurses were also expected to use helpful techniques to facilitate education according to patients' learning styles, as mentioned before about patients who have particular needs and requirements. The guidelines that referred to patients with similar types of diabetes state that:

> *Structured patient education … group or individual education … ensure that education is accessible to all people with diabetes considering; culture, ethnicity, psychological, and disability issues, delivering education in the community or at diabetes local centres and in different languages … use techniques of active learning adopted to personal choices and learning styles … use modern communication technologies to advance the methods of delivery of diabetes education.* (IDF-MoH p.101)

This is:

> *According to patients with similar types of diabetes. (Doctors' guidelines-MoH)*

Nurses were expected to provide education to other healthcare team members, such as nurses from other units and hospitals:

> *Educate ward nurses and train nurses coming from other hospitals about the methods of health education and follow up with patients and all about diabetes. (Doctors' guidelines-MoH)*

Education provided to patients and other healthcare team members should cover healthy lifestyles, which should lead to controlled glucose levels, blood pressure, and lipid profiles. Nurses were expected to participate actively in providing education to cover these significant issues in diabetes care, which could minimise the negative impact of diabetes and other complications:

> *Advise people with type 2 diabetes that healthful eating will improve overall health; attain individualised glycaemic, BP, and lipid goals; achieve and maintain body weight goals; physical activity considerations … .* (ADA-MoH S73)

In some healthcare systems, nurses are enrolled on 'nurse prescribing' courses to become eligible to prescribe either for diabetes or other conditions, based on the nurse's speciality. This is not the case in Kuwait; according to the MoH nurses are not allowed to prescribe.

The international guidelines mentioned nurses' involvement in providing medication advice to most diabetes patients, including patients taking oral therapies or injectable therapies such as insulin. Nurses are expected to:

> *… provide guidelines for adjusting medications and insulin (IDF-MoH) and to help them to identify appropriate: sites for insulin injection and self-injection and rotation of sites of injection* (ADA-MoH S78).

In summary, the existing international guidelines clearly described the various duties expected of nurses in diabetes care clinics regarding meeting patients' needs. Nurses are expected to provide different education approaches that can be structured, individualised and/or in-group education, according to patients' styles of learning and needs. The guidelines further informed that the expected role of a nurse is to advise patients about their medications; both those that can be taken orally and those that are injectable.

3.4.1.3 Delivery of care

The documentary review of the guidelines identified that patient support was a significant factor in diabetes care. This issue of support included staff and healthcare providers creating a responsible relationship with patients so they could facilitate good delivery of care. This approach encouraged patients empowement to self-manage their diabetes.

It was noted that nurses involved in patient care were expected to provide the patient with support by creating and maintaining a good relationship with them. Nurses were also expected to address patients' issues and concerns and assist in resolving them whenever possible. Additionally, the nurses were expected to provide all aspects of diabetes control by providing information about diabetes in general and its complications.

To achieve better patient outcomes, the nurses need to share the plan of care with the patient so that they can agree and accept it. By involving the patient, the nurse creates a collaborative work environment, which encourages patient involvement in the plan of care. Patient empowerment allows patients to ask questions, so that they can express their needs and concerns:

> *encourage collaborative relationship, by actively involving the person with diabetes in consultation, and create opportunity for them to ask questions and express concerns beside addressing patients main issues; provide all aspects of diabetes control and complications to all people with type 2 diabetes; agree a care plan with each person with diabetes, review care plan as needed and modify it according to changes in wishes and circumstances; provide telephone contact between clinic visits.* (IDF-MoH p.15)

The international guidelines informed healthcare team members that they should uphold patients' rights to understand about managing their diabetes, and raise their awareness about the national associations from which they can expect to receive care. The healthcare team members also must ensure that patients become skilled in managing their diabetes and to understand their boundaries:

> *Consider how people with diabetes, acting as expert patients, and knowing their limitations, together with local/regional/national associations, might be involved in supporting the care delivery of their local health-care team.* (IDF-MoH p.15)
>
> *Self-management of blood glucose should be linked with a strtuctured educational and therapeutic program designed to facilitate behaviour change for improving blood glucose levels.* (CDA-MoH p.50)

3.4.1.4 Patient empowerment

The international guidelines recommended that nurses be involved in encouraging and supporting patients to develop self-management strategies so that they become knowledgeable about their own care. Additionally, the international guidelines also proposed that the patient should have knowledge about other conditions that result from uncontrolled diabetes. Therefore, nurses

need to follow their patients even when they are admitted to a ward in order to keep in contact with them regarding their diabetes status:

> *encourage self-management of diabetes (food choice, self-monitoring, insulin dose adjustment where appropriate); ensure awareness of special risks to people with diabetes during hospital procedures, including risks; provide guidelines driven care to ensure detection and immediate control of hyperglycemia for anyone with a presumed acute coronary event or stroke; Daily ward rounds to follow up with diabetes patients.* (ADA-MoH S84)

3.4.1.5 Multidisciplinary work

One of the significant factors described in the guidelines is a teamwork approach, in which nurses who provide diabetes education should be adequately trained to meet their patients' expectations:

> *Use an appropriately trained multidisciplinary team to provide education to groups of people with diabetes, or individually if group work is considered unsuitable.* (IDF-MoH p.15)

Based on this recommendation, nurses are required to work collaboratively with other healthcare professionals to demonstrate knowledge about a teamwork approach. The teamwork model was highlighted in the majority of the guidelines, which included interacting with other team members at the clinic to accomplish their duties and tasks recommended by doctors:

> *Communicate with other healthcare professionals; perform other tasks advised by the direct consultant.* (Doctors' guidelines-MoH)

This multidisciplinary teamwork approach can contribute to better patient education and care through using a:

> *... multidisciplinary care team approach to maintain professional education to patients.* (IDF-MoH p.15)

A teamwork approach will assist healthcare professionals and staff to communicate about patients' health concerns or findings, in addition to considering the involvement of patients with diabetes. This will consequently lead to improved patient care, as the members of the team can brainstorm some of the issues that might impact positively on patients' experiences and outcomes, in particular patients with complex needs or conditions:

> *Discuss the outcomes and clinical implications with the person with diabetes, and communicate findings to other team members where appropriate.* (IDF-MoH p.27)

> *Patients in need of foot care … a specialist foot-care team will include staff with educational skills (usually podiatrists or trained nurses).* (ADA-MoH S58)

In addition to the above recommendations, the international guidelines described teamwork as an important approach in diabetes care, with the CDA guidelines encouraging an inter-professional approach in order to support the management of diabetes:

> *Inter-professional team-based care with expansion of professional roles, in cooperation with the collaborating physician, to include monitoring or medication adjustment and disease management ….* (CDA-MoH p.35)

The above suggestions provide useful guidance for the organisation of care in diabetes management, together with the further suggestion by the CDA that:

> *The use of inter-professional teams which could include … diabetes educator, dietician, nurse, pharmacist, and other specialists* (CDA-MoH p.35).

The CDA however, identifies 'nurse' and 'diabetes educator' as team members, which strengthens the debate about the lack of specifically designed guidelines for nurses in Kuwait. Actually, nurses are advised, according to the guidelines, to practice performing the various responsibilities in the delivery of care. For instance, the IDF highly recommends the use of:

> *… guideline driven diabetes care to deliver care plans* (IDF-MoH p.28).

3.5 Summary of the international, national, and local guidelines

While there are differences between the guidelines used within each case study, most of the guidelines are patient-focused, which should be their purpose whether they are international, national, or local. For clarity and reinforcement of this point, I went through each set of guidelines individually and created a table that includes the recommendations suggested by the guidelines (see Table 7). The next section discusses the guidelines identified in each case study, in the light of the points identified in Table 7. This table included the recommendations suggested in diabetes care as stated in the international, national and local guidelines revised in the two case studies.

3.5.1 National and local guidelines in the UK

Whilst the national and local guidelines in the UK were established for nurses, the NICE guidelines were established for general healthcare providers working in diabetes care. Actually, the general recommendations in the NICE guidelines can make nurses unsure about which particular recommendations are directed towards them. Both the national and local guidelines encouraged nurses to rely on the guidelines, as they are evidence-based and have been derived from international guidelines, such as those of the ADA. However, some of the guidelines such as the NCF, the RCN and the NDSAG, need to be updated as they were published between 2005 and 2006. These dates indicate that the guidelines lack of up-to-date, evidence-based recommendations.

In examining Table 7, it can be noted that most of the recommendations suggested in the national and local guidelines in the UK are common across the guidelines, except those of the RCN. Although the RCN guidelines included important general recommendations, which have been suggested by most of the guidelines, they neglected to offer particular recommendations and consideration of the role that can be specifically accomplished by nurses working in diabetes care. Interestingly, the three national guidelines, which are considered evidence-based, neglected to make any significant recommendations about caring for newly diagnosed patients with type 2 diabetes. This type of care is stated in the local guidelines of the NDSAG. However, the NDSAG guidelines do not list patient self-care promotion as an important suggestion in terms of being cost-effective. While 'providing patients with psychological support' was mentioned in the three national guidelines (NCF, NICE, RCN), the NDSAG guidelines do not support this point. It can be concluded that patients with diabetes need physical, medical and psychological support, as they might have anxiety or other issues related to fear of needles and symptoms of hypoglycaemia.

Table 7 Suggested recommendations in the guidelines about diabetes care

Guideline recommendations	UK Guidelines				Kuwait Guidelines			
	NCF	NICE	RCN	NDSAG	IDF	ADA	CDA	Doctors' Guidelines
Screening, prevention and early detection for diabetes	✓		✓	✓	✓	✓	✓	✓
Newly diagnosed patient with type 2 diabetes advice: activity, lifestyle, weight management				✓	✓	✓	✓	✓
Promoting self-care/self-management/ patient empowerment	✓	✓	✓		✓	✓	✓	✓
Mental health/psychological support	✓	✓			✓	✓	✓	
Nutrition- dietary advice	✓	✓		✓	✓	✓	✓	✓
Urine monitoring	✓	✓			✓			
Blood glucose monitoring	✓	✓		✓	✓	✓	✓	✓
Oral therapies	✓	✓		✓	✓	✓	✓	✓
Injectable therapies/ insulin adjustment	✓	✓		✓	✓	✓	✓	✓
Hypoglycaemia or and hyperglycaemia/ glycaemic control	✓	✓		✓	✓	✓	✓	✓
Intercurrent illness	✓	✓			✓			
Managing diabetes in the hospital/ In-patient care	✓	✓	✓		✓	✓	✓	✓
Hypertension and coronary heart disease	✓	✓	✓		✓	✓	✓	✓
Neuropathy/complications of diabetes	✓	✓	✓	✓	✓	✓	✓	✓
Nephropathy/complications of diabetes	✓	✓	✓	✓	✓		✓	✓
Retinopathy/complications of diabetes	✓	✓	✓	✓	✓	✓	✓	✓

Guideline recommendations	UK Guidelines				Kuwait Guidelines			
	NCF	NICE	RCN	NDSAG	IDF	ADA	CDA	Doctors' Guidelines
Erectile dysfunction					✓		✓	
Foot problems/ foot care				✓	✓	✓	✓	
Patient education	✓	✓	✓	✓	✓	✓	✓	✓
Provide education to other healthcare providers			✓					✓
Older people					✓	✓		
Guidelines are specified to nurses	✓		✓	✓				✓
Guidelines are specified to healthcare providers for diabetes care		✓			✓	✓	✓	

3.5.2 International and local guidelines in Kuwait

The international guidelines followed in Kuwait are up-to-date (Dasman Institute 2015), which makes them evidence-based and theory driven. They are based on the Chronic Care Model (CCM), which is a professional model of care provision for patients with long term conditions (Wagner et al. 1996). In Kuwait, the local guidelines were established when nurses began providing diabetes care.

The local guidelines, when reviewed, provided most of the recommendations mentioned in the international guidelines; however, they did not include relevant criteria under each major recommendation. Interestingly this omission might be considered as being beneficial, in that nurses have the opportunity to refer to the international guidelines which are up-to-date, thereby preventing the adoption of out-of-date practices. It is important to consider that guidelines are to guide and nurses are not restricted to follow advice provided by any particular set of guidelines.

Despite the limited number of recommendations and advice included in the local guidelines, the international guidelines can be seen as too general; they include broad advice and recommendations without being explicit as to what should be accomplished by which team member working in diabetes care. This lack of specificity might result in nurses misunderstanding which recommendations pertain to them and which are not for them to follow.

It can be also noted in Table 7 that the local guidelines in Kuwait, established by doctors, included most of the needed recommendations suggested by the international guidelines. However, there are exceptions in three areas: one is related to the nurse's role, while the other two relate to needed medical interventions. The first issue relates to providing foot care, which may be neglected in the local guidelines in Kuwait. Actually, this can be seen as a work-load related relief, as it enhances the spirit of distribution of work amongst staff. The other recommendations that need medical intervention are (1) care for patients with erectile dysfunction and (2) older people with diabetes. These patients need more advanced work which might not be included under the scope of a nurse's role, as these two interventions are not suggested in the other national and international guidelines.

3.6 Similarities and differences between the documentary reviewed in both case studies

This section contains a discussion on the similarities and differences between the guidelines used in the UK and those used in Kuwait. In the UK, the guidelines were mainly established for nursing bodies who work in diabetes care, although other healthcare professionals were involved in the establishment and the implementation of some of these guidelines. In Kuwait, although the international guidelines do not specify the nurse as a contributor in providing diabetes care, a similarity with the NICE guidelines which are not designed specifically for nurses. None of the UK national and local guidelines use the basic general term 'nurse'; however, they use more specific terms including 'practice nurse', 'nurse working in diabetes care', 'nurse consultant', 'competent nurse' etc. The IDF and the ADA use both the terms 'nurse' and 'diabetes educator'. Interestingly, the CDA also uses the term 'diabetes educator' as being different from 'nurse', which indicates that diabetes educators are not only nurses but also other healthcare providers with the possibility that nurses are included.

The specification for nurses in the UK, in some of the guidelines, might be related to the need to nurses contributions as well as the powerful influence of the nurses' organisation in the UK - the RCN. The healthcare system in the UK is large, and in the process of continuous development, and nurses in the UK have authority and autonomy in their profession. In Kuwait, few nurses have higher qualifications (Al-Otaibi 2007). Personnel with higher level qualifications can have influence in healthcare systems as a result of their expertise (Aiken et al. 2011), so they could contribute to implementing change in the current healthcare system to optimise patient care.

The ADA gives direct instruction for each patient's condition, although there was no specification for which recommendation a nurse needed to follow. The ADA provides a set of guidelines for basic diabetes care without instructions for other more complicated cases, such as those patients with complex needs or conditions, who are better referred to specialists. This point is significant as it can encourage staff members to refer patients, who they do not know how to manage, to more knowledgeable experts. For instance, there is a recommendation for providing care for patients with erectile dysfunction, which was only listed by the IDF and the CDA guidelines (see Table 7). This might be related to the need for these patients to be referred for more specialist care for this particular issue. Actually, this type of care was not listed in any of the UK

guidelines; an omission which indicates the need for these patients to receive specialist care. Equally, providing care for older patients, which is only listed in the ADA and the IDF (see Table 7), might be related to the fact that these patients are likely to develop other conditions as a complication of diabetes (ADA 2010), or as a result of getting older (Levin 2001). Patients with complex needs require more advanced care that often involves medical interventions (Inzucchi et al. 2012).

In contrast, the UK guidelines cover nurses' roles which are more detailed than the international guidelines used in Kuwait. For instance, the NCF, the RCN and the NDSAG are national guidelines that are specifically designed for nurses in diabetes care. However, these UK national and local guidelines were fundamentally derived from three sources: the NICE guidelines, the ADA guidelines and the IDF guidelines. Two of these three major sets of guidelines are used in Kuwait, which indicates the proficiency of diabetes care that is followed there. The researcher identified that although the ADA was established in the USA, the largest section of its global members was from the UK, seven out of 25 members; these numbers indicate the UK's contribution to the establishment of the ADA guidelines. The remaining members included three from the USA, three from Australia, two from India, two from the Netherlands, Italy, Colombia, Denmark, Argentina, Cameroon, Tanzania, Switzerland, and Belgium. Basically, this distribution of members might give strength to the UK guidelines, in terms of diabetes care, as the majority of the members involved in developing the guidelines were from the UK. However, in the CDA the majority of its committee members who developed the CDA guidelines were from Canada.

The IDF, ADA, CDA, and NICE members developed their organisations' guidelines to become a source of information to members in healthcare systems in which those members gather, derive and implement the practices that are applicable to their own specialities. For instance, medical staff might derive and establish guidelines from the international and national guidelines that are only relevant to their practice, as is the same with other specialities. For nurses, the same thing happens but with some contributions from medical staff, as the latter group is more knowledgeable about these guidelines and they are more specialised in biological and physiological factors that relate to disease conditions than are the nurses. However, for the NDSAG, most of the staff who contributed to the establishment of these guidelines were nurses.

For national and local guidelines to support effective depth of practice, both medical input and highly qualified personnel input are needed. For example, the CDA guidelines were established after appropriate utilisation of methods and methodologies and went through extensive stages of peer review, auditing and international external examination. The CDA provides extensive templates and samples to be used by healthcare providers for diabetes care (see Table 8, CDA 2013). The guideline document provides information and advice regarding care, objectives and targets to meet the needs of patients with T2D. Additionally, the IDF and the CDA guidelines are continuously updated: the IDF every five years.

The doctors' guidelines in Kuwait, established in 2003, specifically for nurses working in diabetes care, were not established after rigorous research or evidence-based practice, but the construction was informed by the areas that needed to be covered in diabetes care.

The IDF is mostly evidence-based, as their standards are implemented and put into action after robust research and consultations with multiple disciplines being involved (see IDF 2015). Overall, the major gap in the international guidelines is identified as '*the lack of specification of a nurse's role'* as evidenced in the literature (Llahana & Hamric 2011); nurses make major contributions to diabetes care. Therefore, effort is required to establish specifically designed guidelines for nurses.

Table 8 The CDA guidelines for type 2 diabetes

Care	**Objective**	**Target**
Self-monitoring of Blood Glucose	Ensure patient can use glucose meter, interpret results and modify treatment as needed. Develop a blood glucose monitoring schedule with patient and review records.	Premeal (mmol/L)=**4.0-7.0 mmol/L for most patients** 2hr postmeal (mmol/L) =**5.0-10.0 mmol/L for most patients 5.0-8.0 mmol/L** if not achieving A1C target
Blood glucose control	Measure A1C **every three months** for most adults. Consider testing at least every 6 months in adults during periods of treatment and lifestyle stability when glycemic targets have been consistently achieved.	A1C ≤**7.0% for most patients.** individualized based on life expectancy, functional dependency, extensive coronary artery disease at high risk of ischemia, multiple comorbidities, recurrent sever hypoglycemia, hypoglycemia unawareness, longstanding diabetes unable to achieve A1C ≤ 7% despite best efforts (including intensified insulin)
Hypoglycemia	Enquire about hypoglycemia at each visit. Discuss recognition at treatment of hypoglycemia and	Avoidance of hypoglycemia especially in the elderly, those with hypoglycemia unawareness, and

Care	Objective	Target
	risk/ benefit of hypoglycemia and pharmacologic management.	those with criteria for less stringent control.
Blood glucose meter accuracy	Meter results should be compared with laboratory measurements at least **annually,** and when indicators of glycemic control do not match meter.	Simultaneous fasting glucose/meter lab comparison within **20%**
Hypertension	Measure BP at **diagnosis and at every diabetes clinic visit.**	**<130/80**
Waist circumference	Measure as an indicator of abdominal fat.	Central obesity defined as: WC **M≥102cm W≥ 88cm** (North America) WC **M≥94cm W≥80cm** (Europids; Middle-Eastern; Sub-Saharan African; Mediterranean) WC **M≥90cm W≥80cm** (Asian; Japanese; South and Central Americans)
Body Mass Index (BMI)	Calculate BMI (mass in kilograms/height in metres^2).	Healthy body weight targets: **BMI: 18.5-24.9**
Nutrition	Encourage nutritional therapy (by a registered dietitian) as an integral part of treatment and self-management.	Meet nutritional needs by following **Eating Well with Canada's Food Guide**
Physical Activity	Discuss and encourage aerobic and resistance exercise. Evaluate those with possible CAD or microvascular complications undertaking exercise substantially more vigorous than brisk walking.	Aerobic: **≥150 minutes/week** Resistance: **3 sessions/week**
Smoking	Encourage patient to stop at each visit; provide support as needed.	**Smoking cessation**
Chronic Kidney Disease (CKD)	Identification of CKD requires screening for **proteinuria** using random urine **ACR** (2 out of 3 sample over 3 mths) and **assessment of renal function** using a serum creatinine converted to **eGFR. Type 1 diabetes**-screen at 5 years duration and then annually if no CKD. **Type 2 diabetes**-screen at diagnosis and then yearly if no CKD.	**Normal ACR <2.0 mg/mmol** **Normal eGFR >60 mL/min**
Retinopathy	**Type 1 diabetes**-screen 5 years after diagnosis, then rescreen annually **Type 2 diabetes**-screen at diagnosis and 1-2 years after initial screening if no retinopathy is present. The interval follow-up	

Care	Objective	Target
	assessment should be tailored to the severity of the retinopathy. Screening should be conducted by an experienced eye care professional.	
Neuropathy/Foot Examination	**Type 1 diabetes**-Screen 5 years duration and annually **Type 2 diabetes**-Screen at diagnosis, then annually Screen for neuropathy with 10-g monofilament or 128 Hz tuning fork at dorsum of great toe. In foot exam look for: structural abnormalities, neuropathy, vascular disease, ulceration, infection.	Early detection and treatment. If neuropathy present: require foot care education, specialized footwear, smoking cessation. If ulcer present: manage by multidisciplinary team with expertise.
Coronary Artery Disease (Saaddine et al.)	**Conduct CAD risk assessment periodically:** CV history, lifestyle, duration of DM, sexual function, abdominal obesity, lipid profile, BP, reduced pulses, bruits glycemic control, retinopathy, eGFR, ACR.	**Vascular Protection:** First priority in prevention of diabetes complications is **reduction of cardiovascular risk by vascular protection** through a comprehensive multifaceted approach **All people with DM:** optimize BP, glycemic control and lifestyle **Statin if:** age ≥40 years OR macrovascular disease OR microvascular disease OR long duration or DM (DM>15 years and age>30 years) **ACEi or ARB if:** age≥55 years OR macrovascular disease
Dyslipidemia	**Fasting lipid levels (TC, HDL, TG and calculated LDL)** at diagnosis, then yearly if treatment initiated.	Lipid targets for those who need therapy: **Primary target: LDL≤2.0 mmol/L or ≥50% reduction** **Alternate Primary target: apo B≤0.8 g/L or non-HDL-C ≤2.6 mmol/L**
Care objectives: People with diabetes will have better outcomes if primary care providers 1) identify patients in their practices 2) encourage self-management and use interdisciplinary team approach to attain care objectives 3) schedule diabetes-focused visits 4) use diabetes patient care flow sheets and systematic recall.		

3.7 Chapter summary

This chapter represented the strategies followed in selecting the guidelines that inform the role of nurses in T2D care. The chapter showed the types of guidelines that were followed in each case study, some being designed for nurses and others included general recommendations with lack of specification as to who each recommendation related to. Guidelines in both case studies were found to

stem from a major guideline that included all the recommendations followed in each case study. Comparison between the revised documents relating to each case study were carried out.

The next chapter contains a detailed discussion of the methodology and methods of conducting the current study.

Chapter 4: METHODOLOGY AND METHODS

4.1 Introduction

This chapter contains the methodological issues pertaining to the study. It will set out the aims and objectives of the study and then explain the philosophical underpinnings that were taken into consideration when selecting case study as the methodology for the study. In addition to exploring the various aspects of the case study methodology, this chapter discusses the possibilities and challenges in using this research model. The chapter then reflects on the experiences of using case study methodology for data collection.

The issues discussed are: recruitment, obtaining research related consents and conducting interviews with the nurses and diabetic patients. Also, discussed, in the later part of this chapter, is the process of data analysis, in which I deliberate on the appropriate choice to execute this process.

4.2 Aims and objectives

Patton (2005) emphasised the need to clarify the research purpose first to assist in choosing an appropriate research design and methods. The aims of this research are: (1) to investigate the actual roles undertaken by nurses in T2D care, (2) to investigate the extent to which these different roles affect the quality of nursing care as perceived by T2D patients, (3) to investigate / review the guidelines that are used to guide the practice in the provision of diabetes care in the UK and Kuwait, and (4) to evaluate if nurses are delivering care based on these guidelines.

Objectives:

1. to explore the role of nurses in diabetes clinics in the UK and Kuwait.
2. to compare what the guidelines inform about the role of a nurse and actual roles of nurses in T2D care within diabetic clinics in the UK and Kuwait.
3. to understand how the difference between the guidelines-informed ideal role of a nurse, and their actual role in the real world, impacts on perceived quality of nursing care.
4. to identify how aspects of the actual nursing role impact on patients' perceptions of nursing care.

5. To conduct cross-case analysis based on comparison of the two case studies findings.

4.3 Philosophical underpinnings

4.3.1 Critical realism

I considered adopting critical realism as the philosophical underpinning for this research. Critical realists believe that reality does not exist independently from our knowledge (Benton & Craib 2011), but it can be empirically achieved, though individuals might be unable to observe or recognise this reality as their knowledge about it might be weak. Critical realists admit that: “Social phenomena are intrinsically meaningful and hence that meaning is not only externally descriptive of them but constitutive of them. Meaning has to be understood, it cannot be measured or counted and hence there is always an interpretive or hermeneutic element in social science” (Sayer 2000 p.17).

This thesis focuses on exploring and explaining different perspectives regarding the quality of nursing care and how it is perceived from each individual's, patients and nurses point of view which is considered the actual context, which critical realists believe in. Critical realists acknowledge that the world does not simply fit into our perceptions and experiences (Wynn & Williams 2012). Bhaskar (2013) introduced two sides of knowledge: one produced by man and the other not. Bhaskar suggests that people in their social activity "build knowledge in the same way they build things, on the other hand knowledge not produced by man is ‘of’ things, such as the specific gravity of mercury, the process of electrolytes, the mechanism of light propagation; none of these ‘objects of knowledge’ depend upon human activity” (Bhaskar 2013 p.11).

Critical realists argue that “in both everyday life and social science, individuals frequently explain things by reference to causal powers” (Sayer 2000 p.14). In this context understanding a) the actual role of nurses, b) the different approaches nurses follow in diabetes care and c) how the nurse's role is perceived by patients are shaped by Bhaskar’s views about building knowledge. Each individual participant holds his/her own perceptions about the role of nurses, which was the main phenomenon explored in this research. Based on this exploration other things were taken into consideration, such as the patients' perceptions about the quality of nursing care.

This current study has complexities, in terms of the multiple sources of information from two countries with different healthcare systems. These complexities are explained by the views of critical realists who seek to develop causal explanations of complex procedures (Dobson 2001; Easton 2010). Critical realism is considered the most appropriate approach in case study research to answer queries such as: what is the link to the phenomenon to be researched? (Easton 2010). In order to differentiate the stages of social reality, Bhaskar stratified the ontology of critical realism including the actual, the empirical and the real, encompassing actions, mechanisms and experiences correspondingly (Easton 2010). The actions, mechanisms and experiences are best explored by understanding nurses' actual actions empirically and by exploring patients' understanding and perceptions about nurses' actions and understanding how the different aspects of the nurse's role impact on the quality of care provided. Therein, the epistemological relevance for using critical realism was not only to describe the actual setting of T2D care but also to identify areas that contribute to the needed aspects in nursing care.

4.4 Research paradigms

In the current study, reality does not exist independently from the researcher's knowledge of it, but it can be explored and understood by using different methods in research. As identified in the literature review, what roles nurses are actually playing in diabetes care, and whether they are practicing according to what has been recommended and informed by the guidelines, is complex and subjective. In addition, factors impacting patients' perceived quality of nursing care cannot simply be reduced to measurable components. A research paradigm relies on ontological expectations, description or the nature of the truth or reality and epistemology, which is how this reality can be known. For instance, for positivists reality is external to the person and can only be achieved by using measurement tools (Redfern & Norman 1999) or by the means of empirical observation (Guba & Lincoln 1994). Thus positivists believe that there is an external reality and this reality is constant (Johnson & Onwuegbuzie 2004). Therefore, positivist researchers emphasise empirical observation to enforce some control and to decrease bias and maximise reliability and validity of the research (Creswell 2009).

Quantitative research draws on positivist ontologies, which focus on objective measurements and the statistical or numerical analysis of the collected data, via

surveys and questionnaires (Gunter 2002). Positivism might lack the needed support for in-depth investigation of individuals and their behaviours. Consequently, to quantify the quality of nursing needed to perform at an optimal level of caring, based on patients' and nurses' perceptions and expectations, was considered unlikely to be achieved by a positivist paradigm.

Qualitative research on the other hand, draws on the constructivist/interpretivist paradigm (Lather 1992) in which there is a belief that there is no absolute truth (Maxwell 2005) and reality cannot be studied empirically but can be achieved by interpretations, as it is socially constructed (Snape & Spencer 2003) by the means of interactions with others (Patton 2002). The epistemology of interpretivists tends to rely on exploring and explaining the truth according to its context (Miles & Huberman 1994; Mays & Pope 1996). Therefore, knowledge is generated inductively (Pope et al. 2000; Patton 2005) and greater understanding of this knowledge results from the investigation of multiple perspectives (Creswell et al. 2007).

The interpretivist standpoint was therefore chosen to underpin the current study, as it has an impact on the research methodology and later on the interpretation of the study's findings (Johnson & Onwuegbuzie 2004). Furthermore, the interpretivist stance supported the current research aim and objectives by allowing the exploration of the multiple perspectives of nurses and patients in T2D care, through interviews and observations conducted within the naturalistic settings of diabetes clinics. However, there are some drawbacks in the interpretivist approach. There is a lack of objectivity and there are constraints regarding the generalisation of study findings (Walsham 2006), in addition to the influence of the potential bias of the researcher (Mays & Pope 1995). I was aware of these drawbacks presented in the interpretivist approach and therefore I adopted multiple sources of data collection, in order to create an in-depth understanding of the study's findings.

4.4.1 The study's position: qualitative

Guba and Lincoln (1994) suggest that human behaviour lacks value without referring to the meanings and purposes attached to that behaviour; individuals add meaning to their life experiences to develop their social reality. Individuals attach meaning, views and perceptions to the phenomenon being studied (Mays & Pope 1995). Therefore, qualitative information is recognised as a source of rich insights into human behaviour and action. In contrast with research

methodologies that deal with measures and statistics that give numerical data (Creswell & Clark 2007), qualitative research looks for processes, thoughts and meanings (Mays & Pope 1996; Denzin & Lincoln 2008). In the current study, an in-depth understanding about the different roles played by nurses in the real-life settings of diabetes clinics needed to be achieved and this was done by employing a qualitative approach.

Qualitative methodology can be considered a multiple system, which accommodates multiple approaches. It brings an interpretivist, naturalistic approach to its subject matter in which the researcher studies issues in their natural settings so as to make sense of, or to interpret, the issues and attach meanings proposed by individuals to those issues (Jones 1995). Based on the study's research question, aims and objectives, a qualitative methodology was considered to be the most appropriate, as the study sought to investigate individuals' actions and behaviours in social surroundings (Patton 2005). A qualitative approach was therefore employed as that model is known to produce rich and in- depth understanding of a social phenomenon in its natural context (Mays & Pope 1995; Sandelowski 1996).

4.5 Research approaches

Maxwell (2005) suggests that research questions, findings and conclusions would be reasonably connected when the researcher follows logical steps in choosing the appropriate research approach. There are a variety of qualitative approaches that could have been employed in this study, such as ethnography, grounded theory (GT), phenomenology and case study (Creswell 2007). Ethnography is about investigating the way of life of groups of people and understanding their life styles and behaviours, while being actively involved and participating with people via observations (Atkinson & Hammersley 1994; Berg & Lune 2004). Whilst the current research included observations of different participants' interactions and communications in diabetes clinics, I was neither actively involved nor participating, thus ethnography was rejected as inappropriate for use in this study.

Corbin and Strauss (2008) emphasise that GT aims to develop a theory that is rooted in systematically gathered facts and analyses and deals with perceptions, which perhaps are considered as an issue to be studied. However, the main focus of this research was not about theory development. This research was considered exploratory, as it sought to investigate a phenomenon (Barnard et al. 1999), by

understanding human experiences and perceptions; therefore, GT was not a suitable design for this study. Phenomenology aims to describe a phenomenon without preconceived perspectives; however, I had previous knowledge about the role of nurses and therefore, at least in theory, preconceived perspectives.

A case study involves a rigorous investigation of a particular case or a small set of cases (Gerring 2004; Yin 2011). It can be employed within a wide range of methods and methodologies; for instance, it can be used within the positivist or interpretivist paradigms and a variety of data collection methods can be used (Stake 1950; Creswell 2013; Yin 2014). This ability of the case study to accommodate a wide range of methods and methodologies enhances a study's strengths and minimises flaws. This gives the case study the potential to cover multiple realities (Eisenhardt 1989). In addition, Yin (2011) argues that case study permits flexibility between paradigms in case the researcher needs to defend the philosophical choices for including multiple research methods.

However, the variations between the available case studies can make it difficult for researchers to understand and describe the case study as a methodology (Baxter & Jack 2008). There has been debate about whether case study can be used as a fully integrated approach (Eisenhardt 1989) or a single method which makes the generalisation of research results unachievable (Flyvbjerg 2006); an outcome which is the case in most qualitative studies. Eisenhardt (1989) and Merriam (1998) confirm that case study can be used as a 'self-contained' independent methodology. It includes its own methods, components and techniques (Yin 2014). In line with this debate, case study experts define the case study approach differently. For instance, whilst Stake (1995) suggests that the case study can be defined by the presentation of the case, rather than the presentation of the methods used, Eisenhardt (1989) defines the case study as a methodology that ends up building theory. Yin (2014) defines case study as:

> *An empirical enquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between the phenomenon and context are not clearly evident* (Yin 2014 p.18).

Case study design has several limitations. It is not possible to generalise the results to the wider population because we can never know whether the case we have investigated is representative of the wider body of "similar" instances, prone to bias because researchers' own subjective feeling may influence the case study, a lot of data depends on the interpretation the researcher's places on the

information acquired. This means that there is a lot of scope for observer bias and it could be that the subjective opinions.

Yin (2014) suggests that case study does not support generalisation, lacks rationalisation about how things occur the way they do, and consumes a vast amount of time and resources to finish a single case study or small number of cases. The differences in perspectives on case study methodology may prevent researchers from developing a mutual understanding of practice and rigour (Hyett et al. 2014). Data collection and analysis in case study design mostly depend on the researcher's background and way of interpreting things (Yin 2014), both of which will impact the validity of the research and limit the overall rigour of the study (Morse, 2011). However, if the study uses triangulation to gather data, this option will strengthen the validity of the study (Yin 2014). Figure 5 illustrates how case study research allows for explanation, which is in line with a critical realist approach from Sayer (2000).

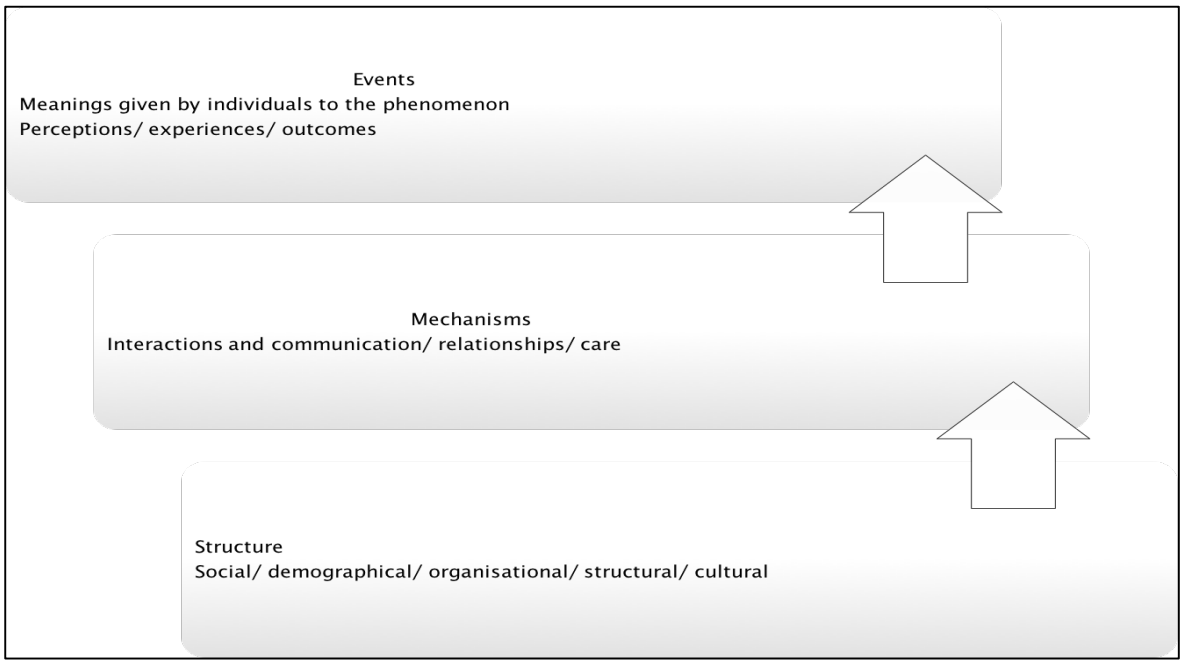


Figure 5 Critical realist's view of in-depth explanation in case study

4.5.1 Case study approach in the current study

A case study was considered to be the most appropriate approach for the current research. This approach is "compatible with qualitative approaches that share an underpinning belief of contextual holism" (Luck et al. 2006 P.105). In the healthcare context, organisational case studies have been found to permit understanding of the role of micro and macro level organisational factors, such as

the two healthcare systems being explored in the current study, with a focus on improved quality of diabetes care (Baker, 2011). In fact, the case study has become a popular research method and is widely used in nursing research (Baxter & Jack 2008). Sandelowski (1996) recommends it as the preferred approach to enhance understanding of the 'one'; the model being instigated in order to serve an explicit purpose. In this case, the 'one' is the diabetes nurse and the purpose is to explore her/his role in T2D care. Thus, qualitative case study in this research will offer a holistic and in-depth understanding of complex real life issues.

A case study approach facilitates the collection of detailed information about a phenomenon in its natural setting, allowing the researcher to develop a rich understanding of the issues under investigation (Ruddin 2006). Additionally, case study can provide a useful approach to explore questions of 'How' events; results can be understood and explained, as well as 'What' happens (Yin 2014).

Both Denzin (1994) and Yin (2014) suggest that the case study is effective, especially when used to study a contemporary phenomenon in its natural setting, where the concentration is on recognising the dynamic interaction between two different individuals or phenomenon in that setting. This study seeks not only to describe the reality of nurses' roles in providing diabetes care but also to explore the different approaches that nurses use to perform their roles, and how these different approaches impact on the quality of care those nurses provide.

A multiple case study allows the researcher to investigate differences within and between cases, as the target is to reproduce findings across cases (Baxter & Jack 2008). Likewise, Yin (2014) considers the findings of multiple case study design as more convincing and robust than those from a single case study. Therefore, a detailed case analysis will be carried out. This will include analysis of data sets for each single case, followed by cross case analysis (Stake 1995).

According to Stake (1995) case study can be demarcated by explicit and tangible emphasis of importance, in which the research is bounded by its specificity, but permits the phenomenon to be examined from multiple sources of information and multiple perspectives within a natural setting. The case study approach is known to be used by critical realists to collect data through multiple methods and multiple data sources. In the current study the methods are interviews, observations, and documentary review; the data sources focus on nurses and patients.

There are three variations of the case study model: the single instrumental case study, the collective or multiple case studies, and the intrinsic case study. Stake (1995) suggested that a single instrumental case study is when the researcher focuses on an issue or concern and then selects one case to illustrate this issue. In a collective or multiple-case study, the researcher again selects one issue or concern but also selects multiple case studies to illustrate the issue. The researcher might select several programmes from several research sites or multiple programmes within a single site. Often the researcher purposefully selects multiple cases to show different perspectives of the issue of interest. Yin (2011) suggests that the multiple case study design uses the logic replication where the procedures are replicated for each case. As a general rule, qualitative researchers are reluctant to generalise from one case to another because the contexts of cases differ. The final type of case study is the intrinsic model, in which the focus is on the case itself, such as evaluating a programme (Stake 1995). The intrinsic case study type can be adopted when the researcher tends to study a case that he/she needs to better understand.

In summary, there are two case study approaches in qualitative research: the first, proposed by Stake (1995) and Merriam (2009), is situated in a social constructivist paradigm. The second proposed, by Yin (2014), is situated in a post-positivist context. Yin considers that cases can be individuals or organisations, while Stake considers that case study can only be a thing or people. In my research, the case is the role of nurses in T2D care and patients' perceptions of these roles and the units of analysis are the nurses and patients at the diabetes clinics in two settings. Therefore, I can rely on various schools of thought regarding case study approaches.

It is crucial in the multiple case study approach to sensibly choose cases, as comparisons and contrasts will be drawn (Yin 2014). There is frequent debate about identifying what is 'the case' in the case study approach (Stake 1995; Yin 2014). Stake (1995) asserts the need for a bounded case; if the case is unbounded, the study will become unmanageable. He identified three types of case study: 1) *intrinsic*, used when the researcher wants to study a case that is remarkable, in order to better understand it; 2) *instrumental,* used to explore an issue in-depth through investigating a case or multiple cases, and 3) *collective*, used to explore the differences between cases. Yin (2014) identifies the case as a unit of analysis and advises avoidance of unbounded cases that are not clearly identified. Yin (2014) suggests that case study can be either *single* that includes

only one case or *multiple* that includes more than one case. Yin (2014) presented three types of case study: (1) *explanatory*, which explains the cause and effect in complex phenomena that are not explored by surveys or experimental methods; (2) *exploratory*, which explores a phenomenon that lacks clear outcomes; and (3) *descriptive*, which describes a phenomenon in its context.

For the current research, an instrumental case study model was adopted to satisfy the need for in-depth understanding of an issue and an interest in obtaining insight into the question (Stake 1995). The instrumental case study approach will allow the research to concentrate on exploring the role of nurses in the provision of diabetes care and by investigating multiple cases will allow me to examine the phenomenon of interest in different contexts. The instrumental case study model was employed in this study in order to try to understand a specific issue: the nursing care offered in T2D clinics in the UK (via the NUH) and in Kuwait (via the MoH). The reason for choosing this type of case study model was based on Stake's (2005) argument that instrumental case study presents an approach that investigates the area to be studied and helps the researcher to recognise what has been previously investigated; these outcomes can be achieved by exploring the area as a case within its natural context.

Stake (2005) further adds that multiple-case study design is suitable for recognising the area to be studied as a whole, but within different contexts. In Yin's (2014) definition of case study this current research is an exploratory case study, as it is focused on the bounded and explicit phenomenon of the differences between what nurses are actually doing and what is their role, as informed by the guidelines, together with an investigation of how the differences impact on patients' and nurses' perceptions of the quality of the nursing care provided. Thus, this approach allowed for a detailed and in-depth investigation about the actions of nurses in diabetes clinics, the impact of the different actions on perceived quality of nursing care. Furthermore, this research option makes it possible to generate data from multiple perspectives.

The exact number of case studies that should be adopted in research is not precisely identified in the literature. Replication logic is used to adapt rigour to empirical research in qualitative case study design (Yin 2011). Yin (2011) further suggests that the multiple case study model is usually accompanied with 'replication logic'; and selecting studies that contain between two or three cases would theoretically end up with similar findings. However, this option could not be used in the current study as the two case studies originated from different

countries with different healthcare systems. Therefore, the chances of having similarities and differences are expected, especially as the research is not to generate theory. Yin (2014) clarifies that using logic in a multiple-case study should include careful selection of cases envisaging similar findings (a literal replication) or contrasting findings for 'predictable reasons (a theoretical replication)'. Within replication logic a literal replication could not be applied in the current study as the cases were not purposefully chosen because they could yield similar findings. Therefore, a theoretical approach to replication was adopted, where the cases were chosen with the expectation of some contrast in findings, due to the differences in the cases: particularly the countries, healthcare systems, nurse training, and infrastructure.

In my research, I decided to choose two case studies based on a pragmatic rationale about the research time frame and the availability of diabetes clinics in Kuwait (only two hospitals include diabetes clinics) and the county in the UK where I study my PhD included only two hospitals with two diabetes clinics services in total.

4.5.2 Case selection

Case selection was influenced by purposive sampling (Patton 2005) with pragmatic considerations regarding first access to rich data sources with potential for the transferability of the findings (Patton 1990; Stake 1950). The criteria used in the case selection were as follows:

- The diabetes clinics in the hospitals should be accessible and convenient to the researcher (Patton 2002).
- The diabetes clinics should represent the locations (diabetes clinics in two hospitals in each of the two cases) for operation in different areas (Patton 2002; Yin 2014)
- The selected cases should be sufficient to provide a representative sample (Gerring 2004; Stake 1950).

Miles and Huberman (1994) suggest that the number of cases should be grounded on searching for comprehensive data that meets the research objectives. My intention was to have four multiple case studies in total, however I found that the two clinics in the UK and similarly the two clinics in Kuwait were undertaking similar roles. Therefore, I dealt with the two clinics in each case study as one case study for the following reasons: (1) if I decided to have two

case studies in each site, the cases must be different or I should not know about if the clinics are run similarly; Yin (2014) justified that cases numbering less than four would potentially produce similar results; (2) the clinics were run similarly (nurse-led type in the UK and physician-led type in Kuwait) and this would not allow me to identify similarities and differences within each case; (3) nurses were performing similar roles in each case study so mentioning individual role in each case could be a repetitive If I were to have four case studies, and (4) separating the clinics allowed for more participants in each case study. Whilst Eisenhardt (1989) advised that less than four cases would challenge theory development in any study, the aim of this research was not to develop theory. This rationale about the number of cases is in addition to the available time I had for my PhD, so I decided to have two case studies to meet the aim of my research (see Figure 6).

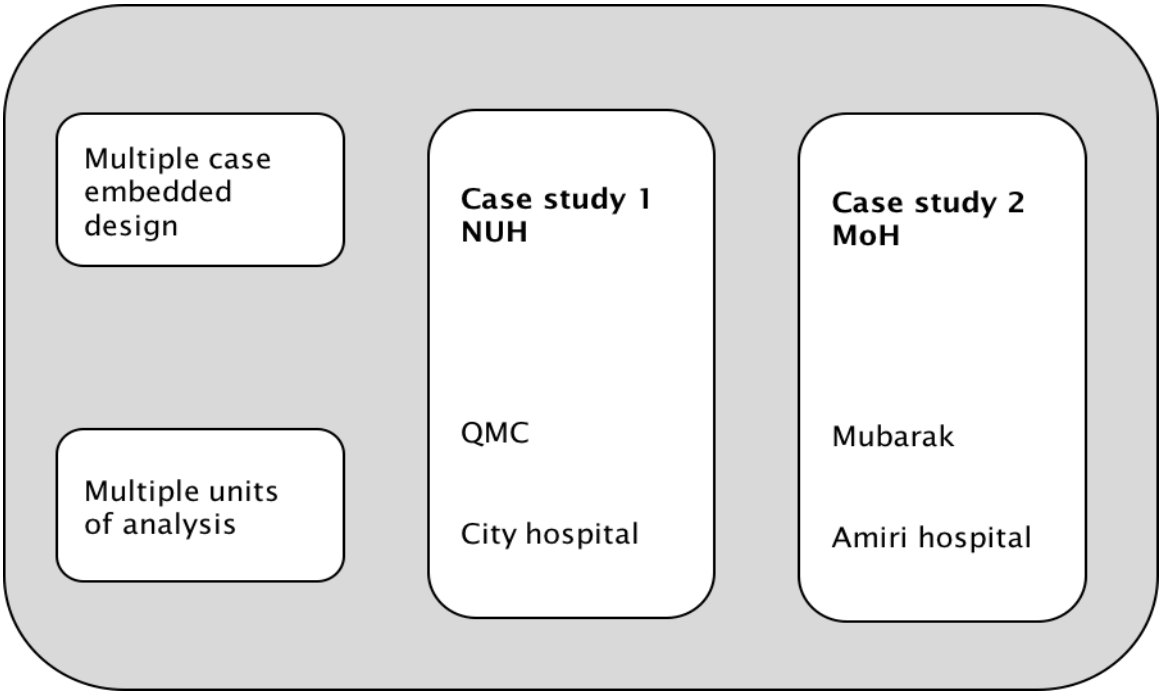


Figure 6 Selection of cases in the study

In each hospital, there is one diabetes clinic and in each case study the two diabetes clinics follow the same model within that country's healthcare system. However, there are some variations in the model of care that is followed in the two trusts. For instance, clinics in the UK are run by nurses with physicians' collaboration and support, while Kuwait clinics are run by physicians with nurses' collaboration (see Figure 7). All patients visiting the clinics are registered in those respective clinics.

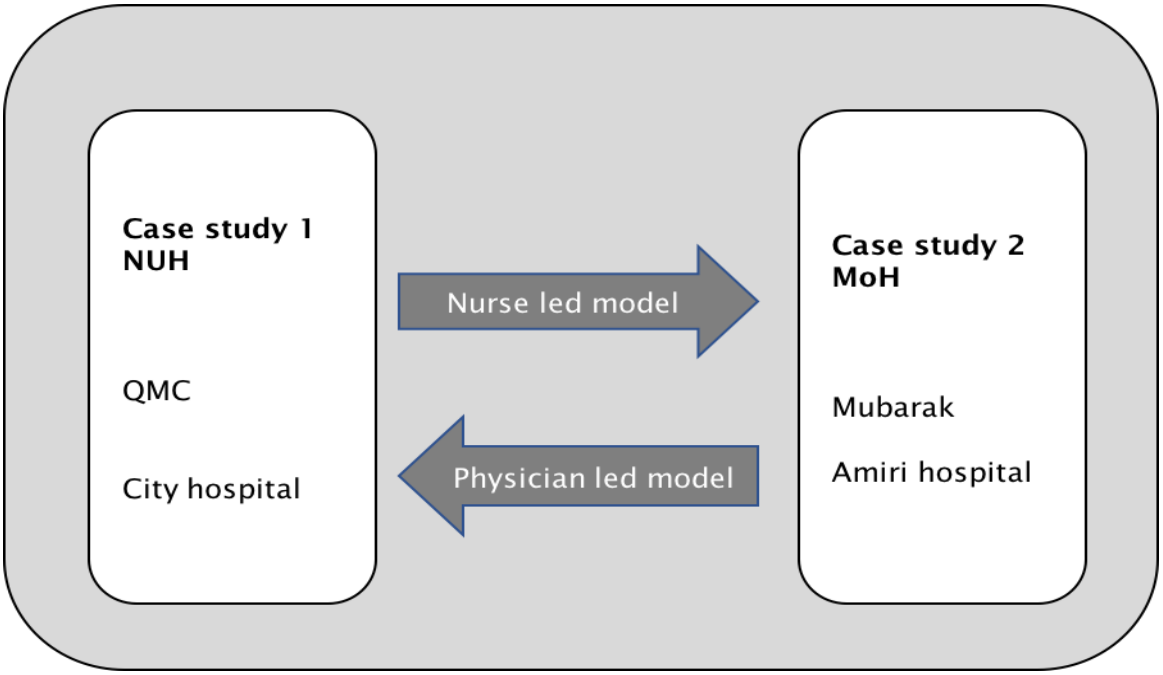


Figure 7 Study settings

4.6 Study settings

The UK and Kuwait were selected for this study; two countries operating under the umbrella of their respective nationalised healthcare systems: the NHS in the former and the MoH in the latter. Both systems are non-profit services. Four hospitals were identified as the case sites, two in the UK and two in Kuwait, with both providing comprehensive care for patients with diabetes in hospital based outpatient clinics. In each case study, one diabetes clinic in each hospital was included (two diabetes clinics in total). The sites were labelled as the NUH for the UK case study sites and MoH for Kuwait case study sites. Figure 7 illustrates the multiple case-study design used in this study.

Next section is about the selection process of participants within each case study.

4.7 Sampling

Qualitative research aims to reflect the diversity within a given population, rather than aspiring to be statistically generalizable or representative. Purposive sampling is a specific type of non-probability sampling in which the objective of developing a theory or an explanation guides the process of sampling and data collection (Teddlie & Yu 2007); such an approach allows the researcher to meet the particular issues of the study (Robson 2011). This outcome can involve developing a framework of variables based on the researcher's practical

knowledge of the research area, the available literature and evidence from the study itself (Creswell 2013; Yin 2014). Purposive sampling is usually recommended for studies involving individuals' observation (Patton 1999), and is ideal for the qualitative aspects of this study. Purposive sampling was utilised in the current study for the selection of NHS and MoH staff and patients to participate in the research. Further, the sampling strategy in qualitative research is to recruit individuals who have experience about the issue being studied (Morse & Field 1995; Denzin & Lincoln 2011). The study samples were not chosen to be statistically representative, but chosen as a purposive sample (Yin 2014). The study samples in both the UK and Kuwait included nurses working in diabetes clinics and patients who were receiving diabetes care.

There are no particular specifications about optimal or ideal sample sizes in qualitative studies (Creswell & Clark 2007). Sampling in the current study was not about generalisation of the findings to the entire population but to select samples that would exhibit relevant descriptions and behavioural actions applicable to the study's aims and objectives (Pope & Mays 2006). Sandelowski (1995) suggests that sample size in qualitative research tends to be small, unlike quantitative research, which tends to have large sample sizes. In qualitative research, there are no specific indicators that point out the 'correct' sample size in a study (Patton 2002). Thus the number of participants is not critical in qualitative research, as the number of participants will depend on a saturation point (Creswell & Miller 2000).

The study sample comprised of ten nurses at NUH in the UK, and nine nurses in the MoH in Kuwait. All were working in diabetes care clinics and they all met the study eligibility criteria (see Table 9). Patients also had to meet the eligibility criteria as identified in Table 9, to be considered suitable to recruit for this study.

Table 9 Inclusion and exclusion criteria for eligible participants

	Nurses	**Patients**
Inclusion criteria	Qualified nurses employed in the diabetic clinic at NUH (the QMC and the Dundee house at the City hospital) Qualified nurses employed at the diabetes clinic within MoH hospital (Al-Amiri and Mubarak Hospital)	Individuals aged 21 years and over as this age participants do not need consent of their guardians Have a diagnosis of T2D Able to give consent Attending one of the clinics forming the case studies in this study

	Having direct role in patient-facing diabetes care	Able to speak English for UK participants Able to speak Arabic for Kuwait participants
Exclusion criteria	**Nurses**	**Patients**
	Not registered nurses Not employed in either diabetes clinics at NUH and within MoH	Not diagnosed with T2D Under the age of 21 Not able to provide consent Not attending any of the diabetes clinics Not able to speak English for the UK participants Not able to speak Arabic for Kuwait participants Pregnancy (the care pathway for pregnant women with T2D is different)

As a result of applying these eligibility criteria, a total of 34 participants were obtained comprising 19 nurses and 15 patients (see Figure 8).

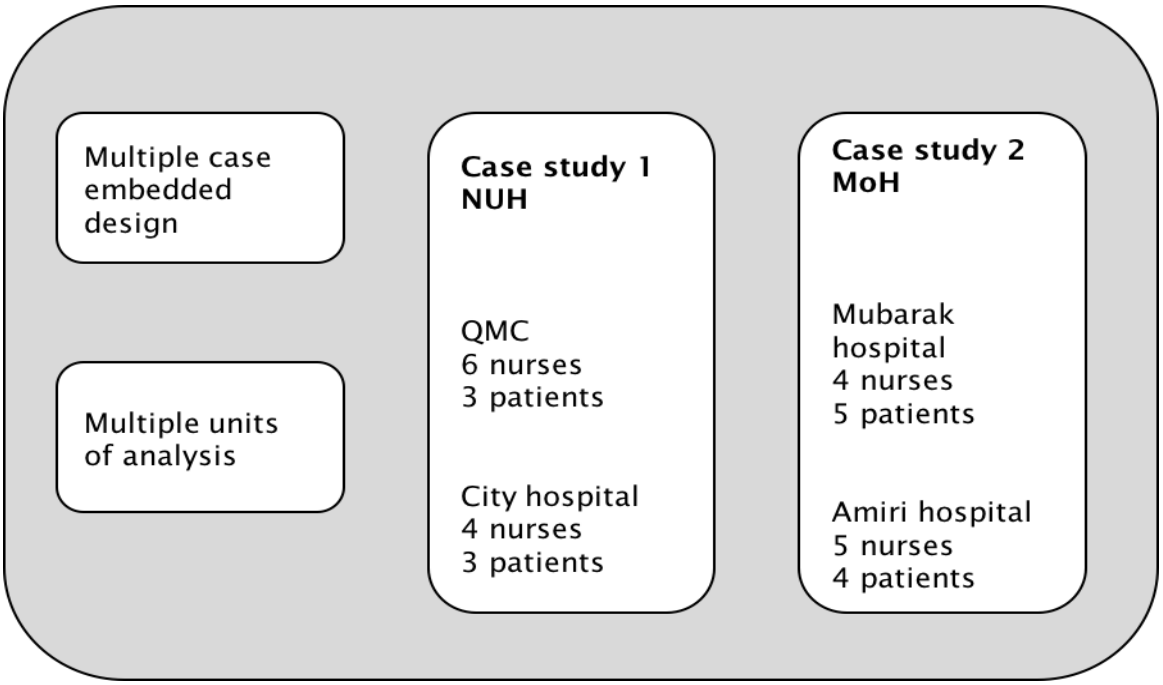


Figure 8 Study participants from each case study

4.8 The research processes

The study included various implementation stages starting from the process of obtaining approval to commence the study, access and recruitment of potential participants and the process of data collection.

4.8.1 Process of approval

In order to develop the protocol and explore the feasibility of the proposed study, initial approaches were made to, and consultations took place with, representatives and managers in the practice areas concerned. Formal permission to undertake the study in the clinics concerned was sought, subject to approval by the University of Nottingham's Ethics Research Committee (REC), the Research and Innovation Committee (R&I) of the NHS Trusts and Kuwait's local ethical research committee (see Appendix D).

There were a number of ethical procedures involved in this study. These are outlined in Figure 9.

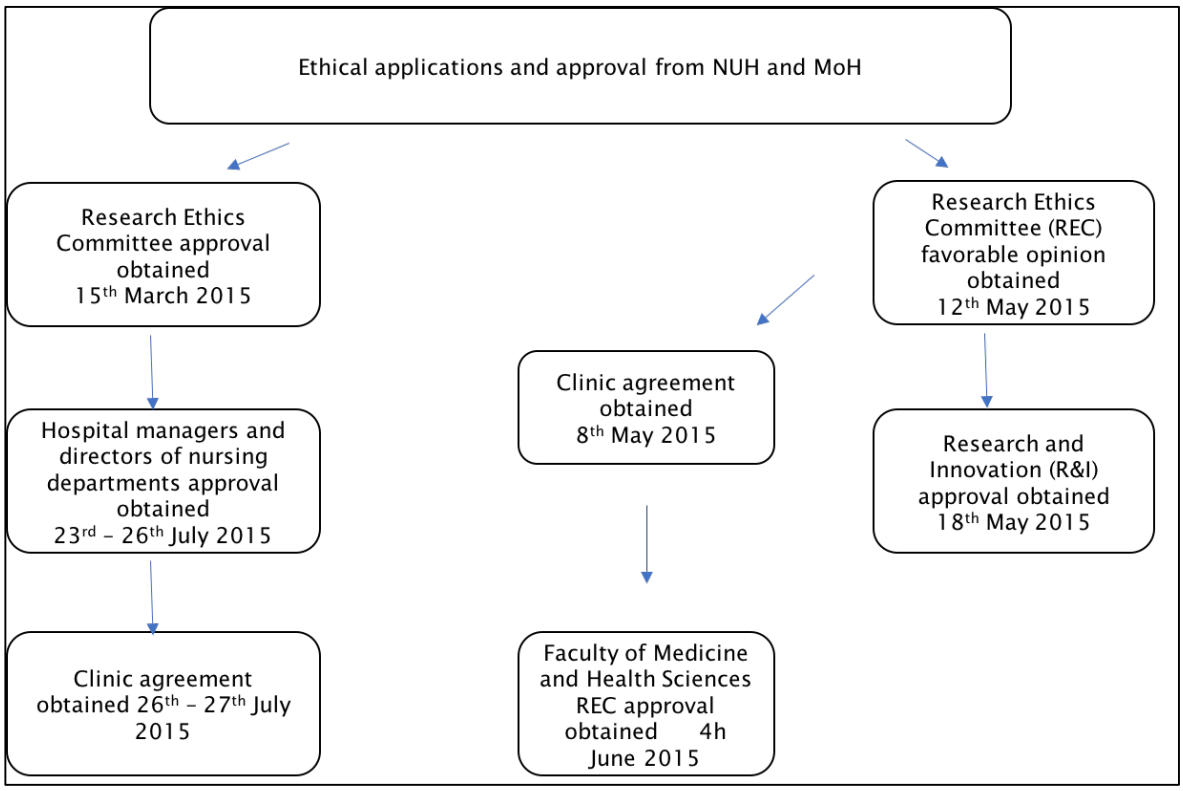


Figure 9 Ethical approval process

As the study was conducted in two different countries, ethical approval underwent two processes in which each agency had its own procedures before recruitment commenced (see Figure 10). I had to ask someone in Kuwait to

undertake the procedures on my behalf to save time. The study protocol was approved by three institutions, (1) the University of Nottingham Faculty of Medicine, (2) the NHS REC and R&D and (3) the Ethical Committee of the MoH, Kuwait. In the UK, once the NHS R&D provided approval, I started the recruitment process. However, in Kuwait, each hospital has its own procedure, informed by the MoH Research Ethics Committee, which provided me with a signed and stamped document of approval. Each nursing director and manager also needed a document of approval.

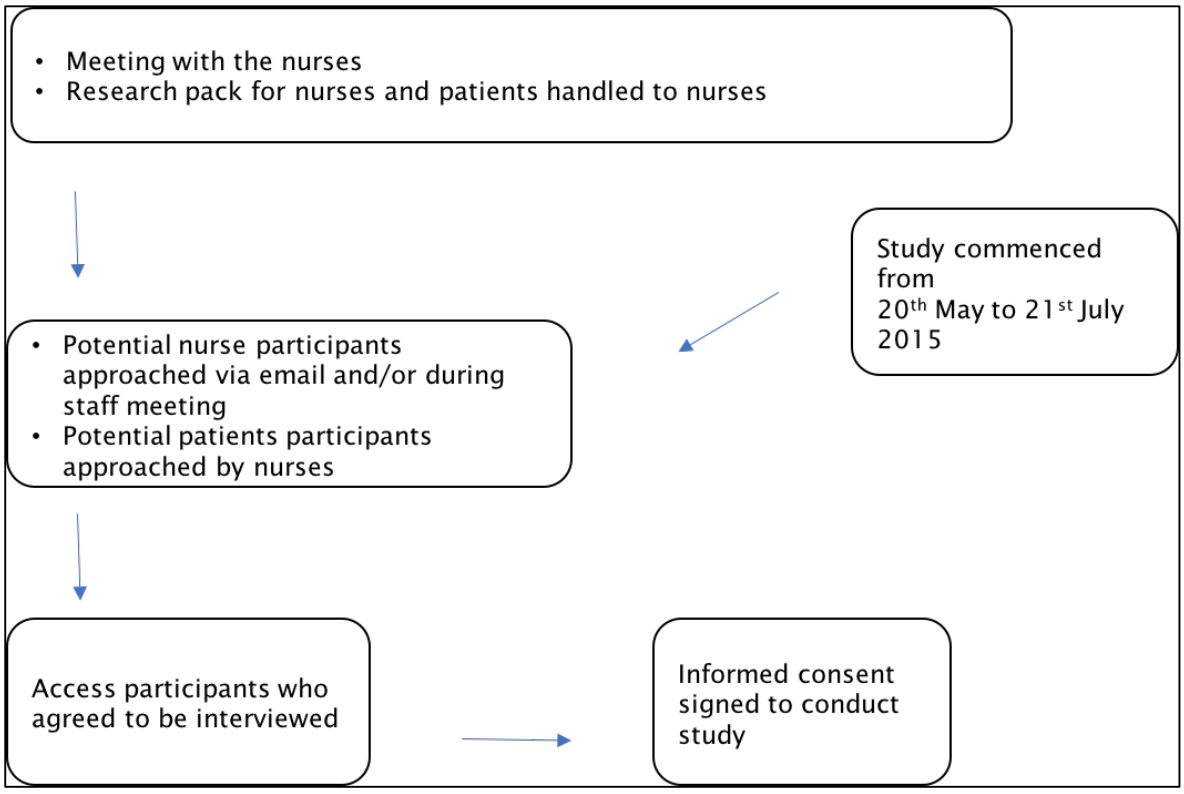


Figure 10 Participant recruitment process

4.8.2 Recruitment of nurses

Following ethical and R&D approval, the clinics' managers arranged for the researcher to meet with staff. The study was presented to nursing staff and participant information sheets (PISs) were distributed. Nurses were given the opportunity to consider taking part in the study and were asked to complete the appropriate consent forms. There were two different kinds of consent forms: consent for observation and consent for face-to-face interview. Once agreement to start data collection at the clinics was made, I attended morning staff meetings and informed potential nurse participants about all aspects pertaining to participating in the study. If nurses made the decision to take part in the study an

informed consent form was administered, following which a face-to-face interview was conducted.

After the interviews, the nurses were asked whether they wished to participate in the observations, the details of which were also contained within the PIS. If they wished to participate in the observations an informed consent form was also administered. Nurses had a choice to participate in either interview and observation or interview only. It was explained to the participants that entry into the study was entirely voluntary and they could withdraw at any time. It was also emphasised that only nursing activities would be observed and each observation would last during normal working hours of the day. For the UK case study that would cover five hours in the morning and three hours in afternoon; for Kuwait, seven hours.

Subsequent observation visits were pre-arranged with the staff who were willing to participate. During all periods of observation, and with consent of the clinic managers, posters were displayed in appropriate places within the clinics to give a high level of visibility for patients and staff. This provided further opportunities for nurses to decide about participating in the study. During observations of nursing activities field notes were written, but the activities were not audio or tape-recorded. Participants' names were not used in the field notes.

4.8.3 Recruitment of patients

Patients with T2D who met the eligibility criteria were identified and then recruited from the diabetes clinics at the NUH trust and the MoH. Nurses requested permission for me to approach patients in order to explain the study. The nurses emphasised to the patients that there was no obligation for them to take part in the study and that their care would not be affected should they decline to participate in the study. Potential patient participants were given PISs. Patients who decided to take part in the study were provided with a consent form and were asked to return the signed form in a stamped and paid for return envelope. The process from obtaining consent till data transfer is depicted diagrammatically in Figure 11.

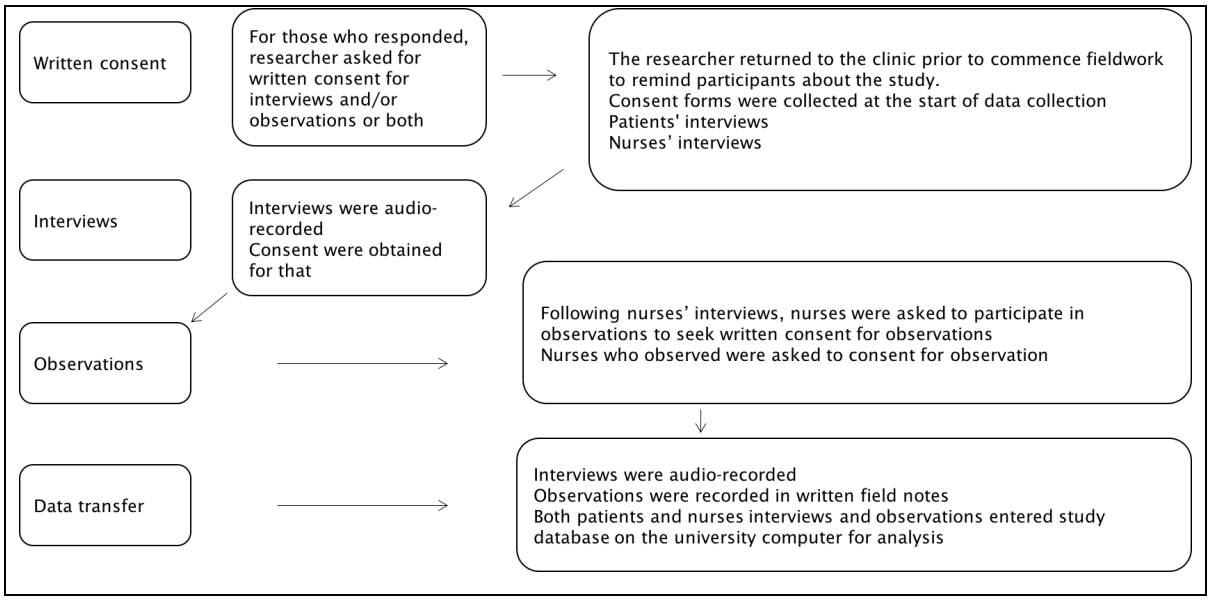


Figure 11 Procedures from written consent to data transfer

4.8.4 Ethical procedures

4.8.4.1 Informed consent

An invitation letter including study details was sent to the participants before the interviews. The recruitment process started with the researcher sending the participants a research pack that included the invitation letter, together with the PIS. The researcher prepared two versions of the consent forms and PIS to be sent individually. Participants who returned signed forms and agreed to participate were interviewed.

After receiving the research pack the potential participants were given adequate time to decide if they wished to participate. If the participant did not reply within a month, it was assumed that they did not want to take part in the study. Once the reply slip was received with the signature of the participant agreeing to take part in the study, the researcher contacted the participant to confirm the date, time and location of the interview. On the day of the interview, the researcher gave the consent form to the participants, asking them to read, or have read to them, what they will be asked about. Participants were asked to complete the form and sign it.

For the observations, nurses also had to sign their consent. I considered that other disciplines at the diabetes clinics might have been uncomfortable with my presence; therefore, posters informing staff, other healthcare providers and patients about the research, and when the observations will be undertaken, were

displayed. It was clear in the poster that any individual who did not wish to be involved, or disagreed with the observation, should inform the researcher or the person in charge at the clinic.

4.8.4.2 Confidentiality and protection of participants

All information given by the participants was held in the strictest confidence, and only the researcher with the supervisory team had access to this information. All digital recordings and computer-based copies of the transcripts were stored in a password-protected computer on the university database server and treated according to the university guidelines and data protection laws. All participants' hard copy forms will be kept in a lock-protected cupboard at the university for seven years from the end of the study.

4.9 Data Collection

The types of data collection methods were linked to the research objectives as described in Figure 12 below.

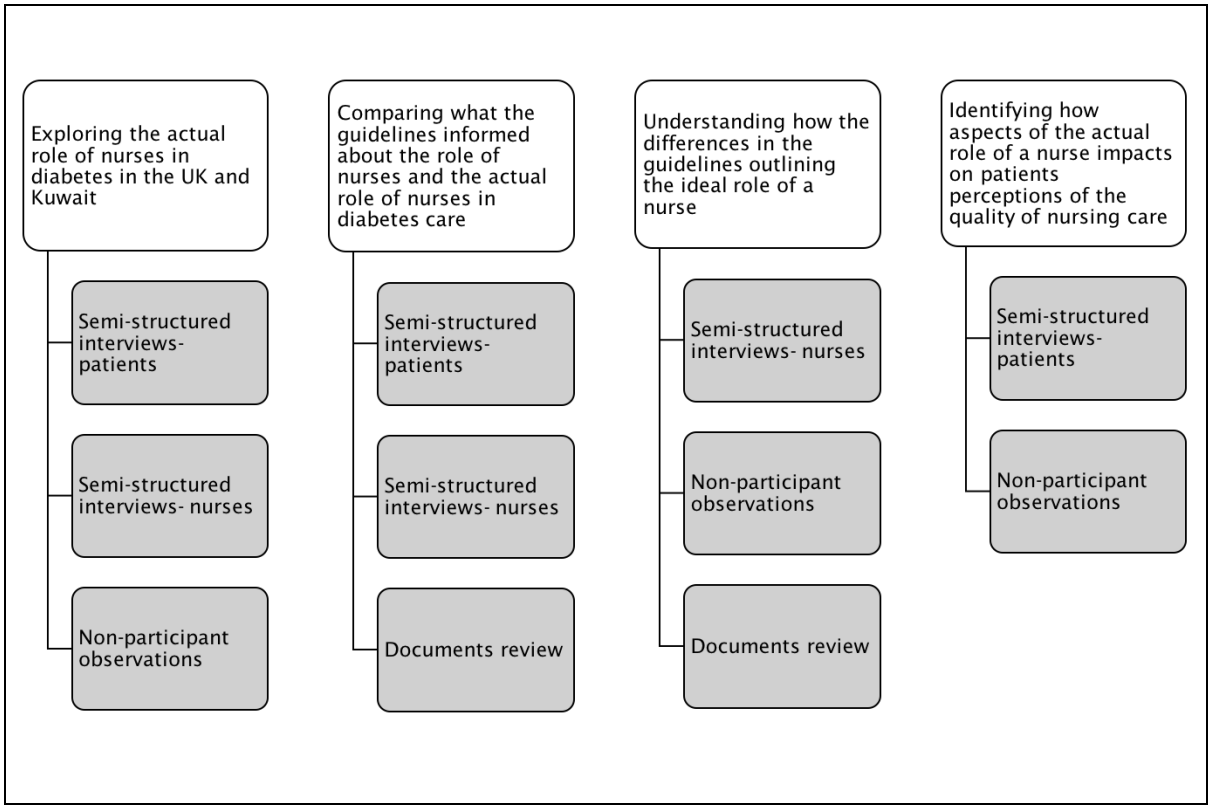


Figure 12 Link of study components to the research objectives

A number of data collection methods were employed: nurse interviews, patient interviews and observations (see Figure 13). Each method of data collection makes its own empirical contribution in achieving part of the study's aims and

objectives. Data extracted by these methods were later incorporated in order to achieve the research objectives. A detailed discussion about each method is provided in the next sections.

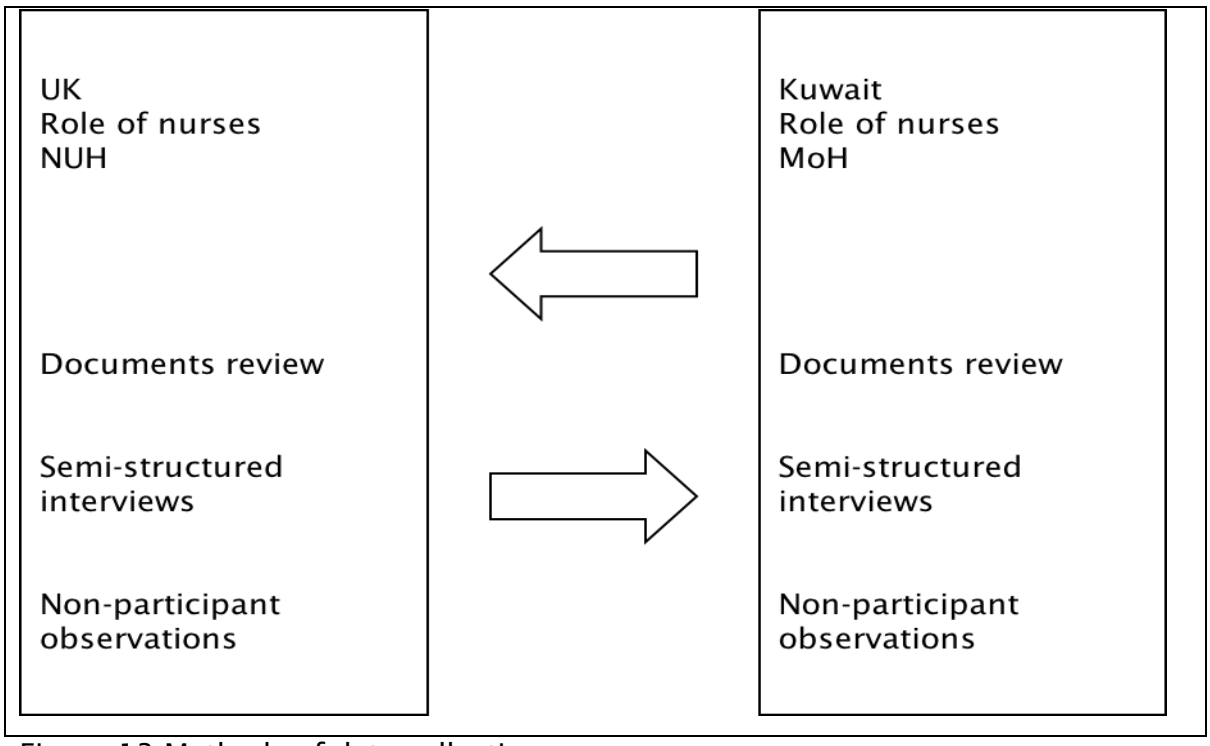


Figure 13 Methods of data collection

4.9.1 Multiple methods of data collection

Yin (2014) argues that case study is used to explore a phenomenon in context by using multiple sources of data collection. It is a comprehensive approach in terms of "a form of within-method and across-method triangulation" (Jones & Lyons, 2004 p.73). The investigation of the nurses' actual role and guideline-informed role in T2D care and how this affects perceived quality of nursing care is complex, as reflected in the number of factors influencing the management of T2D. It is therefore unlikely that one method of data collection would allow a robust exploration of all these factors. Multiple methods of data collection were therefore employed (See Figure 14). Individual interviews with nurses working in diabetes clinics, and patients registered at those diabetes clinics, were conducted. In addition, non-participatory observations were conducted by attending nurse-patient consultations.

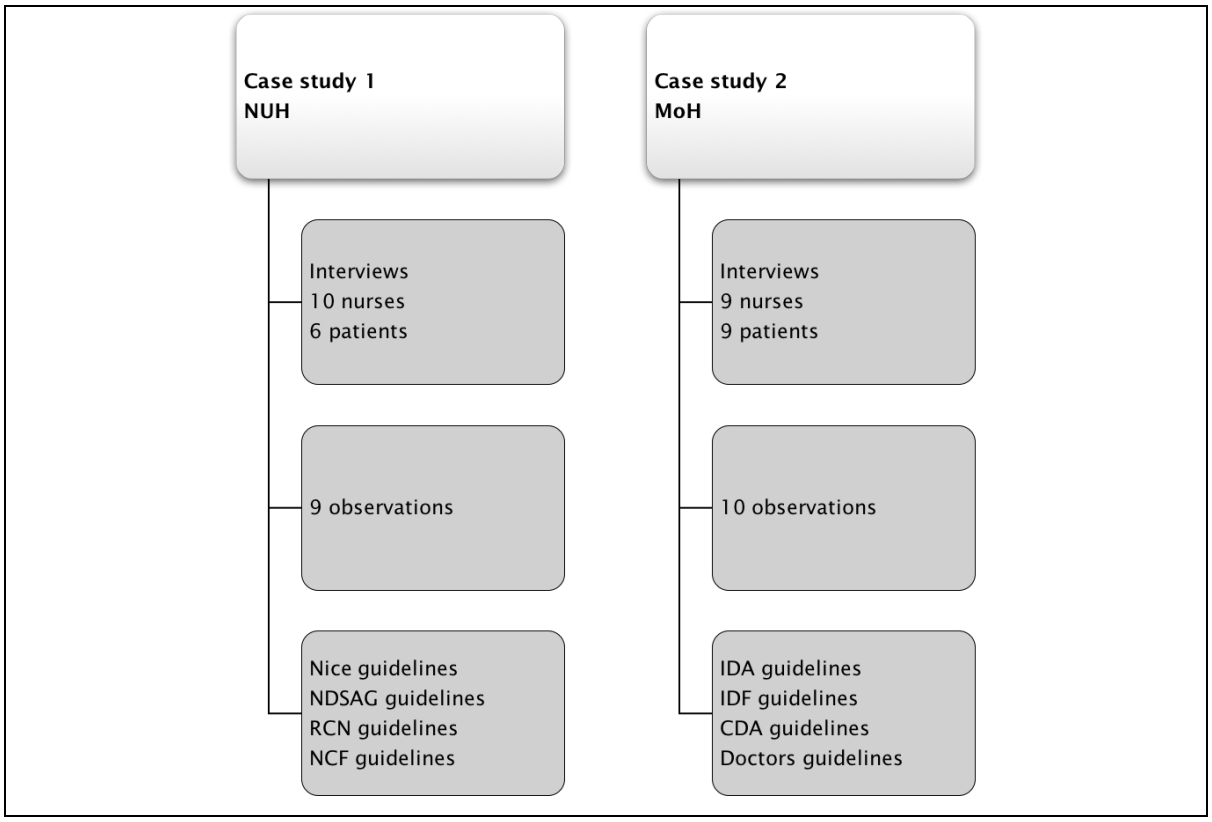


Figure 14 Case studies and their sources of information

4.9.2 Triangulation regarding sources of information

Patton (1999) introduced four types of triangulation that enable validation and verification of qualitative research: 1) adopting methodological triangulation (mixed-methods studies), 2) using multiple perspectives or theories to understand the data, 3) relying on multiple investigators to review findings, and 4) adopting multiple sources of data collection to examine the consistency of different data sources within the same study.

In the current study, multiple sources of data collection were used to obtain the information, in line with the objectives of this study. Yin (2014) argues that the researcher might use a single method of data collection, such as interviews, and miss other sources that are significant to the study. However, these studies are more prone to flaws associated with that specific single method approach as there will be more concentration on this particular method; for instance 'loaded' interview questions, while studies with multiple sources of information allow for cross-data validity checks (Patton 1999). Yin (2014) argues that the study outcomes solely depend on the researcher's background, based on the methods of data collection he/she intends to use in the study. This current study used multiple methods of data collection as such an approach would enable

triangulation which is an important feature of the case study model (Johansson 2003). Eisenhardt (1989) confirmed that triangulation, by adopting multiple methods of data collection, offers solid validation of paradigms and hypotheses. Furthermore, the overall quality in case studies with multiple sources of information is higher than case studies relying on a single source of information (Yin 2014). In the current study, triangulation was adopted in order to study the role of nurses from different perspectives, different contexts and to use the triangulated data to gain a deeper understanding of the nurses' roles and patients' perspectives (Stake 1995).

There are some misunderstandings about triangulation. Researchers might think that different sources of data would generate same study outcomes, instead of viewing the data as providing a rich understanding about the relationship between sources of data and the issue under investigation (Patton 1999). Triangulation is used to strengthen the confidence of the research findings (Merriam 1995); therefore, in this study triangulation is considered to be one way of supporting the research rigour. Decrop (2004) indicates that triangulation can reduce and/or eliminate personal and methodological biases and increase the probability of generalising the findings of a study as the data is gathered from different angles and by different methods. In the current study, three different sources of evidence were used: interviews, observations and documentary review. This paradigm provided both subjective and objective approaches to the case studies (Williamson, 2005). The use of a number of different participants in each case was also seen as means of triangulation, as it provided multiple perspectives of the research phenomenon (Merriam 1995). This approach, by itself, was an effective way to overcome most of the weaknesses of each method used in the data collection (Gray 2004).

4.9.3 Observation

Observations are considered important sources of data in a qualitative case study (Berg et al. 2004; Patton 2005) as they allow the researcher to access and freely observe the context in its natural setting (Yin 2014). Thus, observational research can produce empirical evidence and reliable data for analysis, as it allows the researcher to view interactions without interventions (Mays & Pope 1995). Employing observation in this study enabled the exploration of what was actually happening in diabetes clinics in terms of the different practices performed by nurses in a natural setting. Also observed was the nature of interactions between

nurses and patients during consultations, which revealed actual practice in a real setting. The observations were an essential part of this study, allowing the researcher to explore the actual roles that nurses were undertaking on a day-to-day basis within the clinics. Therefore, observations undertaken in this study provided valuable and rich data. It should be stressed that non-participatory observation was conducted, but it was difficult to interact with patients as such interaction is not allowed by the NHS. As observation facilitates inquiries, questions generated from the observations were used in the interview schedules to enrich trustworthiness of the data (Shenton 2004).

Whilst Yin (2014) suggests that observational data is most useful when more information needs to be added to the study under investigation, Stake (1995) emphasises that observations enable the researcher to better understand the case under investigation. Stake (1995) suggests starting the fieldwork with observation, as that allows the story to take shape. However, it was highlighted that the researcher during an observation session is unable to control the ongoing events and behaviours being observed. I started my fieldwork with observations, as I thought of them as way of becoming familiar with the staff and the place where data was collected. This was also an opportunity for building a positive working relationship between myself, the participants and related clinic personnel. The first observation was a pilot session. I was advised not to communicate or interact during my attendance at nurse-patient consultations. I chose a convenient place to sit, which allowed me to observe and take notes based on facial expressions and body language. Stake (1995) advises that the space used in observation is to record natural language used with special consideration for any incidents that are relevant to the key issue of the study.

4.9.3.1 Patients' presence during observations

As patients were present during the observations, their permission for me to also be there was required, even though limited data pertaining to them were recorded. Posters were placed around the clinics informing everyone that observations were taking place. Patients were informed on each occasion that I would be observing nurses delivering care to them and should they express an objection, then the observation would be terminated.

4.9.3.2 Protocol for setting-up the observations

In order to develop the protocol and explore the feasibility of the proposed study, initial approaches and consultations were made with nurses' representatives of

the study and managers in the practice areas concerned. In both countries, formal permission to undertake the study in the clinics concerned was sought, subject to ethical approval and approval by local Research and Development (R&D) bodies. In the UK study, following ethical and R&D approval, the clinic manager arranged for the researcher to meet with staff at a convenient time. A similar process was followed in the Kuwait case study, except that separate approval, from each hospital manager, was needed before the study commenced. An observation sessions schedule was developed as part of the case study protocol (see Appendix F).

4.9.3.3 The observations in practice

Nurses were observed for 5 working days in each case study (a total of 10 observations). In the UK working times, there are two periods of consultation: the first period starts from 8 am to 1 pm and the second from 2 pm to 5 pm. In Kuwait, clinics work for one period from 7 am to 2 pm, but they have drop-in sessions in the afternoon. The minimum time for a consultation was 30 minutes and the maximum was one hour. Some nurses deliberately put their newly diagnosed patients with diabetes last on the appointment list as they would require more time; the same situation applied to patients with multiple needs. Some nurses finished with their patients within the assigned time for each consultation, as they stressed about the right of each patient to have their assigned time; therefore, they often not allow in excess of 30 minutes for patients. Other nurses just knew their patients and put the patient who needed more than 30 minutes last. During the observation, I was not interacting or interrupting the nurse-patient consultation sessions. However, some patients in both countries shared with me some of their concerns but I adhered to the ethical protocol and just referred them to the nurse. Some patients in Kuwait were talking directly to me, but I had to explain to them that I was a PhD student and cannot help in what they wanted to share with me, but referred the matter to staff nurses. For instance, a patient asked me to talk to the doctor to refer him to the social support clinic. I explained to the patient that I was only a researcher and that I was obliged to refer the matter to the staff; the patient accepted this explanation.

The nurses' activities and tasks were observed and detailed notes were made after each observation period, rather than during the observations, as overt note-taking would have been disruptive (Atkinson & Hammersley 1994). All

observation notes and transcripts were in English for both case studies, as the researcher is competent in English language.

During the observations, I sat in a place that allowed me to observe both nurses and patients' verbal and non-verbal communications. Reflective notes were written soon after each observation about the nature of interaction between nurses and patients during consultations, including the context of the interaction. At the end of each consultation I thanked the patients for allowing me to attend their session.

4.9.4 Interviews

There were a number of considerations regarding not using focus groups (FCs) in this study, even though some participants shared similarities in work positions and health conditions (patients). However, in the Kuwait case, not all participants shared the same language, even though the language of communication in Kuwait healthcare is English. Also, participants might not be comfortable with English, as they might prefer a specific language to express their views and perceptions more clearly and more freely. Undoubtedly, some participants express themselves better on a one-to-one basis than in group discussions. Cultural reasons for using one-to-one interviews were that participants' potential disclosures, which might be both personal and sensitive, are likely to be more freely provided than in a group.

Unlike observations, the researcher can control interviews (Stake 1995). Interviews are a significant source of data in qualitative research and within a case study design (Yin 2014), and are "the main road to multiple realities" (Stake 1995 p. 64). Interviews are found to be helpful in studying social phenomenon in which they promote an insight into what people think and their views about particular phenomenon they have been asked about (Johnson & Onwuegbuzie 2004). In contrast Charmaz & Belgrave (2012) found interviews to be highly subjective, stressing that researchers must be aware of the subjectivity of interviews. For example, participants might deliberately hide specific information that is important to the study or change their behaviour when in the interview situation.

Different authors of qualitative research have different views about which type of interview to choose that reflects a study's aims and objectives. The use of open-ended questions in interviews will be in a natural setting and are designed to

allow participants to speak about their views and experiences in their own words (Patton, 1990; Denzin & Lincoln, 2008). In contrast, unstructured interviews can be misleading, though they are preferable in studies about sensitive topics (Corbin & Morse 2003). In the current study the issue to be investigated is the role of nurses in diabetes clinics, explored via different participants with different perspectives. Employing structured interviews limits participants' responses and restricts the focus of the issue being studied. Therefore, semi-structured interviews were adopted to encompass major themes or questions with prompts.

Semi-structured interviews are extensively used in research as a result of their flexibility in categorisation, wording and the amount of time spent in each area studied (Robson 2011). Semi-structured interviews allow participants to express their experiences and opinions without restriction (Louise Barriball & While 1994). Semi-structured interviews are valuable as they promote the in-depth gathering of data (Braun & Clarke, 2013). Interview themes and questions were derived from the literature, the research aims and objectives, and as a result of my interactions with the supervisory team (see interview guide in Appendix E). As the questions were open- ended, to allow participants to express as much in-depth details as they could to help the research, the interviews continued until no further new information emerged (Merriam 2009).

There were two sets of interview guides, one for nurses and one for patients. Interview guides and observation grid were reviewed by the supervisory team (see Appendix E and F) at the University of Nottingham to clarify comments or points before being used with participants.

4.9.4.1 Interview protocol

In order to develop the protocol and explore the feasibility of the current study, initial approaches and consultations were made with nurse representatives and managers in the sites where data collection was conducted. Formal permission to undertake the study in the clinics concerned was sought, after getting ethical approval from relevant institutions. The clinic manager arranged for me to meet with staff at an appropriate and convenient time. The study was presented to nursing staff and participant information sheets (PISs) were distributed.

Nurses were given the opportunity to consider taking part in the study (24 hours to decide if they wish to take part), and if they decided to take part they were asked to complete the appropriate consent forms. The forms asked for separate consent for the observation and interview stages of the project. Consent forms

were collected at the start of the data collection period and convenient time for observation and/or interview was arranged with the individual nurses.

The researcher attended morning staff meetings prior to commencement of the interviews and informed potential nurse participants about all aspects pertaining to participating in the study. Potential nurse participants were asked if they did not wish to participate in interviews. If nurses did not choose to withdraw from interviews at this point, consent to participate was assumed.

Patient participants were interviewed in a private room at each clinic. Prior to commencement of the interview, each patient was reminded that they could terminate, or withdraw from, the interview at any time. Patients were informed that the interviews would be recorded, and that no names would be used; also, that no data would be shared with anyone other than my supervisors.

4.9.4.2 Recording the data

I informed participants that recording interviews would help me to focus on what they were saying (Gill et al. 2008). Fortunately, I did not experience any refusal from the participants about the recording. Data collection commenced after the participants returned the consent forms; the interviews were recorded using a digital voice recorder (Philips 1100 recorders). All interviews were saved on different files in the recorder and were later transferred to my password-protected personal computer for the purpose of maintaining confidentiality with the data. Each file was given a name (Nurse) for staff, followed by a number for the nurse and a code of the hospital (NUH); for example: Nurse11-NUH. Similar procedure was followed in Kuwait case study.

Each interview was transcribed on the same day the interviews were conducted to ensure some of the non-verbal behaviours which happened during the face-to-face interviews were recorded accurately. Voice recorders do not pick up non-verbal behaviour like body movements, therefore I did not rely on listening only but I also made hand-written notes. Reflective accounts of interviews were documented soon after each interview.

4.9.4.3 Issues arising from the interviews

I could not understand all the interviews regarding some vocabularies, colloquialisms, and regional accents, as the UK participants came from different backgrounds, both nurses and patients. Therefore, I had to ask for help from my

supervisors. I sent them the portions that I could not transcribe and they helped with resolving that problem.

It is important here to consider the risk of bias within data analysis (Higgins et al. 2011). This was minimised by separately doing the coding process (independently do the coding). I sometimes ask a colleague and/or my supervisors to do the coding and then compare the themes. Non-repetitive words, expressions or statements that appeared to add new dimensions to the understanding of patients and nurses' experiences and needs were also critically analysed for theme identification (Ryan 1999).

4.9.4.4 Organisation and management of interview data

Interviews with nurses and patients were recorded using audio digital recorder. The audio recording of participants' interviews is an important process used in qualitative research. Permission was gained from nurses and patients to record the interviews. Silverman (2014 p.20) highlighted that "transcripts of such recordings, based on standardised conventions, provide an excellent record of naturally occurring interactions, and can offer a highly reliable record to which researchers can return as they develop a new hypothesis". In fact, I found that knowing that the data were being recorded, while the interview was in progress, alleviated the stress I expected of having to record activities in this complex process of data collection. Kelly (2010) suggests that audio recording during data collection affords an overall description of participants' reports in the context within which they contributed. I used Kelly's (2010) idea in this study and this positively reinforced the process of interviews.

Silverman (2014) suggested that transcribing interviews ensures accuracy in research. Transcribing the interviews conducted in the UK took between five to ten hours for each interview. Translating each interview conducted in Kuwait from Arabic to English took on average of 10 hours and transcribing each of them took six to 10 hours. Transcribing interviews helps the researcher to thoroughly understand the data (McLellan et al. 2003). Like nurses' interviews, each interview with a patient was transcribed verbatim immediately after the interview ended, so that I did not forget issues or matters arising during the interviews, such as emotions and facial expressions. Ambiguous sections were repeated several times to ensure my understanding of what the participants were talking about. I followed similar steps for both data collection and data analysis in both case studies to ensure reliability and validity of the study findings (Stake 1995).

Interviews conducted in Kuwait were translated from Arabic to English. The translated transcripts were sent to a colleague from Kuwait, who works in the medical field, to audit each transcript against the original Arabic transcript to ensure accuracy of the translation process. Also, this process was designed to ensure that the meaning of what the participants said was fully retained. I deliberately chose a colleague from the medical field, as nurse participants spoke different languages based on their backgrounds. Though the nurses were from Arabic countries, some of them pronounced English terminologies in Arabic, so the words will be heard in English but in an Arabic way.

4.10 Documentary review

Documents were obtained from both the NHS Trust in the UK and the MoH in Kuwait. There were two types of document review: formal and informal. The formal document review included published guidelines, protocols, policies and procedures that include or offer descriptions and recommendations to healthcare providers working in diabetes care. The informal document review included accessible materials such as brochures and pamphlets, besides other documents which were accessed through the NHS Trust's public website, describing the roles of nurses in diabetes clinics. This method was adopted to compare what has been published about the guidelines regarding the role of nurses in diabetes care and what nurses are actually performing.

4.11 Data Analysis

Yin (2003) stresses that the analytical approach in case study research involves a detailed description of the case and the setting for the case within contextual conditions, as the case study research builds an in-depth, contextual understanding of the case, relying on multiple data sources. It was also suggested that the researcher should start their analysis by playing with data, searching for promising patterns, insights or concepts and meanings. The goal is to define priorities and what to analyse and why.

There is no standard format for case study data analysis (Eisenhardt 1989). This 'freedom' encouraged me in the current study not to stick to a single method of data analysis, but to find a pathway for each stage in the data analysis process, as the study is complex. Its design involves two case studies from different countries with different cultural and social context and with two different

healthcare systems. This required careful thinking and re-thinking to find a suitable method of analysis.

Data from interviews can be analysed thematically as they offer a theoretical input into nurses' roles in diabetes care. However, observation aims to capture the whole picture about the nurses' roles in practice, as they go about their daily duties in their diabetes clinics. Data obtained by observation should ascertain whether what nurses say they do, is what they actually do during their work. As the information from the observations was in a form of a structural grid of textual data, thematic analysis as well as a degree of quantification was applied to its data.

This study draws on a qualitative research approach and has collected data from interviews and observations as components of a multiple case study. Therefore, the analytical process was guided by the nature and focus of the study, in order to "tease out relationships, to probe issues, and to aggregate categorical data, but those ends are sub-ordinate to understanding the case" (Stake 1995 p.77). In line with this, I considered a strategy for analysing qualitative data in order to make sense of the data collected, so as to be able to present the findings from each case in order to draw specific findings and generate new knowledge. In order to establish the most appropriate analytic strategy, I first needed to consider various methods of qualitative data analysis and, secondly, the analytical frameworks of case study research.

Within qualitative analysis, Stake (1995) suggests that the analytic framework should focus on triangulation and the establishing of comparisons, because case study research uses multiple data sources to ensure that the phenomena of interest are explored in terms of their multi-dimensional properties. He also suggests that there are four steps of data analysis and interpretation in case study research, namely: i) categorical aggregation, ii) direct interpretation, iii) establishment of pattern and iv) development of naturalistic generalisations. The first step of categorical aggregation involves seeking key information from the data. This is the process of coding that enables a researcher to understand and give meaning to the data. In direct interpretation, the researcher focuses on a single issue and seeks to understand it. This is the process of extracting a segment of text for each code and piecing it back together to develop a category that has more meaning to the researcher. In establishing patterns, the researcher looks for a connection between two or more categories to develop themes by using a 2x2 table to show the relationship between the two categories (Stake

1995). Finally, naturalistic generalisations could be developed by reporting details of the case study in relation to the research process, in order for the reader to recognise the similarities in cases of interest relative to their own case or field (Stake 1995). Stake then presented specific techniques for finding the patterns, which is an essential part of the two general strategies. Although Stake recognised that these strategies do not necessarily constitute the 'right way' to conduct case study analysis, he adds that "each researcher needs, through experience and reflection, to find the forms of analysis that work for him or her" (Stake 1995, p.77).

The process of thematic analysis is one approach available to facilitate analysis of the development of themes or patterns within data, and therefore is often used in case study research (Casey 2007). It is a method that helps a researcher to condense the data and describe the phenomena being studied, giving rise to categories or themes that are used to explain the phenomena (Boyatzis 1998). The process of thematic analysis is deemed to be appropriately flexible and has been detailed in various forms such as by Miles and Huberman (1994) and Braun and Clarke (2006).

There are three phases of the analysis process: i) data reduction, ii) data display, and iii) drawing and verifying conclusions (Miles & Heberman, 1994). Data reduction involves the process of data coding, summarising and identifying categories and themes. The process of data display is used for seeking meanings within data by presenting visual displays. The matrices or networks can be used to display coded data or categories of data in order to establish the relationships between them, in terms of similarities and differences. Following these phases, conclusions can be drawn. The process of drawing and verifying conclusions is the stage where meanings and concepts emerge from raw data. It involves interpreting results and writing them up. The process of data analysis consists of eight steps: a) sketching ideas, b) taking notes, c) summarising field notes, d) identifying the codes, e) displaying data, f) reducing codes into themes, g) counting the frequency of codes and h) relating categories (Miles & Huberman 1994). Codes are descriptive or analytical labels assigned to a chunk of data (Saldaña 2015). In contrast, Braun and Clarke (2006) present six key steps of qualitative thematic analysis which are: i) familiarising oneself with the data, ii) generating initial codes, iii) searching for themes, iv) reviewing themes, v) defining and naming the themes, and vi) producing a report.

Within this study, I was influenced by both the eight steps and six steps suggested by the authors above (Stake 1995; Miles & Huberman 1994), in which the overall scene was guided by Braun & Clark (2006) because I found them relevant and useful. For each data set I followed general strategies which include: (1) preparing and organising the data, (2) reducing the data into themes through coding process and condensing codes, and (3) presenting the data into figures, tables or a discussion by each source of data collection (Creswell (2012 p.180). Therefore, the analysis process of the current multiple case studies involved a number of key stages as shown in Table 10.

Table 10 Analysis processes of the multiple case studies

Activity	**Informed by**
Familiarising myself with the data by reading and re-reading the data and recording initial ideas	Braun & Clark 2006)
Identifying *codes* by writing codes and memos ***Noting*** any interesting features of data and collating data relevant to each code	Miles & Huberman 1994 Braun & Clark 2006
Displaying data by making contrasts and comparison	Miles & Huberman 1994
Grouping and classifying the data to collate information from the data to gain meaning	Stake 1995
Searching for themes**,** reviewing themes, defining and naming	Braun & Clark 2006
Reducing codes *(capturing the significant ideas, not losing the meaning of data)* into patterns and themes, counting frequency of codes, relating categories. Understanding phenomenon, and developing construct.	Miles & Huberman 1994
Establishing patterns by looking for the connection between two or more categories	Stake 1995
Reporting the results within case analysis by describing and organising all of the case information	Yin 2014
Displaying relevant findings of the two case studies from the displayed and categorised case studies' data (Eisenhardt 1989)	Miles & Huberman 1994
Analysing data across all cases through searching for similarities and differences of themes across cases	Eisenhardt 1989 Stake 1995

Qualitative research has been criticised, as it focuses on findings rather than the analytic processes (Patton 2005); however, the interpretivist approach to data offers a chance to develop theory, via inductive analysis, of the study findings

(Eisenhardt & Graebner 2007; Charmaz 2011). Therefore, I used an inductive approach to explore the role of the nurses in managing T2D care in diabetes clinics in the UK (NUH) and Kuwait (MoH), from the perspectives of nurses and patients. In doing so, triangulating the data would minimise criticism that this research might face, related to external judgments of the rigour of the study (Scandura & Williams 2000; Patton & Appelbaum 2003).

An inductive process derives data from other than having a pre-conceived idea about coding the data (Patton 1990), so the codes and themes are determined from the data itself. Yin (2011) implies that data analysis should be in-line with the philosophical underpinnings of the study, in order to confirm methodological equivalence. Drawing from a critical realist point of view, a qualitative computer analysis programme (QSR NVivo) was used to sort codes and categorise data (Yin 2014) for detailed analysis, and allowing for within and across- case comparisons (Eisenhardt 1989).

Silverman (2014) advised the initiation of data analysis after the first interview. This practice is useful in data collection, as it aids recognising lost/missed associations in the data gathered. Data analysis was initiated within-case to gain understanding of the findings of each data set gained from the interviews and observations, before cross-case analysis that compared the identified themes (Stake 1995). In order to analyse the multiple case study data, I adhered to the two stages of multiple case study analysis: within-case study and cross-case analysis, as recommended by Yin (2014).

The sequence of analysis for both case study 1: NUH and case study 2: MoH followed a similar but individual process as follows:

- Patient interview transcripts;
- Nurse interview transcripts;
- Observational data;
- Merged patient and nurse interviews which produced categories, sub-themes and themes;
- Merged observational data which generated additional categories, sub-themes and themes.

I started with a close reading of the raw text to familiarise myself and to understand the content. I carefully read each transcript so as to gain an overall sense of the data. Notes of thoughts and memos were recorded at this phase. I considered this as an important issue, before initiating the analysis process, not

to enforce any pre-existing consistent codes but to construct novel codes and labels to systematise the big portions of data into fairly smaller portions.

The initial stage of analysis was via a thematic analysis approach (TA) which is "a process of encoding qualitative information" (Boyatzis 1998 p.25) including formulating initial codes and searching for themes. Preliminary analysis, provides a detailed description of individual cases, as the data is sorted into categories and codes (Stake 1995; Yin 2014). This procedure assisted in determining key emerging themes within the case data (Yin 2014). I continued to playback recorded interviews and re-read interview transcripts and observational transcripts to be more familiar with their content, in order to gain an in-depth and broad understanding through searching for patterns and meaning in the data (Braun & Clarke 2006). This process of reading and repeatedly going through transcripts provided me with insights into how the actual roles of nurses in diabetes care differed, how the approaches nurses said they adopted in patient care impact on the care received by their patients and how the patients perceive the discrepancy of approaches nurses adopt in meeting their different needs. Also clarified were factors relating to how nurses' personal experiences impact on care provided and how the organisational factors and infrastructures for the two healthcare systems promote or hinder nurses' roles in providing quality care.

In the current study, I identified a large number of codes but later these were collapsed into a smaller number. Initial coding of each transcript was made separately and all codes were labelled and provided with descriptions. Using 'free node' and 'tree node' tasks was employed to arrange data in the computer to sort and rank codes, so enabling me to develop a hierarchy of codes. One section of data had the chance to be coded under more than one sub-theme. However, some data were not considered as they were not relevant to the aims of the study.

The coding process stopped when I reached themes that were dissimilar, when refinements were not adding any new codes and when the study's objectives had been met (Braun & Clarke 2006; Clarke & Braun 2013). Figure 15 provides a screenshot of some of the themes. While coding I identified initial sub-themes and themes; for instance, implications of nurse performance which exposed the different approaches nurses adopt in diabetes care. This sub-theme then developed to become a theme that included more sub-themes, so enabling yet more meaningful conclusions to be drawn about the content. The data became clearer as each new transcript was coded to yield new categories, sub-themes and themes to the coding system. This within-case analysis allowed me to identify

themes for each particular data set; for instance, interview data included reports from nurses about their roles and the impact on diabetes care, but nurses' interviews alone did not provide a full picture about what I was seeking, based on the study's aims and objectives. Codes not relevant to the study's aims and objectives were excluded.

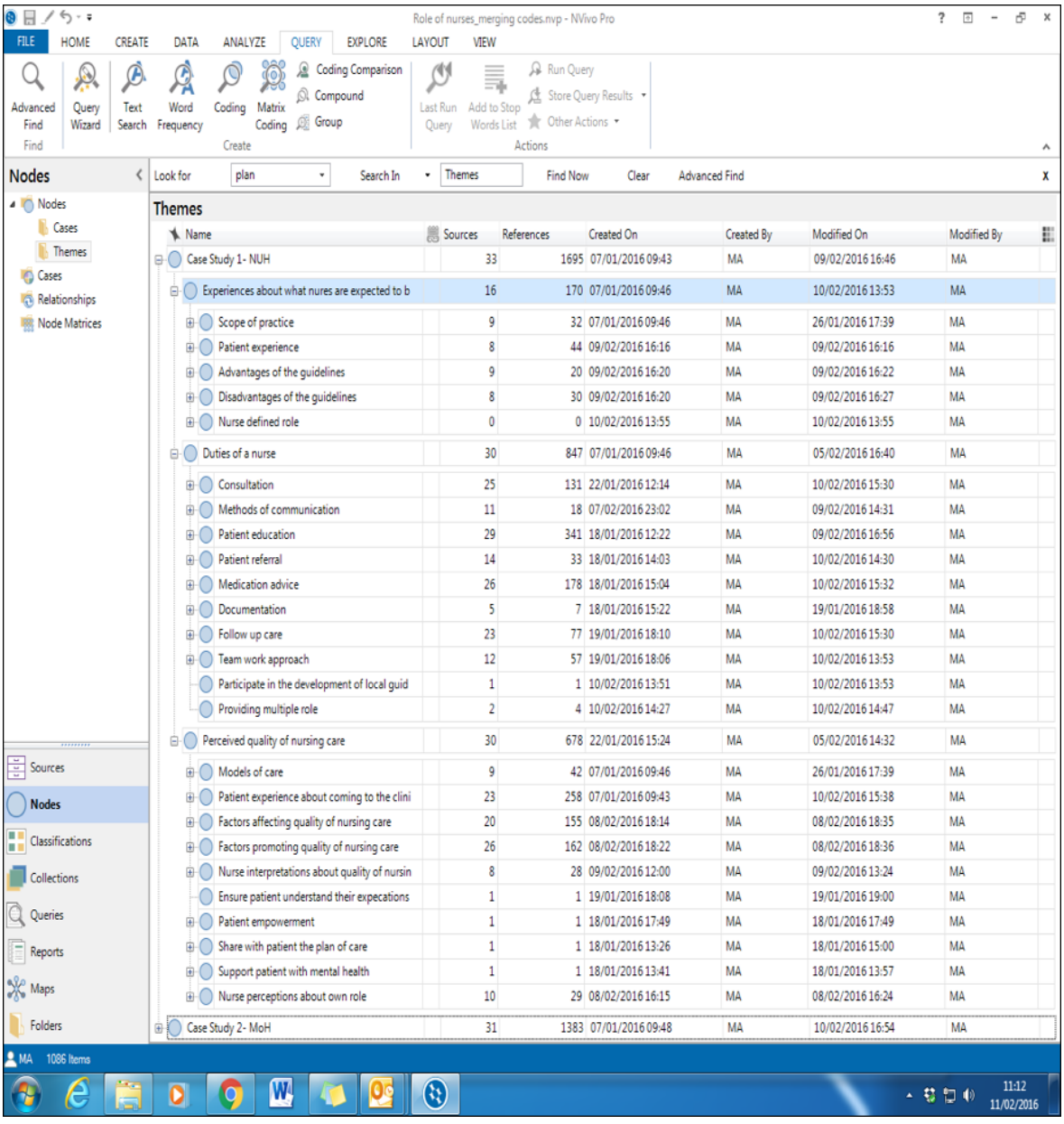


Figure 15 Screen-shot of NVivo themes

Themes were considered as stand-alone concepts with no embedded relationships with other themes. Categories and sub-themes which were similar, or had similar meaning, were combined. For instance, I found the *patient-centred approach* sub-theme and *holistic care* were similar, so I combined them under a *patient centred-approach* theme. Similarly, *care*, *individualised care*, and *tailored care* were all grouped under *the patient-centred approach*. Tables 11 to 16

illustrate the initial coding process of each set of transcripts and observations before merging each sub-set of analysed data to have one set of merged categories, sub-themes and themes. However, the two case studies were not merged, as the researcher adopted a cross-case analysis with them (See Chapter 7).

Table 11 Initial coding of nurses' interview transcripts –UK

Themes	Sub-themes
Theme 1: nurse role	Follow local guidelines Lack of specification about nurse role Lack of knowledge about guidelines
Theme 2: nurse perceptions about the guidelines	Nurse contribution to policy change Scope of practice
Theme 3: duties of professional nurse	Health education Inter-professional role Patient education and health promotion Patient support
Theme 4: implications of nurse performance	Approaches of care
Theme 5: challenges of patient care	Changes of the services
Theme 6: nurse perceptions about own role	Workload Busy clinic

Table 12 Initial coding of patients' interview transcripts - UK

Themes	Sub-themes
Theme 1: nurse role	Health education Patient education and health promotion Patient support Prescribe diabetes medication
Theme 2: challenges of patient care	Patient wishes One stop shop Changes of the services
Theme 3: patient experiences about coming to the clinic	Too much work to be done
Theme 4: patient perceived quality of nursing care	Nurse-patient interaction

Table 13 Initial coding of observations – UK

Themes	Sub-themes
Theme 1: duties of professional nurse	Health education Inter-professional role Patient education and health promotion Patient support
Theme 2: approaches of care	Individual consultation
Theme 4: implications of nurse performance	Nurse-patient interaction

Table 14 Initial coding of nurses' interview transcripts - Kuwait

Themes	Sub-themes
Theme 1: nurse role	Follow local guidelines Lack of specification about nurse role Lack of knowledge about guidelines
Theme 2: nurse perceptions about the guidelines	Nurse contribution to policy change Scope of practice
Theme 3: duties of professional nurse	Health education Inter-professional role Patient education and health promotion Patient support
Theme 4: implications of nurse performance	Approaches of care
Theme 5: challenges of patient care	Nurse-patient relationship Patient empowerment Patient non-adherence
Theme 6: power relationship	Professional autonomy Recognition of nurse role in diabetes care

Table 15 Initial coding of patients' interview transcripts – Kuwait

Themes	Sub-themes
Theme 1: nurse role	Health education Patient education and health promotion Patient support
Theme 2: challenges of patient care	Nurse-patient relationship Patient empowerment

Theme 3: duties of professional nurse	Health education Inter-professional role Patient education and health promotion Patient support
Theme 6: patient perceived quality of nursing care	Recognition of nurse role in diabetes care

Table 16 Initial coding for observations – Kuwait

Themes	Sub-themes
Theme 1: nurse role	Health education Inter-professional relationship Patient education and health promotion Patient support
Theme 2: implications of nurse performance	Approaches of care Nurse-patient relationship Patient empowerment Power relationship Professional autonomy

4.12 Review of the Documents

Documents were uploaded in NVivo not to be coded or analysed but to compare between the standards and recommendations listed in the revised local, national and international guideline documents and the actual role of nurses. This information would help verify whether the data met one of the study's objectives of comparing between what the guidelines stated about the roles of nurses and the actual roles of nurses as they discharged their daily duties. In this study, I revised textual types of data (standards and recommendations) published via web pages and in hospital documents. This method was appropriate because of the research question and one of the aims was to investigate roles informed by the guidelines that are undertaken by nurses in T2D care. Thus, the process of analysing the documents went through the following steps:

1. First the documents were clearly determined according to what the researcher found in web pages and what the in-charge nurses in both case studies provided her prior to study approval. Therefore, the sample consisted of all the documents related to the role of nurses delivering T2D care.
2. I searched the keywords across all the documents that inform about roles in diabetes care.

3. I used the recommendations and standards that matched for commonality and differences with other data sets.
4. Lastly, some statements extracted from revised documents were integrated with the other data sets (interviews and observations) found to be under similar codes, categories and themes. This is discussed in the two findings chapters, 5 and 6 and also in chapter 7.

4.13 Cross case analysis

The process of data analysis was started initially within-case to obtain an understanding of the findings before proceeding to the cross-case analysis process. This process enabled the comparison of the themes and categories identified in each case (Sandelowski & Leeman 2012). For both case studies, within-case analysis allowed an in-depth understanding of what nurses were actually doing, what the patients reported about nurses' conduct when providing their care, what the researcher observed during nurse-patient consultations, and what the guidelines recommended about diabetes care (Stake 1995). Cross-case analysis allowed the researcher to search for cross-case patterns within the data obtained from each case (Yin 2014; Creswell 2007). In the cross-case analysis, tables were used to explain and clarify the analysis procedure by demonstrating the data sources for each case study.

4.14 Summary of data analysis

Within-case analysis naturally includes a thorough description for each case study in each site, as it enables the researcher to manage the earlier stages of data analysis, when there is a massive amount of data at hand (Eisenhardt 1989). Preliminary coding was formulated before I started the next step, which involved gradually merging data sets. I started to merge nurses' interview transcripts with patients' interview transcripts in each case. It should be noted the interview schedules for patients and nurses were deliberately created to include questions about roles of nurses, the different approaches nurses follow in diabetes care, how both patients and nurses perceived these approaches and whether these approaches contributed to the quality of nursing care (See interview schedule in Appendix E). Creswell (2003) suggests that relevant meanings appear while the researcher examines each data set and finds meaning from it. I found that nurses' and patients' responses to some questions were similar; for instance, when considering the issues of patient education, health education, health promotion

and patient support. Following the merging at coding level of interviews, observation data were added and reviewed for commonalities and differences between sub-themes and themes in the merged interview data. Finally, these three data sets were compared with the local, national, and international guidelines to compare what nurses expressed and patients confirmed about the role of nurses and what the guidelines informed about the roles of nurses.

Data were clearer after merging the three data sets in line with the inductive approach I adopted. As more data were merged and more information was added to the themes it became clearer the themes were firmly grounded in the data. Nurses' actual roles were compared with what nurses said, what patients said, what I observed and what the guidelines informed about the roles of nurses. I have explained the outcomes in detail in Chapters 5, 6, and 7.

4.15 Rigour and Trustworthiness

A multiple case study design, including multiple sources of information, will ensure trustworthiness of the data collected (Stake 2005). Commonly, rigour has been identified in terms of its trustworthiness (Guba 1981; Merriam 1995). Establishing rigour in research is an essential factor (Mays & Pope 1995; Baxter & Eyles 1997; Yin 2014) yet establishing rigour in qualitative research is still challenging (Merriam 1995; Morse et al. 2002). Within a case study approach Yin (2014) took a positivist standpoint and suggested comprehensive procedures to ensure rigour by means of standardisation of the reseach process. He focused on *'construct validity', 'internal validity', 'external validity', and 'reliability'*. The external validity is the generalisability or transferability of the study results and the internal validity is the reliability or accuracy of the study results and balanced must be achieved between these two variables (Sanderson et al. 2007). In the current study, the external and internal validity are linked to using similar but different case studies. Though reliability is concerned with the accuracy of the actual process adopted in reseach, validity is concerned with the study's findings or results. The external validity is therefore strengthened in the current study by the use of two case studies from two different countries with people of different culture, and background and different context but similar results were reported from both case studies. This suggests that the results should be repeatable in another city of the UK or Kuwait.

The aspects of validity and reliability are however often associated with evaluating the variables for assessing the effectiveness of interventions in quantitative,

rather than qualitative, research designs (Sanderson et al. 2007). Stake (1995) however, considered the flexibility to react to study findings in ways that enable the researcher to create an insight, to be both superior and beneficial when compared with standardised procedures. Merriam (1995) argued that rigour is needed in all kinds of research to ensure that the findings can be trusted. Merriam (1995) proposed some questions to reflect legitimate concerns about rigour in qualitative research and to reflect upon philosophical assumptions underlying a positivist stance which were incongruous for assessing rigour in qualitative research. These presentations of rigour and trustworthiness make it unlikely a unified definition of the concept of rigour will soon be established in the field of research. In the current study I ensured the rigour by careful consideration of the case study methods adopted for this study. The use of multiple data sets within cases strengthens the reliability of findings and to further assure reliability I was engaged in sharing with my supervisors the emerging issues and themes so they could offer thoughts and insights into the stage of my higher level of analysis. This study used similar but different case studies, from two different countries and different nurses, patients with different cultural backgrounds, but similar findings were reported.

Qualitative researchers attempted to present some solutions to ensure rigour in qualitative designs. For instance, Mays and Pope (1995) offered checklists of rigour for qualitative research and Finlay (2006) presented five aspects in the assessment of rigour and trustworthiness: i) clarity, ii) credibility, iii) contribution, iv) communicative resonance and v) caring. Finally, Guba (1981) offered four key aspects of trustworthiness: i) credibility, ii) dependability iii) transferability and iv) conformability. These are described in the below sections.

The credibility of this study resulted from the suitability of the research design informed by the ontological and the epistemological positions and their consistency with the aim of the study and the research questions. The adoption of a triangulation approach (Lincoln & Guba 1985) strengthened this study's findings, which were generated by diverse methods of data collection. For instance, to gain understanding about the actual roles of nurses, the analysis process included different sets of data from nurses' interviews, patients' interviews and observations; these data sets enabled the merging of data during the analysis process. Whilst this approach, of gathering data about an area, allowed me to establish a full picture of the phenomena being studied (Casey & Murphy 2009), this might have meant that agreement was unlikely to be achieved

because each source of data collection could answer different aspects of the same question. However, this divergence was found to enhance the validity of the research by demonstrating multi-dimensional aspects of social factors (Mason & Dale 2010).

Burns and Grove (2005) argued that the researcher's persistent engagement and presentation with both the participants and the place of study, is necessary to enrich the credibility of qualitative data analysis. To enrich the credibility of my study, interpretation of the data and the study findings were shared and discussed with my supervisors and other colleagues doing research. I also had preliminary meetings with the matron and nurses working at the clinics in both case studies prior to commencement of my fieldwork. Meeting participants in their natural working environment could enhance the development of trust between researcher and researched (Englander 2012), as well as promoting an in-depth understanding of cultural backgrounds (Berg et al. 2004). During staff meetings, the overall research aims and relevant ethical considerations were discussed and, in addition, any questions asked by the nurses were answered. Initially nurses felt uncomfortable about observations so I informed them that my role was not to interfere or interact with patients and that they would be free to talk to me after the observations (See 'Interviews' and 'Observations' in Appendices E and F). These preliminary preparations helped to gather more valid and credible responses and views from the participants.

After each interview with patients and nurses, I adopted the strategy advised by Lincoln and Guba (1985) which is 'member checking'. After each interview, I summarised the main points discussed and what had been said in order to ensure that the data included was what the participants meant and said. Occasionally, some points needed confirmation by the participants to verify the accuracy of the particular information, especially when it had significance to the study. I followed the same strategy after each observation, where I summarised what the nurses did. I asked them questions about actions that needed explanation, in order to confirm the accuracy of what I had recorded in my fieldwork or about the specific behaviours of certain patients. Also, I sometimes needed clarification to inform my decisions before any modification of the interview guide was made. These strategies are in line with Morse et al. (2002) who emphasised that peer checking ensures that a study's findings that are generated from the data, comes from the participants' views and opinions.

The concept of dependability means consistency of the research findings derived from the data analysis (Lincoln & Guba 1985). Research findings are considered consistent and trustworthy if other researchers examine the data gathered and develop similar findings. I discussed with my research colleagues the categories that emerged during analysis, so as to confirm dependability. We discussed the confirmation and non-confirmation of specific themes found in each manuscript; either through the medium of NVivo or hard copy. Initially, I shared with my supervisors some of the examples of the coding and emerging themes to make sure it was the right method of analysis.

Lincoln and Guba (1985) defined transferability as the possibility of the research findings being applicable to other contexts or groups. However, this research does not aim for that outcome, or for generalisability, as the nature of case study design and qualitative methods focuses on gaining in-depth understanding of the issue or issues being studied. Accordingly, understanding of the role of nurses in diabetes care was obtained from two case studies from different countries and with two settings from within each case study. This structure showed that nurses' roles might not be precisely similar or indistinguishable. In fact, to achieve this, an adequate narrative describing the findings of the study was accomplished (Miles & Huberman 1994). I enriched the descriptions of the current study's findings by the adoption of a cross-case analysis. The adoption of two case studies enables the reader to have an insight into the data from the case records, finding the relationship between cases, and generating conclusions from the findings (Stake 2013).

In summary, adherence to the above aspects has proved useful in ensuring and establishing the rigour and trustworthiness of this study. Overall credibility of the study was achieved through the different views and opinions from different participants and different methods of data collection, in addition to conducting the research in two different countries with two different healthcare systems.

4.16 Quality of research

In Kuwait, nurses in T2D care are recognised in the sense that they make valuable contributions to support healthcare professionals, including doctors and patients. Worldwide, the incidence of diabetes is increasing rapidly so that this research is of significant value. People who have diabetes need to know how to control their illness, so my research is focused on enabling patients to be able to control and manage their diabetic condition. Therefore, as a nurse tutor, and a trustworthy

individual in the community, I was able to support nurses in this particular field in the classroom and in clinical practice. At this point I believed that political support was needed to improve the whole experience of diabetes nursing care. Consequently, this research needed to be valid, trustworthy and culturally relevant to my country, Kuwait. To achieve these values, it was incumbent upon me to be a reflective researcher.

Reflexivity is considered a key aspect in qualitative research and refers to the researcher's awareness about his or her presentation in the study and their influences on the data they are collecting (Mays & Pope 2000). In an interpretivist approach, the researcher 'generates' from the data rather than 'discovers' (Sandelowski 2000). The researcher has some impact on the way data is generated by his/her personal presentation in the study and the amount of data that can be discovered (Stake 1995). Therefore, reflexivity is considered essential in qualitative studies, as a result of the researcher taking the major role in data collection and analysis (Stake 1995). I have documented my own reflexivity in order to provide an idea about my position as a researcher in this study (Merriam 1988). These records were kept in my logbook, in which I recorded my feelings and impressions during both data collection and data analysis.

My role as a previous employee of the Kuwaiti MoH means that I might have been viewed by participants as an insider; a situation which could have negatively influenced both the observations and nurses' interviews in Kuwait. However, this situation actually impacted positively on the fluency of the fieldwork, in terms of being a participant and researcher with a familiar background. Some nurses participants in the Kuwaiti case study knew me as I had taught them at college before they qualified as nurses and, as a result, I was unable to avoid 'the reflection of my own identity' (Polit & Beck 2004). However, I made sure to explain to them that they were independent nurses now and that they could use their own experience as they were well trained and qualified. I had to explain to them that their knowledge is now greater than my knowledge in diabetes care, because they are specialised and qualified according to the training they received. They needed to understand that I was acting as an 'outside observer' of nurse-to-patient interactions during consultations as they occurred, and could not be directly involved in the nurse-patient consultations being studied as that would invalidate my research data, as well as being ethically unacceptable (Merriam 2009). However, being an ex-medical surgical nurse and lecturer in adult nursing meant that I had some experience about these interactions, making me an

outside 'insider' (Patton 1990). Therefore, in the current study I was both an 'insider' and 'outsider', but my role within the study was influenced by my previous work experiences. Participants can feel more comfortable to talk to an 'insider' as they have shared contextual information and background (Dwyer & Buckle 2009).

In both case studies, I developed some key competencies resulting from my relationship with nurse participants, mainly resulting from my existing knowledge about roles and regulations relevant to the field of nursing practice. However, such insider knowledge can have both negative and positive impacts on a researcher's attempts at gathering valid information. As an insider, nurse participants and I had a chance to share knowledge about the diabetes clinics and the general principles of diabetes care. This communication established a good working and trusting relationship, which was considered by me to be a positive effect on my research, as it smoothed the flow of my fieldwork. For instance, some nurses met me before the fieldwork commenced and gave me some helpful information before starting both the observations and nurses' interviews. This included suggesting that I should be present around the clinic at most times and also provided information as to how I should maintain my social identity during the interviews and observations.

Participants in the UK case study did not know me, but before I commence my fieldwork, I did some preliminary interviews with the matron and one diabetes nurse in order to introduce my study to them. During those communications, I informed them about my need for their support. I observed that nurses were not very welcoming; perhaps I was perceived as a stranger, in their territory. However, when I explained in detail about the study they showed interest when I talked about conducting interviews to ask them about what they were actually doing, in real practice, with their patients. One nurse asked me to go to the community, as I was in the wrong place as they were busy and could not find the time. She advised me that they do not have any more patients with T2D; however, when I asked the PA to help me to find the list of patients coming to the clinic, she provided me with a long list of patients with T2D.

Following the meeting, the matron sent an email to me and copied the ten nurses working in the clinic and encouraged them to participate in my study. Accordingly, I sent a follow up email explaining that I would not interfere or interact with either the patients or nurses while attending the consultations. I stressed quite clearly that I would just observe the nurses' practices in diabetes

care and no observations would be audio or video recorded, but notes would be taken. I considered these attitudes of the nurses as normal as they might have thought that I would ask questions or make comments or notes which would interfere with the fluency of their consultations. I experienced on one occasion three nurses asking me to do a single group interview as they did not have time to take part in individual one-on-one interviews. I explained that this was not a focus group interview and we then arranged other times that would be best for each one of them. Subsequently, some nurses showed their willingness to contact patients to ask them to participate in the study. Nurses in both case studies, when I told them I needed more patients, tried to contact patients over the phone, which was successful in both case studies.

The first observation I attended was in the UK and it was a pilot observation for practical reasons for me to become familiar with the workplace at the clinic and also for other nurses to know me and not see me as a stranger or threat. In most consultations I attended, both nurses and patients were comfortable with me to observe their interactions and nursing practice, in order to explore nurses' roles and experiences in diabetes care. Starting my fieldwork with observation meant that I could ask the observed nurses to agree to participate in interviews and to ask their patients to participate in the observations and interviews. Most nurses felt comfortable with my presence during the subsequent days of fieldwork, which encouraged me to have some ‘side talks’ with nurses after the clinic.

However, there were some negative experiences within the period of my fieldwork. For instance, one of the UK consultations took about two hours as the nurse was trying to sort out some personal issues for the patients. In fact, I attended the longest observation and interview with this nurse, as she was trying to sort out one patient’s social life, as well as financial and emotional issues with another patient. She was very intimate with her patients but this in my opinion impacted on other patients' waiting times and delays at the clinic. Between consultations, I asked the nurse about delaying other patients, and she said that she was aware of that issue so she arranged to have the patients with greater needs to be the last in the schedule. However, I noted that most of her patients took more than 30 minutes, although the average consultation time is supposed to be 30 minutes based on their NHS authority protocol and other patients’ rights. While I was conducting the observations as a nurse there were some situations when I felt the urge to be involved; however, I had to adhere to the ethical obligation which guided my conduct as a non-participant observer.

In Kuwait, during the interviews, some nurses thought that I could raise their views to the management regarding recognition of the work they were doing. They wanted their position recognised with different job titles and better salaries than other nurses working at the clinic.

In both case studies, some interviews took more time than expected, as some nurses and patients were keen to talk about issues other than those within the scope of the study. For instance, both nurses and patients in the UK were trying to raise their concerns about moving diabetes care services to the community. Some nurses felt that they were able to provide care in the clinics and some patients preferred to receive their care in the clinics.

4.17 Chapter summary

This chapter has discussed the research methodology adopted in this study with justification for the utilisation of the research design and methods, in addition to the interpretivist approach. The strengths and limitations for the adoption of the case study design have been examined in detail. The research protocol for the study's fieldwork has been discussed with detailed explanations focused on selection and recruitment of study sites and participants. Methods of data collection and data analysis were explained in detail, with illustrative samples for clarification. The trustworthiness level of the study has been discussed with respect to credibility, transferability, dependability and confirmability of the research findings. Ethical considerations have been considered, as has the researcher's reflexivity relating to the study fieldwork notes and logbook, details of which were presented. The next chapters (5 and 6) present the study's findings.

Chapter 5: FINDINGS OF THE INDIVIDUAL CASE ANALYSIS CASE STUDY 1: THE UK

5.1 Introduction

This chapter presents the findings of the UK case study. Data that constitute the findings in this chapter were obtained from multiple sources, with three methods of data gathering being used in order to triangulate the findings in this case study. Data drawn from interviews with diabetes nurses (DNs) clarified the actual, as opposed to ideal, role that the DNs undertook in diabetes care. Interviews with diabetes patients provided information about whether what nurses said they did in diabetes care actually happened. Further, to support these two data sources, observational data, informed the interaction between the DNs and patients and sometimes the involvement of other healthcare providers in diabetes patient care. Furthermore, observational data were used to verify what was said in the nurses' and patients' interviews.

5.2 Study Participants

The UK sample consisted of six patients (two females and four males ranging from 55 to 69 years old), all with T2D, and all attending the clinic from five to 30 years. All but one of the sample received follow-up with the same DN. The DN sample consisted of 10 female participants, with ages ranging from 30 to 66 years; with nursing experience ranging from four to 38 years. The nurses' qualifications ranged from Nursing Diploma to Master's degree. Their years of experience in diabetes clinical care ranged from two to 21 years, with the majority having more than 10 years' experience.

5.3 Findings of case study 1 - the UK

The data analysis produced three themes:

- Theme one: actual role of nurses in diabetes care
- Theme two: nurses' relationship with the guidelines
- Theme three: implications of nurses' performance

From these themes emerged a number of sub-themes and each theme and sub-theme is discussed in detail in Table 17 below.

Table 17 Findings of Case Study 1 - the UK

Themes	Sub-themes
Theme One Actual role of nurses in diabetes care	• Health education and health promotion • Providing patient support • Prescribing • Inter-professional role
Theme Two Nurses' relationship with the guidelines	• Nurses refer to the guidelines in practice • Nurses' attitudes and perspectives towards the guidelines • Nurses' influences on policy change
Theme Three Implications of nurses' performance	• Nurses' perspectives about their own role • Patients' perspectives on the quality of their diabetes care

5.3.1 Theme One - actual role of nurses in diabetes care

This theme emerged from three sources of data: i) nurses' interviews, ii) patients' interviews, and iii) my observations during nurse-patient consultations. This use of data allowed for triangulation between the data to take place. The DN's actual roles were explored to understand, in the wider context, what the DNs were actually doing and relate their actual role to that which is informed by the guidelines. Therefore, this theme includes descriptions of the actual role(s) of DNs, the functions and tasks DNs undertake in diabetes management, as expressed by the DNs interviewed and observed during nurse/patient interactions in consultations. For additional confirmation of what DNs reported about their actual role, and what was being observed, patients were interviewed to explore their perspectives on the nursing care they received during their visits to the diabetes clinic. Data analysis from all the sources revealed four sub-themes: i) health education and health promotion, ii) providing patient support, iii) prescribing, and iv) inter-professional role(s).

5.3.1.1 Sub-theme - health education and health promotion

The DNs followed stages in teaching plans; from the time the patient was referred to them until the patient’s needs were met. This sub-theme can be divided into two parts: 1) health education and 2) health promotion.

5.3.1.1.1 Health education

The DNs planned for three phases before initiating health education. They first gathered baseline information about patients' levels of understanding and then

they assessed the patients' different needs in order to plan for the topics to be included in health education. Later, they established preliminary views about the educational programmes they would plan for, as all patients were different and therefore their needs were different. The DNs then planned for the learning approaches the patients would need. Finally, the DNs decided whether or not the patients would be ready to self-manage their diabetes. Figure 16 below describes the phases the DNs followed in providing health education for their patients as expressed during the DNs interviews.

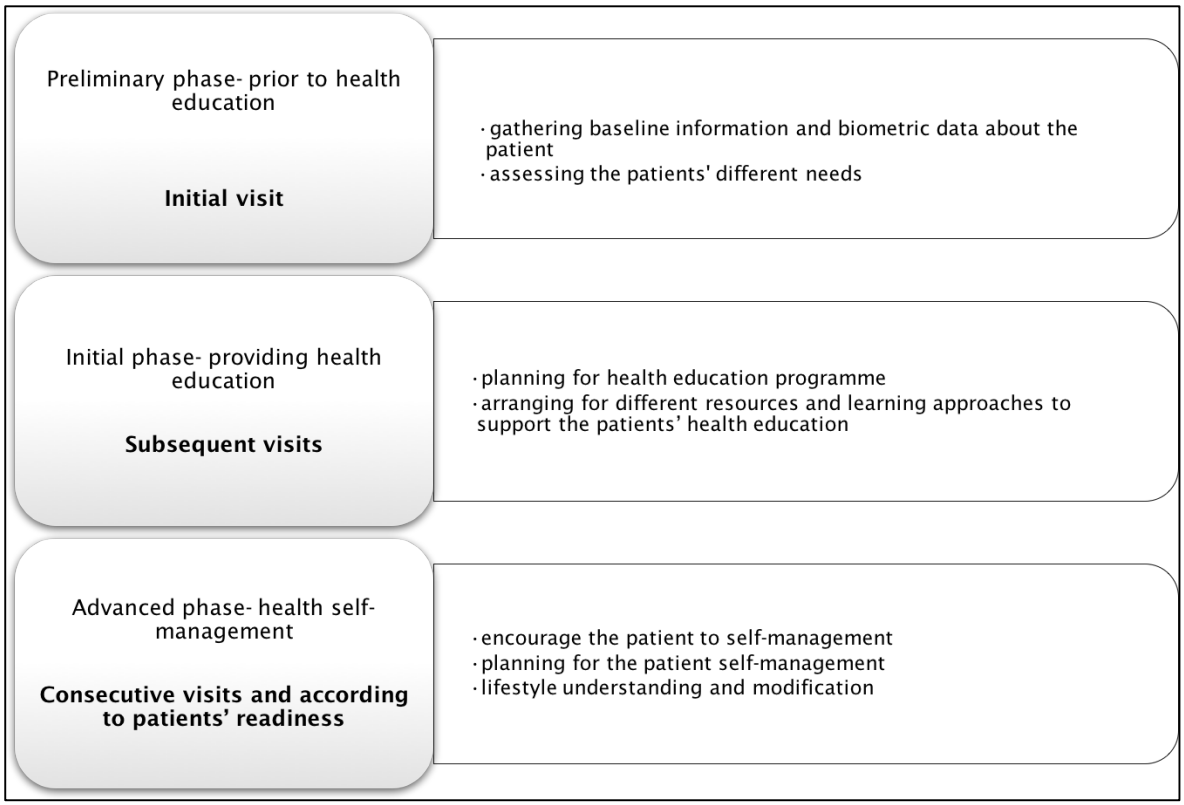


Figure 16 Strategies used by DNs in health education and promotion

5.3.1.1.1.1 Preliminary phase - prior to health education

The DNs' interviews revealed that they spent a minimum of half an hour for each patient's consultation, while gathering baseline information and biometric data. This strategy, in establishing baseline data about a patient's level of knowledge and understanding of their illness, as well as identifying the patient's willingness to receive education, indicated that DNs spent from five to ten minutes with patients before a health education programme commenced. This patient-related information was gathered by reviewing the patient's condition at each visit. Additionally, asking the patient questions about their condition provided the

patient the opportunity to explain and discuss their concerns, which would then consequently allow the DN to provide appropriate health education to the patient.

Health education was based on patients' needs and requirements, as there are different types of diabetes which cause the patients' needs to vary. The following comments indicated how these variations were addressed through individual consideration of the patient by the DNs. Some patients needed frequent and specific education, as they had difficulties with understanding and needed special consideration from the DNs.

> *"Patients are different and sometimes you could use slightly different methods. Some patients have difficulty in understanding what you are saying and others are very smart … we are providing individualised type of education according to each patient's needs ….*" (Nurse 8-NUH)
>
> *"We make an assessment of the previous knowledge and experience. We ask the patients what they feel and why they come to see us.*" (Nurse 2-NUH)

Some patients had been visiting the clinic for a long time, which reduced their needs as they might have become proficient in their diabetes management, as a result of their frequent visits and being involved in their own care-management. Also, some patients were newly diagnosed, which meant that they would need more time and effort devoted to their health education. The following comments indicated the supportive relationship that needed to be achieved between the patient and the DN:

> "*We ask the patients what they want to get out of the consultation and then I personally have a duty of care to make sure that they have the correct information. So, I will deliver education in a way that is appropriate to the patient*." (Nurse 2-NUH)
>
> *"The first visit is all about assessment. We ask them what they know about target blood glucose (sugars), how they respond to highs and lows, if they have a plan for sick days. Our job is really to give them the tools to navigate on a daily basis with this disease."* (Nurse 1-NUH)

In fact, patients testified their gratitude to the DNs. This gratitude was based on the evaluation of their educational needs and the decisions regarding individualised education or group education.

> *"I appreciate nurse J seeing me in person …. It is the face-to-face contact with somebody who knows who you are, what some of the problems are going to be, and the confidence that they [nurses] know what they are doing."* (Patient 1-NUH)

Collecting patient information, before commencing education, benefitted the DNs as the procedure saved time and effort on their part as well as the patients

receiving the rich and appropriate knowledge they needed regarding their diabetes care. Table 18 shows the various functions that the nurses performed before starting patients' consultations. These functions were identified from three sources of information: observations, patients' interviews and nurse's interviews.

Table 18 Baseline data gathered from multiple sources

Baseline Data	Observation	Interview patients	Interview nurses
Patient diary (diet, insulin, glucose readings)	x	x	x
Vital signs		x	x
Blood glucose	x		x
Blood pressure			
Patient weight		x	x
Laboratory work		x	x

Table 18 shows that during the consultations which I attended, nurses were not observed to monitor vital signs, blood pressure, patient weight and checking laboratory work. These tasks were identified through the interviews with patients and nurses as taking place. Patients reported that some procedures were not performed by nurses, which shape an important issue to be drawn in the discussion chapter. This issue considers the power between nurses and patients.

Identifying patients' needs, as mentioned earlier, enabled the DNs to decide about firstly, the learning approaches patients needed to facilitate education and secondly, to consider the optimal treatment that the patients needed to receive. For instance, some patients required individual face-to-face education, as they may have been newly diagnosed or, as mentioned in earlier extracts, they might have had some difficulties understanding, or they needed more effort and time given to them by their DN.

> *"Our patients here know each other and help each other as well. However, we are aware that some patients rely on their own experience and that is not necessarily applicable to other patients, so we are aware of that and we do not recommend patients to provide advice but to share their experiences with each other."* (Nurse 10-NUH)

On the other hand, the DNs identified that diabetes care education is better understood in group sessions, as indicated in the following comment:

> *"We provide professional education. We do provide that on either an individual basis or group educational sessions, as we noticed that*

> *some patients are better in understanding and appropriately controlling their glycaemic level in group sessions."* (Nurse 8-NUH)

The patients understanding the difficulties concerning their diabetes care, was related to cultural beliefs and language barriers, as the patients came from different socio-cultural backgrounds, and these needed to be taken into account. For instance, some patients did not speak English; however, the DNs ensured their understanding by the use of different learning approaches. This was noted during observation:

> *The patient cannot speak or understand English very well. The nurse was trying to understand what he was saying and to make sure he understands what she is saying. Alternatively, she was drawing for him and writing to make sure he understood what she said. The consultation took more than 30 minutes, but the patient looked comfortable as he understood what the DN said.* (Observation 6-NUH)

Learning styles varied as some individuals found reading to be their method of learning, whilst others found listening to be appropriate for them. For other patients with difficulties in understanding their diabetes care, the DNs provided written materials as a more appropriate approach. Some patients preferred the DNs to read to them as they could understand more through listening than reading. This situation was explained by the following comments:

> *"Sometimes the nurse gives more information and I'm really pleased with that because she reads the brochures out to me .... Sometimes she writes it down for me and I take it home. She says if you can't read ask someone to read it for you, but if you need any sort of help just ring us, we will come there and then help."* (Patient 5-NUH)

> *"I get along with her very well; she understands what I am saying ... she asked me to write sugar levels down but other things I ask my family to write it down for me."* (Patient 5-NUH)

The patients' comments indicated that the DNs were found to be skilful in identifying the patients' different needs, including educational needs and being able to plan for how to meet the needs of the individual patient. As an approach to support patients' learning, selection of an appropriate communication style was considered important by the DNs at the clinic, despite the patients' language barriers or other factors related to difficulties with learning. For instance, during a nurse-patient consultation, it was observed that the DN leaned forward to the patient, who was wearing hearing aids, and tried to raise her voice, but with a soft tone, so as to allow the patient to read her lips. Furthermore:

> *The nurse was using figures of types of long acting and short acting insulin and action for each one and she was pointing to each figure using a pen. The patient was not happy to increase his dose of*

> *insulin but the nurse explained to him that he should be on a higher dose of his medication.* (Observation 3-NUH)

Furthermore, respect for a patient with particular needs, related to understanding their diabetes care, facilitated their learning; especially when the nurse considered the patient's other factors related to age, educational level, length of time having diabetes and other associated conditions.

Other approaches that the DNs utilised in facilitating learning were the use of different models that reflected some of the practices that needed skills to be demonstrated. These models of learning were based on patients' preferred learning styles or needs. Evidence of the approaches used was triangulated by nurse and patient interviews and my observations:

> *"We use different learning approaches with our patients according to their educational needs. Sometimes we draw for them and use building blocks to count the amount of insulin and to get to know everything about their diabetes. Some of them can learn via pictorial things. So, this depends on how they understand you."* (Nurse 5-NUH)

> *"The nurse used to provide me with some brochures and draw me some information like the work of insulin in the body .... The nurses write things down for me because I do not remember very well. They [nurses] help me with recalculating my insulin ... I found that quite hard to calculate in my head. So, I have had a lot of help and written instructions."* (Patient 1-NUH)

> *In nurse-patient consultations it was observed that the nurse used a blank paper to draw a graph for the patient about how the insulin brings down the high glucose level. The nurse demonstrated to the patient how to self-inject the insulin and the angle of injection* (Observation 6-NUH)

Identifying a patient's needs and problems facilitated the DNs' decision making about the most appropriate management plan, which would reflect collaboration about the patient's care. At this point it is worth mentioning the DN's workload, as undertaking the role of a DN and the multiple associated responsibilities (mentioned in the forthcoming sections in this theme), besides interpreting and overcoming language barriers, generate an increased workload for them. In addition, the DNs' time spent in consultation sometimes exceeded the appointed time slot allocated for each consultation.

5.3.1.1.1.2 Initial phase: providing health education

Providing health education, as part of their role, involved the DNs in identifying the patients' different needs through a number of processes.

> *"Review patient through assessment, documentation, follow up care and patient referral."* (Nurse 6-NUH)

The DNs commenced education by going through the patients' records and diaries to check the patients' stages of diabetes management and control and to establish whether the patients were adhering to the plan of care. My field notes identified that:

> *The DN goes through patient records and asked her [the patient] if she had any high or low glucose levels. The DN asked the patient about what were her [the patient's] interventions to manage these symptoms.* (Observation 7-NUH)

The multiple interventions that the DNs performed, prior to and during consultations, were identified and corroborated by the use of three sources: researcher observation, nurse interviews and patient interviews. The DNs explored the patients' methods of how they were controlling their diabetes, in case they experienced some symptoms of diabetes between their visits to the clinic. Also, the nurses enquired how the patients managed their problems, focusing on the symptoms of diabetes. I observed:

> *The nurse asked the patient about the reasons for having high glucose levels, as frequently recorded in her diary. The patient's daughter informed the DN about her mother not taking her insulin and eating unhealthy food. The DN advised the patient and her daughter that if she continued to have these wrong food habits and skipped her insulin, she might develop diabetes complications.* (Observation 7-NUH)

In the interviews, the DNs talked about providing their patients with advice about following their treatment plans, which would help in controlling their diabetes; an initiative supported by the following comments from a DN and a patient respectively:

> *"I provide consultations to patients, prescribe or adjust his insulin, and check his routine readings and his diary to make sure he is following the treatment plan."* (Nurse 3-NUH)

> *"She [the nurse] gave a lot of advice about the dose of insulin as it [patient condition] was getting impossible because I was taking huge doses… So she gave very good instructions on how and where to inject and how to change the needles and what is the appropriate needle size for me …."* (Patient 2-NUH)

When patients understand more about the consequences of not complying or following the information provided about controlling their diabetes, they will be more cooperative. One DN explained what she, as a diabetes nurse, does:

> *"I [the nurse] emphasise the importance of achieving good glycaemic control and educate patients about the risks associated with poor diabetes control …."* (Nurse 2-NUH)

This information, provided by the DN, was enhanced and strengthened by describing the risk factors associated with poor diabetes control in which the patient must recognise the importance of:

> *"…. maintaining good blood pressure and good cholesterol levels …."* (Nurse 2-NUH)

5.3.1.1.1.3 Advanced phase: self-management

Patients' self-management was considered to be an important part of health education in which the DNs played a crucial role. The nurses viewed that spelling out or dictating to a patient what to follow or what to do was not a successful strategy, especially if the patient needed to learn about how to become independent in terms of managing their own diabetes.

> *"… the main part of my role is educating patients to self-manage their diabetes … ."* (Nurse 3-NUH)

> *"better to ask the patient about what they have been doing rather than just to be dictatorial and tell him exactly what he should do.*" (Nurse 7-NUH)

To enhance encouragement of a patient to self-manage their diabetes, the DNs followed some strategies that could contribute to the patient's ability to self-management, therefore the DNs would:

> *"… provide proper counselling."* (Nurse 5-NUH)

In addition, patients may not always be ready to receive critical information needed in self-management. The DNs were aware of the importance of preparing patients before giving them the opportunity to self-manage their diabetes. Hence, a continuous evaluation of patients' capabilities was needed, in order to ensure that they could safely self-manage their condition:

> *"They [patients] need a lot of input initially to make sure they are safe and confident in their reliability of managing themselves…sometimes they are coming with no idea, and therefore I have to guide them through it.*" (Nurse 1-NUH)

The DNs at the clinic encouraged patient empowerment to enhance patient confidence about self-management of their diabetes.

The World Health Organisation (WHO) (1998) defined patient empowerment as a process through which people gain greater control over decisions and actions affecting their health" and should be seen as both an individual and a community process.

Through this process patients understand their role, are given the knowledge and skills by their health-care provider to perform a task in an environment that recognizes community and cultural differences and encourages patient participation.

In this context patients with T2D take responsibility in managing their illness.

Furthermore, patients expressed that the DNs were supporting them with their knowledge and skills in order to control their diabetes:

> *"Nurse H is helping me with knowledge and everything. She educates me how to manage my sugar … I mean lots of education which developed my knowledge ….*" (Patient 5-NUH)

Patients stated that they had been provided with knowledge about screening tests and explanations required to achieve them. One patient commented that:

> *"Nurse J makes me confident about the way I am going to manage my diabetes and makes me feel it is going to work and I trust her …I know about the annual review tests and how to be ready for them … ."* (Patient 3-NUH)

Patient empowerment in self-managing their diabetes was observed when I attended a consultation in which the DN went through a patient's readings.

> *The patient looked to be controlling her diabetes well, as shown in the records and diary. She told the DN that she is following the care plan word by word. The DN explained to the patient how to interpret her lab results and specifically her HbA1c.* (Observation 8-NUH)

A DN confirmed that she taught patients about the significance of caring for their feet in order to prevent complications related to diabetes. She provided the patients with information to make them knowledgeable about self-management of their condition and to be aware of the complications that might result from non-controlled diabetes. The DN explained how she did this:

> *"I talk with the patient about the importance of taking good care of their feet and ask them to assess them daily and keep them clean and dry beside applying moisturizing cream… we teach them how to self-examine their feet by using the mirror and using appropriate shoe size and socks. We have patients who are expert and that is after we teach them how to self-manage their diabetes and other complications that might have resulted from diabetes."* (Nurse 7-NUH)

These strategies, used in the health education of patients' diabetes, were beneficial in facilitating two factors: firstly, the DNs were able to understand the patients' needs and concerns. Secondly, the patients respected the information they were given about the importance of following and complying with treatment

plans, which were effectively planned by the DNs for those patients who were found to be able to self-manage their own diabetes.

5.3.1.1.2 Health promotion

The second part of this sub-theme concerns lifestyle behaviour modification to support *health promotion,* which includes eating patterns, physical activities, and exercise; all factors that are crucial in diabetes management, in addition to medications.

The key aspect in health promotion was related to how the DNs helped the patients in maintaining a healthy lifestyle for themselves. The approaches the DNs utilised were typically related to taking medications and following healthy lifestyle advice. The DNs used their knowledge in providing information about diabetes and the complications that can result from uncontrolled and unresolved behaviours. The following interview comments from DNs detailed their role in health promotion:

> *"I just use my knowledge to remind them [patients] if they take alcohol or if they smoke … we do ask our patients to restrict their diet and that is again to help them to maintain a healthy life style …."* (Nurse 5-NUH)
>
> *"... smoking, drinking alcohol, and exercise. I talk with them [patients] about diet issues, if they want to lose weight …."* (Nurse 3-NUH)
>
> *"... their [patients] regular eye checks and to take care of their feet …."* (Nurse 8-NUH)

According to one patient, the DN suggested interventions such as changes to lifestyle:

> *"Like my lifestyle, she [the nurse] said change your lifestyle. Do a bit of exercises, when you sit down; that makes your sugar level go high.*" (Patient 5-NUH).

This was confirmed by my observations during a nurse-patient consultation. The DN asked the patient to control his diabetes by following lifestyle modifications. The common issues that the DN discussed were about diet, exercise, weight control and self-management.

> *The patient complained to the DN about his increased body weight. The DN advised the patient about controlling his diet as the patient said that he is not eating snack but he eats heavy meals. The DN advised the patient about the benefit of doing daily walks or exercise, which will both decrease body weight and control high blood glucose level. The patient realised that and asked the DN about how he can achieve these goals. The DN started to teach the patient about how to manage*

> *his diabetes with the different aspects related to life style modifications.* (Observation 2-NUH)

Discussions with patients about the consequences of an unhealthy lifestyle can convince some patients to follow the DNs advice and suggestions. A patient expressed his thoughts about the major part one of the DNs played in convincing him about the consequences of not following the treatment plan.

> *"When I show her that I'm not happy about something, she will just talk about the rationale if we do not follow the treatment plan and what will happen like in the long term."* (Patient 1-NUH)

A DN explained:

> *"I just use my knowledge in patient education to remind them that if they take alcohol or if they smoke or it is like healthy eating, exercises and losing weight and anything like that."* (Nurse 4-NUH)

5.3.1.2 Sub-theme – providing patient support

Data from DNs and patient interviews, as well as observation data, informed this sub-theme, which introduces DNs' roles in supporting patients. The roles the DNs played in providing patient support in managing diabetes include: identifying patients' needs, meeting these needs, and resolving patients' anxieties.

In identifying patients' needs, the DNs undertook in patient support to identify patients' problems and concerns, as this was necessary in order to consider the optimal treatment patients should receive. The DNs were aware that patients varied in their needs. Therefore, similarly to the strategy used in developing health education, the DNs questioned the patients to gather information about the methods followed by the patients in controlling their diabetes in terms of behaviours such as lifestyle, including diet and physical activity.

> *"Different patients have different needs and requirements… the method we used in meeting patients' needs is based on what they say and want …."* (Nurse 8-NUH)

I observed a consultation where:

> *The DN asked the patient about his life and his daily activities and exercise. The patient said he mostly eats at night as he does not feel hungry during the day. He said that he is not doing exercises but he is walking his dog. Therefore, she advised him about the importance of having a good balanced diet and doing exercises as this will help in controlling his diabetes.* (Observation 3-NUH)

During the consultation, the DN noted that the patient was tired and she asked him why he looked tired. The patient told the DN about his foot problems. The DN explained to the patient about the reasons for these conditions and suggested that he follow some of the procedures that would help him control his diabetes. She explained the causes of his foot problems. I observed that the:

> *Patient complained of numbness in feet and being tired for two days whenever he performs minor tasks at home. The DN suggested that this is one of the complications associated with diabetes, as it affects the nerves and blood circulation around the body. Also, the DN discussed how high or low blood glucose could cause tiredness to some diabetes patients. She suggested controlling blood glucose, which could help to prevent the complications of diabetes.* (Observation 10-NUH)

In addition, the DNs had to respond to patients' questions as some were coming to the clinic either needing answers from the DNs or were coming with no information about what their needs were, as expressed by a DN:

> *"Some patients come prepared with questions and sometimes they come with no idea about their diabetes ...."* (Nurse 1-NUH)

The DNs were responsible for finding out why some patients lacked knowledge and had misconceptions about their medications. For instance, one patient skipped his insulin dose as he had low blood sugar levels. The DN explained to him the consequence of this and that he should not skip his insulin dose. Additionally, she adjusted the patient's current insulin dose and added insulin that works at night (Lantus). During this consultation, it was observed that:

> *The patient mentioned that he experienced hypoglycaemia at night so he did not take his insulin. DN advised patient about adjusting his insulin to a lower dose but not to stop it at night as he might have high blood sugar. The DN reduced the amount of the insulin the patient is taking at night. She prescribed insulin (Lantus) that works for 24 hours, which she explained to the patient.* (Observation 9-NUH)

A nurse explained, in the following comment, why some patients did not take their insulin.

> *"Initially, some patients will not take their insulin as they are afraid to have a hypo ... they think they will die ...."* (Nurse 7-NUH)

The DNs supported the patients by correcting some of their misconceptions:

> *"Therefore, we explained to them [patients] that taking insulin and following the instructions and advises from us [DNs] will prevent hypos."* (Nurse 7-NUH)

There was patient preference to be in touch with a DN who had the knowledge and skills to help, as shown by the following comment:

> *"… to contact a nurse … who actually knows what she is about to do especially in understanding what I need …."* (Patient 1-NUH)

This patient explained his optimistic feelings about the way the DN supported him all the way in his treatment:

> *"… has always been a positive experience…I have always found it very helpful especially my nurse K here. She is always available … and has always been of excellent support to me, that is why I like always to keep coming here … the care I get here is excellent."* (Patient 1-NUH).

Another patient gave similar praise:

> *"Nurse L will say you have bad leg but you use body parts to move your hands and elevate your legs like when you do cycling and do the exercise. That is helping me."* (Patient 5-NUH)

Assisting the patients to identify their problems helped the DNs to establish individualised care plans in order to meet each patient's various needs, according to their conditions. Additionally, patients' sharing about their needs and concerns with the DNs allowed them, as patients, to have an insight into the best way they could achieve their condition managing goals.

Meeting patients' needs followed on from the identification of such needs. The DNs then started to plan strategies on how to meet those needs. For instance, the following comment by a patient confirmed the DN's intervention in lowering his blood glucose level:

> *"My sugar level is coming a bit down now. 32-33 mmol to 20-25 mmol now. It is coming down now."* (Patient 5-NUH)

The DNs' interventions in meeting the patients' needs were not necessarily related to diabetes, as one patient described:

> *"She [the nurse] is providing me lots of support, which is not always regarding my diabetes."* (Patient 1-NUH)

The patients appeared to appreciate the DNs interventions without having to wait to be asked. The DNs were able to encourage patients and give them time to speak, even when they were busy:

> *"They [nurses] would talk to me about things without me asking. They will ask for what is wrong and if I had queries they would do that even if they are busy and if I came up with something they already talked with me about, they would welcome that like if it was about diet or something."* (Patient 2-NUH)

With the DNs following the above strategies in identifying the patients' needs and problems, the patients easily got the required support. Meeting patients' needs

can be achieved by supporting patients to learn about coping mechanisms and techniques; for instance, with emotional problems. The DNs played important roles in providing psychological support to the patients. In fact, this was respected by patients' who felt anxious during consultations:

> *"I appreciate all what nurse J has done to me, I mean my blood sugar was extremely high and look now it is much better."* (Patient 2-NUH)

I also observed this scenario:

> *The DN provided emotional support to the patient by talking about the different coping mechanisms to reduce anxiety. She demonstrated the way she can breathe deeply and gave a rationale for that [was explained by the DN]. The DN also talked about how to promote good mental health and good sleep by walking and exercising, and socialising with others. The DN also observed that trying to cope with diabetes and the changes in blood glucose could cause anxiety.* (Observation 7-NUH)

It could be argued that the patients needed to know about their medications as this would facilitate their understanding of, for instance, how to adjust their insulin dose:

> *"She [DN] explains; let's go up to the U-500. It is specialist insulin got from America I believe and she has explained to me that it is five times stronger. So, every time I take a unit, I am actually taking five units extra … she talked in depth about this dangerous insulin… I don't agree with everything."* (Patient 4-NUH)

Additionally, the DNs provision of information about body reactions and effects of medications encouraged the patients to follow the instructions related to their medications.

Resolving patients' anxieties was considered by the DNs in the way they encouraged the patients to think about ways of achieving this. The DNs spent a fair amount of time with their patients, in order to accomplish the target needed by the patients.

> *"I spent an hour with one of my patients to reduce his fear of a needle."* (Nurse 2-NUH)

The patient expressed that the DN resolved his anxiety when he was in a position of not understanding about his treatment plan. The DN decided to choose a solution according to his level of anxiety, which is sometimes caused by inaccurate decisions that are either related to management or treatment of diabetes:

> *"A couple of months ago I had problems because I had the dietician here telling me one thing and the kidney dietician telling me something else and I was in the middle. Therefore Nurse 9-NUH got them to sort it all out and then it was all-better."* (Patient 4-NUH)

> *"She [the nurse] is telling me ... if you take this [Metphormine] with insulin that will **** [inappropriate word] your health. It doesn't go with the insulin, then I had to stop that tablet and that sort of ……."* (Patient 5-NUH)

Some patients had a lack of knowledge or a misunderstanding about some of the aggravating factors that can lead to serious health conditions, especially in blood glucose symptoms. The researcher observed a consultation in which the DN provided information to a patient about these issues and suggested solutions to prevent these health conflicts occurring. In my field notes I wrote:

> *The DN revised the patient's blood glucose readings in her [patient] diary. She noted one incident of hypoglycaemia. When she asked the patient, the patient said that she drank a lot of alcohol that night. The patient asked the nurse why she had hypoglycaemia as the patient thought that alcohol causes hyperglycaemia and she was going to increase her insulin dose as a result. The DN advised that a little alcohol causes hyperglycaemia but a lot of alcohol causes hypoglycaemia. She advised the patient that this behaviour might cause further health problems in the future, as excess alcohol exhausts the liver.* (Observation 8-NUH)

Facilitating patients to resolve their conflicts and concerns enabled the DNs to understand the problems and issues patients experienced, and to develop a management plan appropriate to each individual patient. The DNs identified patients' needs first, before planning about how to meet those needs. The DNs played an important part in resolving concerns related to patient anxiety.

The UK government's intention to transfer diabetes care services from the clinic to the community was commented on by DNs. They supported patients' views regarding this issue. One DN explained that the DNs preferred patients to have one appointment in which they could see the specialist staff they needed.

> *"...a decision made by the NHS to transfer some of our patients to receive care at the community... our patients are not happy and refused that..."* (Nurse 3-NUH)

> *"... so the patient would not be waiting one week for a dietician then another two weeks for a consultant but to see them all in one appointment ...."* (Nurse 5-NUH)

This disjointed situation, as described above, was considered by a DN as burdening patients with procedures which could end up with them not following up at the clinic and possibly lead to non-adherence to their care plans.

> *"... the worst thing in the world to the patient is to over load him with things. I think to be honest most patients want to get things right. I think offering the kind of support in a rate they need it so not to over burden them because sometimes they can't come back."* (Nurse 2-NUH)

In addition to requiring the patient to make multiple visits, DNs also mentioned the considered risk of complex demands on the patient.

> *"The patient goes through many procedures and treatments like the lab work and many medications especially a patient with complex conditions besides travelling to the clinic. So having all these procedures and management regimen will impact on him [patient] that the patient will not continue with the treatment ...."* (Nurse 2- NUH)

In this section I have explained the DNs roles and the different approaches they utilised in diabetes care, including health education and health promotion. These approaches involved educational and behavioural change interventions, as well as incorporating patient support and empowerment. Further, the findings in this section have extended the knowledge about DNs' nursing practices in demonstrating a teamwork approach. The following sections described nurses' advanced roles such as prescribing and other roles related to multidisciplinary teamwork.

5.3.1.3 Sub-theme: prescribing

Another aspect of the DNs role in health promotion was their substantial role in providing the patient with medication advice. Some DNs were authorised to prescribe, as they had completed the course of *DN prescriber*, arranged by the NHS Trust:

> *"I'm a nurse prescriber. I can prescribe insulin and I can change the insulin, and mix insulin ...."* (Nurse 8-NUH)

Other DNs wanted to be able to prescribe, as they considered that this would save both the patient and the DN's time and would allow the DN to have more scope to provide focused patient care.

Patients' waiting times were a concern for the DNs who believed that their patient's progress could be delayed as a result of waiting for the doctor to prescribe to them their medications. Patients needed to go through further appointments with their doctors just to get their medications:

> *"Waiting for a consultant to prescribe delays patient's progress; I have to refer him to the consultant so he [the patient] should be waiting to have an appointment with the consultant ... some patients are unlikely to wait or to have an appointment ...."* (Nurse 4-NUH)

However, some DNs were found to view prescribing as not part of their role and viewed it as being the doctor's work:

> *"Though this [prescribing] will give me more authority to plan for my patients … but this means I'm doing a doctor's job. That is extra work and not part of my role."* (Nurse 3-NUH)

Furthermore, some DNs viewed the prescribing course as:

> *"… very hard", "expensive" and "takes times to finish …."* (Nurse 4-NUH)

During a nurse-patient consultation it was observed that:

> *The DN reviewed the patient's file and diary, checking her [patient] readings (insulin doses, blood glucose levels and patient diet). The DN advised the patient to lower her insulin dose when she feels hypoglycaemic. The DN gave the patient examples about when to increase or decrease the dose of insulin.* (Observation 10-NUH).

This observation indicated that DNs practiced their role in medication adjustment according to patients' readings and records.

> *"She [the nurse] gave a lot of advice about the dose of insulin as it [patient condition] was getting impossible because I was taking huge doses… So she gave very good instructions on how and where to inject and how to change the needles and what is the appropriate needle size for me …."* (Patient 2-NUH)

Moving patients from non-injectable diabetes medication to injectable therapies can be challenging for some patients. From the patient's perspective, this development would need frequent blood glucose monitoring, besides being exposed to possible hypoglycaemia. A patient's uncertainty about the effect of insulin was changed during his consultation with a DN, as the following comment shows:

> *"I was happy with my Glucophage tablets …. My HbA1c went high for a year. So, they put me on two types of insulin. I did not agree at the beginning but nurse J worked hard with me during our consultation till I accepted to be on insulin. I was supposed to check my blood glucose every time before taking my insulin and I was doing that as I was afraid about low blood sugar …. Nurse J taught me how to alter my insulin dose according to my diet and exercise …."* (Patient 6-NUH)

The previous comments indicated that the DNs formed relationships with the patients before identifying each patient as an individual case that needed its own plan of care. Appreciation of this 'attention to the individual' approach is reflected by the patient feeling valued and with their needs being put as a priority. Additionally, the DNs were able to clarify the information provided about diabetes control, in which they were able to use different approaches to

education so as to ensure their patients' understanding of what had been said in the consultations. This showed the DNs' professional trustworthiness where the patients' trusting relationships with them would be strengthened. Additionally, the education strategies the DNs utilised, with consideration of each patient's particular needs, developed the patient's confidence, which was reflected later by their ability to self-manage their diabetes.

5.3.1.4 Sub-theme: inter-professional role (s)

The inter-professional role DNs played at the clinic was considered as a vital approach in diabetes patient care. This role occurred between DNs and other nurses and healthcare professionals at the clinic and included the different models of care, together with the distribution of roles between DNs and other health team members. Additionally, nurse's role included the boundaries between DNs, doctors, and other healthcare professionals that specify each staff member's role.

At the diabetes clinic, there were different approaches of care including medical and nursing interventions. When a patient came to the clinic, the DN decided whether the patient needed her input or that of other healthcare providers. Therefore, she would refer the patient to the consultant if the patient needed a medical or nursing intervention:

> *"If I have a patient in front of me who needs a medical response to his problem, I will send him through to the consultant. If the consultant has got a patient who probably needs some education, he will pass him to me and that works really well. If the patient has got a serious medical problem then he should see the doctor and if the patient needs education regarding his diabetes then he should see the diabetes nurse."* (Nurse 8-NUH)

If the patient needed health education, the consultant would refer him/her to the DN. In some instances, the patient might need more than one healthcare professional's input or intervention, in which case the nurse would arrange for a joint clinic that included a multi-disciplinary team and approach:

> *"I do a joint clinic with the consultant and I don't ever have that problem once they've [patients] seen me because the DN is experienced."* (Nurse 2-NUH)

According to a DN some patients think that:

> *"the consultant knows best and others think the opposite [nurse knows best]."* (Nurse 2-NUH)

Basically, both the DNs and their patients recognised that doctors and nurses had different roles and were able to identify when the patients needed one or the other, as indicated by the following comments:

> *"Patients should see both doctors and nurses because we do different work."* (Nurse 2-NUH)

> *"A doctor is a doctor and a nurse is a different thing here …. Nurses are capable of doing their job now as they can write medication. We trust them more than any other people here."* (Patient 5-NUH)

This patient's comment also revealed the trust that patients have in DNs' capabilities in performing their functions. However, it is clear that the DNs would not perform functions beyond the scope of their practice, even if the patient prefers that. Certainly, the following comment strongly indicates the respect DNs had for other healthcare professionals' roles:

> *"... if I find a problem with somebody's cholesterol levels or blood pressure I would then call the doctor in. I'm not a nurse prescriber so I know that doctors and nurses have boundaries. Those boundaries, when we work together, they can merge really nicely. Sometimes I hear patients say I've got this problem and I will say that this is actually not under the scope of my practice.*" (Nurse 2-NUH)

Once the DN had recognised that the patient needed her input, she would provide the necessary interventions:

> *"First, doctors see them [patients] in the clinic and then it is for us to see them and it is usually to identify and go through things again like how to take their medications … I mean it will depend on what comes out from the patient; what the problem is …."* (Nurse 7-NUH)

It is clear that the DNs in the clinic worked collaboratively with the doctors and complemented what the doctors had started with the patient. Furthermore, a patient indicated that if they needed support in clarification about certain procedures or medication, there was support from the DNs:

> *"After I see the consultant, I will stop and see nurse J. She will double check that everything is ticked and ok. If anything needs adjusting, either tablets or insulin, she [the nurse] will alter it... Do what should be done and alter the way of taking the insulin. Next week if I come in, she [the nurse] will check everything and because she is a clever woman at her job, she will have to see what needs altering and she will tell me."* (Patient 3-NUH)

In summary, this theme has confirmed that DNs follow different strategies in health education and health promotion for diabetes patients. This personal health initiative begins with preliminary education in which the DNs gather baseline data that help them in planning for patient care, with consideration of different

cultural backgrounds, learning styles and needs in handling their diabetes. The DNs also showed their professionalism in health promotion in providing suggestions about lifestyle modifications and providing advice about medications. Moreover, DNs who had nurse prescriber status had greater autonomy in their diabetes nursing care. The DNs overall aim was towards patients' self-management of their diabetes, wherever possible. The DNs showed the ability to provide patient-centred care achieved through collaboration with other healthcare professionals. Nurse-doctors' collaboration fosters patients' satisfaction and patient confidence to self-manage their diabetes (Pam Silberman and Slifkin 2003). Nurses collaborated with other members of the health care team such as consultants, doctors to meet the needs of the patient, for example in section 5.3.1.4 and 6.3.1.4 when a nurse worked with the doctor to control patient other needs. Patients' on the other hand provided positive comments regarding nurses working in collaboration with others on their behalf for example in section 5.3.2.2. In addition, understanding each professional's role, and using suitable methods in patient care management, such as delegation, can save time and efficiently assign the role of each staff member.

5.3.2 Theme two: nurses' relationship with the guidelines

Three sub-themes emerged from the nurses' interviews and documents review of the guidelines (see Table 17). The DNs in the UK followed both national and local guidelines (NCF; NICE; RCN; NDSAG). The similarities and differences are explained in the forthcoming sub-themes. Whether DNs are following what is stated in the guidelines or diverging from the guidelines, according to particular circumstances, will be explored next.

5.3.2.1 Sub-theme: nurses refer to practice guidelines

All the DNs interviewed agreed that they were fully aware of national guidelines, but few of them were aware of local guidelines. The DNs used a variety of alternative terms to convey the meaning of what the guidelines meant to them; these terms included: *"helpful"*, *"essential"* or *"restrictive"*. The DNs interviews supported the view that they should follow the guidelines as they are *"... based on a lot of research."* (Nurse 4-NUH)

Interview data showed that the DNs were aware of the importance of the guidelines in their practice. They stated that the national guidelines were used as

a source of information that informed them about the minimum level of care expected in terms of patient education and key aspects in diabetes care:

> *"I'm a nurse following the NICE and competency framework, which helped to guide me through my diabetes nurse training … to become a diabetes nurse to become skilled from the NICE guidelines, and the NCF and we have the diabetes guidelines locally."* (Nurse 1-NUH)

In fact, some DNs commented that they must have guidelines, as they used them as a reference in their practice:

> *"Must have roles and protocols so you will not put yourself in difficult situations so they are important and necessary … we refer back to them."* (Nurse 8-NUH)

The DNs also reported that healthcare providers, working with them under the same umbrella, designed the local guidelines. This observation indicated the DNs' awareness of the importance of the local guidelines which are specifically designed for diabetes care.

> *"They [local guidelines] can be very useful and I think because they are established normally by people who work in this department so they made these procedures about diabetes."* (Nurse 10-NUH)

However, some DNs reported that they used the guidelines for advice, rather than for creating boundaries:

> "*Guidelines don't restrict me but guide us*." (Nurse 7-NUH)

Another DN suggested that:

> "*Guidelines are a small part of my job*." (Nurse 2-NUH).

While another DN suggested that guidelines identify:

> "*… legal responsibilities to them.*" (Nurse 9-NUH)

Considering the DNs' different views about the guidelines, they were advised by their senior staff to follow these guidelines and were obliged to do so. In fact, obligations for the DNs to follow the guidelines were found to be stated in the national guidelines and local guidelines.

> *Use national guidelines* (RCN-NUH)
>
> *Follow practice protocols* (NDSAG-NUH)

The DNs were confident about their knowledge and skills, as one indicated:

> *"The skills you have are your experience that allows you to look at this protocol and think about and follow the protocol or stay with your*

knowledge and experience because to me experience proves more than the guidelines." (Nurse 2-NUH)

Table 19 shows the published roles that DNs' in the UK should undertake and where this was evidenced from one of the data sources in the study to be occurring.

Table 19 Guidelines' recommendations and supporting evidences

	UK Guidelines				
Guideline recommendations	**NCF**	**NICE**	**RCN**	**NDSAG**	**Annotated source**
Screening, prevention and early detection for diabetes	✓		✓	✓	Patient3, Nurse7 Observation 8
Newly diagnosed patient with type 2 diabetes advice: activity, lifestyle, weight management				✓	Patient 1, Nurse 1, 2, 8, and 10
Promoting self-care/self-management/ patient empowerment	✓	✓	✓		Patient 3 and 5 Nurse 1, 3, and 7 Observation 8
Mental health/psychological support	✓	✓			Nurse 2 and 6 Patient 2 Observation 7
Nutrition- dietary advice	✓	✓		✓	Patient 2, 4, 5, and 6 Nurse 1, 3, 4, 5, and 8 Observation 2 and 3
Urine monitoring	✓	✓			
Blood glucose monitoring	✓	✓		✓	Patient 6
Oral therapies	✓	✓		✓	Patient 1, 3, 5 and 6 Nurse 1 and 5
Injectable therapies/ insulin adjustment	✓	✓		✓	Patient 2, 3 and 6 Nurse 3, 5 and 8 Observation 6, 7, 9 and 10
Hypoglycaemia or and hyperglycaemia/ glycaemic control	✓	✓		✓	Patient 3 and 5 Nurse 2, 6, 7 and 8 Observation 2, 3, 7, 8 and 10
Intercurrent illness	✓	✓			
Managing diabetes in the hospital/ In-patient care	✓	✓	✓		Nurse 1, 2, 4, 7, 8 and 9

	UK Guidelines				
Guideline recommendations	**NCF**	**NICE**	**RCN**	**NDSAG**	**Annotated source**
Hypertension and coronary heart disease	✓	✓	✓		Patient 1and 2 Nurse 4 and 7 Observation 7 and 10
Neuropathy/complications of diabetes	✓	✓	✓	✓	
Nephropathy/complications of diabetes	✓	✓	✓	✓	
Retinopathy/complications of diabetes	✓	✓	✓	✓	
Erectile dysfunction					
Foot problems/ foot care				✓	Nurse 7 Nurse 8 Nurse 2 and nurse 4 Observation
Patient education	✓	✓	✓	✓	Sub-theme 5.4.1
Provide education to other healthcare providers			✓		
Older people					
Guidelines are specified to nurses	✓		✓	✓	
Guidelines are specified to healthcare providers for diabetes care		✓			

In summary, the DNs had different opinions regarding the guidelines. Some of them found the guidelines to be helpfully informing their work, others found the guidelines to be restrictive. However, in practice the DNs are obliged to follow them.

5.3.2.2 Sub-theme: nurses' attitudes and perspectives on guidelines

The DNs had different attitudes and perspectives towards the guidelines. The national guidelines - RCN and the NCF - were specifically designed for nurses, yet the NICE guidelines were designed for general health team members who were providing diabetes care. The DNs perceived the guidelines as keeping them on track. One DN explained her position with regard to how she would handle incidents that were not stated in the guidelines.

> *"I would discuss it [an issue not stated in the guidelines] with the consultant as I'm not ready to take responsibility for acting outside the*

> *guidelines … I feel comfortable to have these guidelines.*" (Nurse 9-NUH)

However, other DNs reported that they felt that the guidelines could not fully address every patient's needs, with each patient having different needs, as indicated by the three following comments:

> *"Not every patient fits in a particular guideline it can be slightly different."* (Nurse 3-NUH)
>
> *"Patients are different and their needs are different … ."* (Nurse 4-NUH)
>
> *"Every patient is a different individual and guidelines do not fit everybody."* (Nurse 5-NUH)

As such, in practice, one DN reported that:

"I could use my own experience …." (Nurse 6-NUH)

Considering patient safety was an issue raised by the DNs, one DN explained that:

> *"I have to go back to the consultant for the safety of the patient."* (Nurse 8-NUH).

Patient safety concerns provided boundaries preventing the DNs from using all of their knowledge and experience related abilities in practice.

The DNs were aware that the guidelines might sometimes have limited their ability to decide about some patients' plans of care. To further illustrate this issue about their limited ability to decide about patients' care, a DN reported that they were confused about certain recommendations, as stated by the NICE guidelines, regarding a particular type of insulin.

> *"For example, NICE guidelines suggested a particular insulin that might be cheaper which in most cases would be fine but not with a high risk blood sugar. These guidelines [NICE] suggested another particular insulin which would be expensive but associated with lower risk of hypoglycaemia …."* (Nurse 3-NUH)

This situation provided an example of where a DN had the necessary and appropriate experience but was not permitted to decide about the medications. However, the NDSAG local guidelines contradicted the nurse's views presented in the quote above. The NDSAG guidelines suggested in its recommendation that:

> *There is no 'best' insulin regimen for patients with type 2 diabetes.* (NDSAG-NUH p.32)

In fact, the DNs were not satisfied about certain issues in both the national and local guidelines regarding certain types of insulin. The DNs who completed the

nurse prescriber course were allowed to prescribe medications for diabetes; however, they were not permitted to prescribe for all diabetes-related medications, but had to wait for the consultant to prescribe:

> *"I'm a prescriber. I prescribe insulin and diabetes medications. I work on titration insulin and initiate insulin; I can change the type of insulin. I have completed the prescriber course so I have got some knowledge about other medications if the medications have changed."* (Nurse 5-NUH)

> *"There are certain incidents where we have insulin that is 500 times stronger than the insulin we normally prescribe. That protocol does not include that insulin and I cannot prescribe it. I have to wait for my consultant for that patient before that decision has to be made.... This is one occasion yes where not everything is in the guidelines."* (Nurse 8-NUH)

The comments above suggest that the DNs may deviate from the guidelines in situations which they considered as delaying a patient's progress. It is clear that in such situations the DNs used their own knowledge and experience, as indicated by the following comments:

> *"You then diverge from the guidelines and look at the patients themselves ...."* (Nurse 2-NUH)

> *"I always use my clinical judgment over time ... Not all guidelines cover all patients."* (Nurse 3-NUH)

> *"Sometimes it is a bit of looking at the guidelines but at other times it is looking at the competence of your clinical experience and how you would manage your patient."* (Nurse 5-NUH)

> *"We are the ones who decide that we can't leave the patient waiting to see us, or waiting for our call back, or about his medications or other issues concerning him. We are using our common sense because we are here for patients. We use our own experience you know we are trained and qualified to make decisions ...."* (Nurse 1-NUH)

These comments indicate that DNs were likely to act beyond the activity expectations of their employed role to help their patients. While some of the activities they performed were documented in the guidelines, others were not. However, in terms of acting within the scope of practice, DNs reported that they would not act outside the scope of their practice:

> *"All that I'm doing is within the scope of my practice."* (Nurse 1-NUH)

> *"I would never act outside the scope of my practice."* (Nurse 8-NUH)

> *"I would not do anything outside of my limits."* (Nurse 4-NUH)

> *"Also, we can't work outside the scope of our practice."* (Nurse 5-NUH)

However, other DNs went beyond the scope of their practice, as explained by one DN:

> *"I give them [patients] my mobile phone number and all the time I do things I should not be doing. You know I have dropped off needles to a patient's house. There is nothing clinical, but we all go out our way to do things."* (Nurse 2-NUH)

Although, they had specific working hours to fulfil their commitments to their patients; however, additional services such as providing patients with needed items but not at the clinic, were not mentioned in any of the four guidelines reviewed. Therefore, it can be interpreted that these DNs were acting above and beyond what was required within the regulations of nursing practice, in order to take care of their patients. The DNs were aware that sometimes they should follow the guidelines in some conditions for their safety and not to perform some actions against that:

> *"There have to be some boundaries to what we do for our safety."* (Nurse 5- NUH)

To enhance the DNs' safety, there were recommendations in the guidelines about directing the patients to those personnel they could seek help from, instead of the DNs acting beyond the scope of their practice:

> *Seek advice from a team with specialist expertise in diabetes when there are unexplained discrepancies....* (NICE-NUH p.16)

Whilst the previous quotes indicate the DNs different perceptions about the national and local guidelines, most DNs followed these guidelines. However, in some circumstances the DNs worked beyond the boundaries of the guidelines in order to meet patients' needs, which were sometimes critical. One DN reported that the guidelines mentioned little about their duties:

> *"Guidelines are only the backbone and there is a lot of work I do that is outside. There are no guidelines for when the patient says my blood sugar is very high and my husband just left me …. I actually do not do anything with the blood sugar …. If somebody comes with emotional problems he is not going to hear me …. I have to help him to get some counselling and support …. You can use the guidelines for what type of insulin to start, for what dose you need to start and how to use a pen for injection. But there are no guidelines on how that patient is feeling emotionally about giving an injection …. So, guidelines have a place but a lot of my job is not guideline oriented."* (Nurse 2-NUH)

In fact, the above comment was confirmed by a patient, who said that:

> *"I got a lot of emotional support."* (Patient 1-NUH)

This is an example of what the DNs were undertaking, which is not covered in the guidelines. The DN expressed that she provided emotional support to her patients and that she considered this was not within the scope of her job. Interestingly, the NCF guidelines included this skill as part of a nurse's role:

> *Be able to offer the patient/family/carers emotional support* (NCF-NUH p.26),
>
> *…as well as being able to recognise signs of needle fear/needle phobia and offer strategies to help manage this* (NCF-NUH p.16).

Accordingly, some DNs thought they were undertaking more than what was recommended by the national and local guidelines. One DN commented about the wide range of duties:

> *"We are covering quite a huge part in diabetes care that is more than what is stated in the guidelines."* (Nurse 10-NUH)

The comment above was supported by a patient who talked about the effective support he received from the DNs:

> *"She is [the nurse] providing me lots of support which is not necessarily regarding my diabetes."* (Patient 1-NUH)

Therefore, the DNs considered supporting some specific needs for patients as not part of their role. For instance, one DN raised the issues of patients' psychological, social, and other medical needs, as not being within the scope of her practice:

> *"Sometimes we provide counselling for some patients who have major diseases … patients with other conditions than diabetes have a different pathway of care. However, we still see them and discuss with them their stressors. I did not know that this is part of my role to provide this kind of support."* (Nurse 1-NUH)

I found that what the DNs were doing was recommended in the national guidelines, which require taking a holistic approach to patients' care needs, such as patients with complex conditions, psychological, and social needs:

> *Describe the links between type 2 diabetes and other conditions (e.g. cardiovascular disease).* (NCF-NUH p.28)
>
> *Carry out regular patient review … each review should include an assessment of physical and psychological wellbeing*. (NICE-NUH p.7)

In the RCN guidelines, nurses are recommended to refer patients with psychological and/or emotional needs to specialists:

> *Identify psychological problems and refer people for psychological support as appropriate.* (RCN-NUH p.7)

> *Identify people with complex emotional needs and offer them referral to a psychologist.* (RCN-NUH p.10)

In addition to this, there was no specific criterion in the local guidelines (the NDSAG) that included the duty to provide patients with psychological support (see Table 7, Chapter 3).

The DNs reflected that they were doing more than was stated in the guidelines; they were still contributing to patients' care and meeting their needs.

> *"… I think if I have more than what I should do, it must be for the patient's needs."* (Nurse 1-NUH)

Although, the previous views indicated that some of the DNs were not satisfied about undertaking wider roles in diabetes care; equally, they were not able or prepared to ignore or neglect patients' needs, as these are priorities for them. The following statements indicated the importance of the patients to the DNs and the satisfaction they get from their role:

> *"We just can't ignore patients … this is for the patients ……. We cannot just say no, we cannot see you [patient]."* (Nurse 10-NUH)

> *"But at the end of the day we all leave work with a bright feeling that we did a good job."* (Nurse 2-NUH)

It was previously described in this sub-theme that DNs referred to the guidelines as a source of information and reference. However, the DNs considered that the guidelines did not include all their duties. The DNs talked about their need to have specially designed guidelines. What I identified was that the DNs were taking on other roles, such as providing diet advice, even though there was a dietician at the clinic. Furthermore, one DN could not find a specification about her role in the national guidelines:

> *"I don't see that the NICE guidelines mentioned all what we do here at the clinic … obviously we do more as we can't find the time to have a break … . The guidelines do not say we have to call the patient if he didn't show up … . There are dieticians at the clinic but we provide diet advice and lifestyle changes … . There is nothing specific in the guidelines to say what my role is."* (Nurse 1-NUH)

I reviewed the NICE guidelines (see Section 3.3, Chapter 3) and found that there was no specification about a DN's role within them. This supported the DN's claim in the previous quote about the lack of specifically designed guidelines for DNs. However, the other three guidelines (NCF, RCN, and NDSAG) were specifically designed for nurses working in diabetes care.

Fundamentally, the DNs identified the reason related to the shortfall of the guidelines to include the role of a DN, as being out of date (national and local guidelines). A DN indicated that diabetes care is continually evolving and there are constantly new management regimens for it, in which the DNs follow the best practice:

> *"There is always new knowledge that is not in these guidelines and practices as well but I'm sure these will come along in the future and someone will discuss it … guidelines need to be updated as there are lots of things happening around about the work nurses are undertaking in diabetes care, we [nurses] need to know the best practice we can afford to our patients."* (Nurse 2-NUH)

In summary, most DNs followed the guidelines; few found that not all their duties were included or covered in the guidelines, so they mostly relied on their experience. Some DNs viewed the NICE guidelines as too general, lacking specificity about which part, included in their guidelines, related to nurses. The local guidelines, NDSAG, were viewed by the DNs as too narrow and not including all that they did (See Chapter 3 section 3.3). The DNs were aware both the national and local guidelines were relevant to their work, as the documents provided them with some needed recommendations in diabetes care. However, the DNs in some instances relied on their experience and knowledge as these were perceived, from a personal perspective, as being beneficial to their patients. Some DNs highlighted that the RCN and the NDSAG guidelines they were recommended to rely on in their practice, were neither evidence-based nor up-to-date; neither reflected best practice in diabetes care.

5.3.2.3 Sub-theme: nurses' influences on policy change

This sub-theme describes the DNs influence on policy change, both at local and national level, by being members of healthcare teams or committees that established some of the recommendations and standards in the guidelines. The DNs took part in modifying some of the criteria included in the local guidelines by:

- Contacting their peers or doctors about some issues they cannot find in the guidelines.
- Introducing changes, modifications, and suggestions to the local guidelines after discussing these issues with their colleagues or doctors.
- Contributing to changing or adding standards and recommendations in the local guidelines.

Some of the DNs contributed to change and/or established the local guidelines they needed to be revised and updated. A DN commented that:

> *"Guidelines can be very useful and because they are established normally by people who work in this department so they made these procedures and we probably were at some point involved in reviewing them …."* (Nurse 10-NUH)

> *"We [nurses] also participated in establishing some local guidelines like the clinical guidelines for diabetes nurses and I was a member of the team who worked in establishing the guidelines."* (Nurse 10-NUH)

Additionally, another DN suggested a change in their consultation style and methods of teaching, even if these issues are not mentioned in the guidelines, as such a move could result in improved patient care:

> *"We are able to change our consultation style, change our method of teaching and change the current routine way of doing things … ."* (Nurse 2-NUH)

However, other DNs felt that the guidelines did not need to change, as they included what they needed:

> *"... I feel comfortable to have these guidelines and do not have to think to change them or to have something outside them."* (Nurse 9-NUH)

In summary, the theme of nurses' influence on policy change has described the role of DNs informed by the guidelines, and how the DNs referred to both the national and local guidelines. The DNs' various perspectives and attitudes towards the different recommendations in the guidelines have been described in this theme. The DNs contributions to changing or adding new suggestions to the guidelines have also been described, as some DNs were members of the committees that established the local guidelines. Some DNs followed the guidelines, while others suggested some changes were required in these guidelines. Other DNs changed their consultation styles and teaching methods in order to improve patients' understanding about diabetes. Finally, the DNs' attitudes pointed to the same target, which is 'patient care'.

5.3.3 Theme Three: implications of nurses' performance

Implications of the performance of DNs in diabetes care are addressed in this theme (see Table 17) and illustrated by findings from three sources: nurses' interviews, patients' interviews, and observation data. This theme includes two sub-themes: nurses' perspectives about their role in diabetes care and patients' perceived quality of nursing care:

- ***Nurses' perspectives about their role in diabetes care*** which includes promoters and inhibitors that have an impact on DNs' performance. Further, this sub-theme displays the DNs' contributions, with suggestions to resolve some of the obstacles they experience at the clinic, that may influence the provision of quality care.
- ***Patients' perceived quality of nursing care*** confirms what nurses perceived to constitute quality, as compared with patients' perceptions. This concept of quality includes the challenges of patient care, in which patients highlighted their views and opinions about the system itself that is controlling diabetes care at the clinic, together with factors related to patients' complaints about the services.

The patients interviewed mainly had positive feelings about the DN's role, where they reported details of the characteristics of DNs providing them with care.

5.3.3.1 Sub-theme - nurses' perspectives about their own role

This sub-theme explains the DNs' views and perspectives about their actual roles in terms of promoting quality nursing care. Analysis of the data identified promoters and inhibitors to the provision of quality nursing care, as shown in Table 20; the findings for each category are discussed below. sub-theme explains the DNs' views and perspectives about their actual role in terms of promoting quality nursing care. Analysis of the data identified promoters and inhibitors to the provision of quality nursing care, as shown in Table 20, the findings for each one is discussed below.

Table 20 Promoters and inhibitors to quality nursing care

Promoters	**Inhibitors**
1. Providing patient-centred care	1. Shortage of nurses
2. Professional autonomy	2. Nurses' workload
3. Extending the role - nurse prescriber	3. Financial conflict
	4. Power relations - senior management staff
	5. Power relations - medical staff

5.3.3.1.1 Promoters

Three promoters for the quality of nursing care were identified in the study findings for case study 1: the UK.

5.3.3.1.1.1 Providing patient-centred care

The DNs suggested that the quality of nursing care, as a concept, needs to be judged by patients, as patients are the receivers of the care and they are the best representatives to evaluate quality of nursing care. This perspective was expressed by one DN as:

> *"Our care is something that needs to be evaluated by the patient I guess."* (Nurse 7-NUH)

Patient satisfaction was a hard concept to be interpreted by patients, without asking them about how happy they were about nursing care. The DNs considered patient satisfaction as a subjective experience, which only patients should comment on:

> *"We cannot ask our patient how happy they are … we do our part even more than what it should be, then it's the patient who decides if he is happy about what we have provided …."* (Nurse 8-NUH)

The DNs reported positive outcomes from their patients, as some of them were happy about the care they received from the DNs which was indicated by the successful controlling of their diabetes. Other patients, as the DNs commented, appreciated the duties the DNs undertook towards the care they provided regarding their diabetes control:

> *"… patients are happy about coming here [to the clinic], their needs met, they are having better glycaemic control …."* (Nurse 6-NUH)

> *"The effort I'm providing here and patients appreciate each time they come to the clinic."* (Nurse 7-NUH)

The above comments on patients' positive responses about the role of DNs led one DN to confirm that their patients preferred to see them instead of the doctor:

> *"I certainly have patients who would say to me I don't need to see a doctor today because I'm happy with what we've done".* (Nurse 2-NUH)

The DNs described their role as being valued in patient care, by providing patients with individualised and holistic care:

> *"… the care we provide is holistic, we cover patients' needs holistically."* (Nurse 7-NUH)

In fact, the DNs were confident that their patients followed the treatment programme:

> *"I never have experience with patients saying they are not happy with a particular regimen."* (Nurse 1-NUH)

Patients' willingness to follow their treatment plans was related to the DNs intentions and wishes to do something different for their patients:

> *"I just wish there is something I can do for our patients. Here [at the clinic], we don't consider our patients as only patients; we know a lot about their lives. We [nurses] support people so far. This is indicated by patients following up with their treatment plan."* (Nurse 8-NUH)

The DNs approached the patients holistically, so they would cover different aspects of care that are not only relevant to diabetes. For instance, one of the DNs interviewed reported that they were covering patients' cultural issues, financial issues, foot care, physical and psychological care, as well as social support:

> *"Our patients come with different needs and we make sure we cover these needs. Some of them have needs that are related to their cultural backgrounds, others have financial problems and in that case, we try to provide some solutions, though this needs other interventions that are not under our scope of practice …."* (Nurse 2-NUH)

> *"Some patients have physical needs like foot problems or diabetes complications … we try to meet those needs."* (Nurse 4-NUH)

> *"We have patients coming with psychological or social problems… we try to sort these and provide counselling about coping mechanisms and other techniques to support patient's needs."* (Nurse 6-NUH)

The following narrative clarified that on some occasions, DNs were not able to personally resolve patients' concerns; however, they provided pathways for them to follow in order to address their worries and concerns. In fact, the DNs viewed these aspects of care as holistic and impacting positively on patients' outcomes:

> *"We don't just provide advice on diabetes … it is more about nurses assisting patients with other consequences that can either result from diabetes or other disease conditions or other variables of care, like emotions or patient's social life and relationships with others besides cultural issues.... If the patient talks about his financial problems or losing his job I can't just say this is not part of my job you know. I could guide him where to seek help from to overcome his financial concerns. I see covering different angles and sides of a patient's life will help them to follow the treatment plan and thus this will positively influence their condition."* (Nurse 5-NUH)

5.3.3.1.1.2 Professional autonomy

The DNs provided comments that featured and shaped their self-confidence in diabetes care. For instance, she *"never gives up"*, she considered herself a *"safe practitioner"*, as she is *"accountable for what she does"* and she is *"100% responsible for her own practice"*. Expressions of self-confidence can be considered as enablers for the DNs' abilities to make decisions, solve problems, and plan patient care independently. The following comments strongly illustrated the confidence the DNs had in their own abilities as diabetes care providers:

> *"… follow what is right for the patient. If the patient's blood sugar is high, the patient is absolutely petrified for hyperglycaemia. So I could increase his insulin doses gradually."* (Nurse 2-NUH)

> *"We use our own common sense to know about how to present the information and how much detail this particular patient needs."* (Nurse 7-NUH)

The DNs were motivated in providing diabetes care as they had their own patients, which additionally ensured patients continuity of care. These factors therefore enhanced the DNs' professional autonomy by being independent.

> *"I have my own caseloads of patients to follow-up …. I have to cross that with as much as I can with the patient needs. So, I would say to the patient I would really like to see you in another two weeks, are you ok with that. However, I would follow them up as regularly and as often as the patient needs."* (Nurse 2-NUH)

That the DNs made these judgements on a regular basis is indicated by the following comment:

> *"Each day you are making assessments of what is vitally important."* (Nurse 2-NUH)

These regular decisions are made on the basis of professional knowledge, competence and confidence; all of which need to be maintained by continual and frequent updating:

> *"There are always new skills to learn in diabetes pathways of care."* (Nurse 1- NUH)

However, some DNs ensured that the updating of their own knowledge was an on-going process, as one identified:

> *"Our care will not be out of date."* (Nurse 5-NUH)

5.3.3.1.1.3 Extending the role- nurse prescriber

The DNs were found to have different perspectives about prescribing. Some DNs reported their need to become authorised to prescribe other than for diabetes, as diabetes can contribute to other conditions. For instance, a DN reported that her patient came with high cholesterol levels and he needed medication, such as statins:

> *"My patient this morning is actually having high cholesterol levels and I know the statin works and he is tolerable but I'm not able to prescribe it. So, I should ask a doctor to prescribe or refer the patient to a prescriber."* (Nurse 5-NUH)

The DN was unable to prescribe as she was only allowed to prescribe for diabetes, which limited the role she could play; from this DN's perspective, waiting for doctors to prescribe would delay a patient's treatment. Therefore, extending the DNs' roles and allowing them to prescribe would save the patient time and the patients would also have a better experience because they would start their treatment immediately and as needed:

> *"Some patients urgently need some treatment and we should refer them to the consultant or the GP. That can delay the start of treatment and so on. Therefore, prescribing makes the flow of the clinic quicker. As a result, it saves a patient's time and their experience would become better as they can start taking that medication right away."* (Nurse 10-NUH)

Other DNs reported their disagreement about prescribing other than for diabetes, firstly because they viewed this as a doctor's role:

> *"Actually, I cannot prescribe other than for diabetes as this is a medic's role."* (Nurse 6-NUH)

Secondly, because they viewed this as an unsafe procedure:

> *"I know a great deal that hypertension is unsafe to prescribe for."* (Nurse 8-NUH)

Therefore, in this case the DN would go back to the consultant for the patient's safety as well:

> *"I have to go back to the consultant for the safety of the patient and also for the safety of the prescriber."* (Nurse 8-NUH)

In summary, there was no consensus among the DNs regarding the issue of prescribing for conditions other than diabetes. However, some viewed prescribing for other conditions as time saving for themselves and the patients and expediting patient care. These views about promoters of quality nursing care, if

found all together in a DN, would probably be considered as contributing to quality of nursing care. However, there was no DN interviewed who talked about all the characteristics that shape and inform the quality of care.

Despite what the DNs expressed previously about their professional autonomy and independence in their work, they mentioned some organisational dynamics which made them unable to provide the quality care that they aimed for. Two external forces placed the nurses under pressure: firstly, workload and resources and secondly, doctors and associated medical staff. These are discussed below as inhibitors to the delivery of diabetes nursing care.

5.3.3.1.2 Inhibitors

Five inhibitors or barriers to the quality of nursing care were identified in the study findings for case study 1: the UK (see Table 20).

5.3.3.1.2.1 Shortage of nurses

Shortage of nurses was an issue reported by some of the DNs and a number of factors resulted from it. Initially, the DNs thought that the limitations in nurses' numbers required them to work more than what they were supposed to:

> *"Sometimes we have to work more than our work hours and that is because of shortage of staff and we have to do long hours to be able to finish our tasks."* (Nurse 4-NUH)

> *"We are expected to do more and more and see more and more people as there is a lack of staff. You know there are so many things to be done by one person and that makes us feel tired and exhausted*." (Nurse 6-NUH)

If extensive workloads caused the DNs to become exhausted, this might impact on their work, as nursing professionals need to be both fresh and patient. As a result of limited numbers of doctors and DNs, DNs identified that they were required to cover roles elsewhere, in addition to their own roles:

> *"We are very limited here and we do not have many doctors and that makes us unable to make our work like going to wards and finishing our work."* (Nurse 10-NUH)

> *"... if only there are more of us we would not be jumping around but it is an ideal, there is only four of us here and we do jump from things to things for the patients."* (Nurse 7-NUH)

The DNs wellbeing is a fundamental factor in patient care. If the DN is exhausted and frustrated, as suggested in the quotes above, she will lose her sense of caring as well as being prone to making mistakes. Career well-being is a vital

issue and the DNs expressed their feelings of being exhausted. Most importantly patient safety would be at risk if the DNs undertook certain medical roles for which they were not trained. Furthermore, placing an additional workload on the DNs, such as prescribing, can cause conflict especially when the DNs are not being sufficiently remunerated for the additional role they fill as diabetes care providers. This point is also discussed in Chapter 5.

5.3.3.1.2.2 Nurses' workload

Given the hierarchical relationships it appeared that senior staff had high expectations of the DNs. There was an increased burden of responsibility to take on additional workloads, as reported by the DNs:

> *"I think there is no limit to the expectation that we would do. There is your seniors' expectation that you discharge duties within the scope of your profession. So, you would not do anything you are not qualified to do. But there is always an expectation that you can fit extra patients into your schedule."* (Nurse 2-NUH)

The shortage of nurses and the DN's workload were interrelated. As a result of nurses' shortages and the continuing pressure of work, the DNs considered that they were expected to undertake more than they could reasonably do on a daily basis:

> *"You can go out to the ward and do that as it only takes five minutes … . For example, our workload has gone up by 250% ward work and we have no more staff. So the expectation is that we would be able to do that work … . You fill in ward incidence forms and many things."* (Nurse 2-NUH)

In fact, this pressure of work was considered as high in terms of: 1) the number of patients coming to the clinic who needed to be added to the DN's daily schedule and 2) discharge of patients. In practice, as a result of time pressure, the DNs did not have sufficient time to fully manage all the aspects of patient care:

> *"For example, today antenatal clinic, they have two choices, I come to see the patient or I delegate to my colleague to see the patient. Otherwise, the patient will stay in the bed while he needs to go home... . Sometimes, there are hard decisions to make and this does make me feel guilty. However, I only have one pair of hands, so I have to manage time really. And it has happened with a patient having to stay in the hospital because none of us is free to review and discharge him."* (Nurse 2-NUH)

> *"The volume of work we do, ward work here [office work and administration] and at the clinic cannot be finished as it should be … ."* (Nurse 3-NUH)

Not only is time pressure impacting on immediate care, but also on the DNs themselves, which may have long term effects on their continuing professional well-being:

> *"For example, I don't have any clinic appointments. I squeeze patients in before clinic and I squeeze patients after clinic ... . I'm sure management will be horrified if they know we don't have breaks and we don't have lunch."* (Nurse 2-NUH)

During observations, it was noted that the DNs were often busy and could not find time to rest, as a DN reported:

> *"…we can't find the time to have a break".* (Nurse 1-NUH)

The DNs expressed more about the workload they experienced in diabetes care and identified that there were a number of tasks they undertook, which impacted on their workload. For example, a DN reported that she had a ward visit and she had another patient who needed to go home. Being able to rearrange these tasks was an important element in the development of time management and prioritising work requirements:

> *"If I got a ward visit and there is a patient who needs to go home and another patient who is admitted for more than three days, I send the first patient who needs to go home first to free the bed, then I see the other patient. Each day you are making assessments of what is virtually important."* (Nurse 2-NUH)

> *"You have to prioritise … I have to manage time really."* (Nurse 10-NUH)

5.3.3.1.2.3 Financial conflict

A few DNs expressed concerns about not receiving enough income for the duties they undertook in diabetes care. They talked about having a similar income compared to other nurses working in non-specialised departments, which are different from the department for diabetes care. However, the DNs did not neglect their patients and provided diabetes care as usual:

> *"... the only constraint we [nurses] suffer is financial and also time. We are getting similar incomes as ordinary nurses working in other clinics and wards."* (Nurse 7-NUH)

> *"We are not having enough income compared to what we are doing and what we receive is similar to other nurses in other departments. We are covering quiet huge parts in diabetes care … . We just cannot ignore the patients when they come seeking help."* (Nurse 10-NUH)

Despite what the DNs expressed previously about their professional autonomy and independence in work, they also reported some organisational dynamics

which inhibited them from providing the quality of care they aimed for. There were two external factors putting the DNs under pressure: a) their senior management and b) doctors, as explained below:

5.3.3.1.2.4 Relations with managers: senior management staff

The DNs raised some concerns regarding conflicting expectations from senior staff, which required them to act within the scope of their practice, but failed to address the lack of time and workload pressure the DNs experienced:

> *"I think there is no limit to the expectation that we would do. There are your seniors' expectations that you do your duties within the scope of your practice. So you would not do anything you are not qualified to do. But there is always an expectation that you can fit extra patients into your schedule."* (Nurse 2-NUH)

Interruption of work was another factor raised by the DNs regarding their senior staff. This issue can be considered significant as it can interrupt patient care, resulting in a patient's delayed improvement and lack of satisfaction with the treatment they receive. An example of such an interruption was:

> *"The only time I get upset is when I've got a full workload and you get the nurse in charge saying to me, you have to go and see this patient. I can't go and see this patient as I have another patient. However, she [the in-charge nurse] said you've got to go."* (Nurse 2-NUH)

This lack of supportive administration has, in this DN's case, resulted in feelings of being treated unreasonably:

> *"Well, that will make me mad because that actually is an unreasonable expectation about what I can do and that upsets me."* (Nurse 2-NUH)

This style of senior management behaviour can have long term effects on the DNs and just as significantly on the patients. In the short -term, interrupted patient care can delay a patient's improvement and reduce their satisfaction with the care provided for them.

As previously mentioned, the DNs identified barriers to providing quality of nursing care, and described actions they would consider, particularly when the senior management is considered remote and lacking understanding:

> *"… it is when higher management staff that have no knowledge of what we do try to make us do things that are not within our scope of practice then I get upset and I would take it further to our manager."* (Nurse 2-NUH)

The DNs considered that they were under both time pressure and pressure from senior management who did not have sufficient information about what role the

DNs were actually playing. Accordingly, as one DN stated they would explain to their senior managers about the source of conflict:

> *"At the end of the day, we just take that further to our manager and have a word about that but often those demands come from higher up as they don't conform to the team. They come from higher management ...."* (Nurse 4-NUH)

5.3.3.1.2.5 Relations with medical staff

The role of DNs, and their professional interaction with medical staff, raised the issue of power within the nurse/doctor relationship, which seemed to be an unresolved matter. Some DNs, as mentioned above, simply could not ignore patients' needs; however, the DNs undertook multiple roles, with some not being within their speciality. For example, one DN explained a situation of taking on doctors' responsibilities in providing the services needed, which caused pressure on the DNs:

> *"We have not got a doctor here at all, and the next couple of days I'm going to be on my own here .... I will not have a registrar so I will be my own registrar .... It is about adding more pressure and more responsibilities that are more than what you could handle. On the wards, as well I do more work. We [nurses] have to make the right decision about patient discharge and this can sometimes be very challenging."* (Nurse 9-NUH)

Furthermore, undertaking multiple roles was reported:

> *"Doing work more than what you should do is a conflict. Sometimes we do not have a doctor available and we are seeing patients on the wards and it is a tricky situation."* (Nurse 8-NUH)

> *"... there is only four of us here and we do jump from thing to thing for the patients."* (Nurse 7-NUH).

The DNs reported that there were some interruptions in completing their tasks. These interruptions were caused by both doctors and other nurses contacting the DNs to accomplish a task that could have been simply done by them:

> *"When a nurse or a doctor at the ward called me up to teach a patient who is going to be discharged. A nurse in the ward can do the education. Doctors in the ward can do the discharge .... Those things might look small but they are interrupting our work."* (Nurse 1-NUH)

Additionally, the DNs indicated that some doctors referred cases to them that needed medical interventions, not nursing interventions. In fact, the DNs confidently explained to the doctors that they could not work outside their practice:

> *"I don't prefer when a consultant refers patients for work and I would just say that this needs a medical decision not mine and that is not under the scope of my work."* (Nurse 3-NUH)

5.3.4 Patients' perspectives on the quality of their diabetes care

This This sub-theme describes patients' perspectives about the diabetes care service and nursing care quality. Analysis of data gathered from patients' interviews and observations revealed three key areas regarding patients' perspectives that impacted on their perceptions of their care:

- Views on their relationship with the diabetes clinic including: scheduling, timetabling and transfer of responsibilities to the patient relating to clinic location and travel consequently increasing the patient's workload.
- The DN's role in patient care
- Patients' adherence to their care plans.

These points are illustrated as follows:

The first area concerns the patients' views on their relationship with the diabetes clinic. Patients' expressed concerns regarding the services at the clinic, which is related to the transferring of the diabetes care services to the community, as intended by the UK government. Patients reported their disappointment regarding moving the services away from where it used to be; away from the clinic and into the community. One of the patients interviewed described his feeling as:

> *"… This is [moving diabetes services to the community] very disappointed. I can't accept going to other services other than here [clinic]."* (Patient 1-NUH).

This patient's reaction was probably related to the lack of DNs in the community service, as expressed by a patient interviewed:

> *"there are no diabetes nurses in the community"* (Patient 2-NUH).

These concerns probably relate to the patient's appreciation of the care they received from DNs at the clinic, as it seems that they miss this type of care. One patient described the services at the clinic, provided by the DNs, as:

> *"a very good service at the clinic; it was like treating the whole body"* (Patient 2-NUH)

This patient anticipated that he might experience problems as a result of the transfer of the services to the community:

> *"I don't think I will get such a level of information now as I did but I don't know because I haven't experienced it … if I had a problem for instance, I would come up here and say can I see somebody and they will normally see me and that is partly because you are a patient they know. Rather-than somebody who comes off the street. I mean it was a very good service. For now it's fragmented. Which is all right, if you know what you're doing it's fine. And it makes life a bit more difficult as a patient."* (Patient 2-NUH)

The issue here seems to be the breaking up of the services, resulting in what patients described as a disjointed approach. Patients' perceptions were that the clinic provided a holistic approach to their care.

Furthermore, in the interviews, patients identified other problems related to the number of procedures each had to go through in their routine diabetes care at the clinic. Patients complained about having multiple procedures, which were located in different places and the confusion coming from different appointment intervals with different healthcare providers in the diabetes team. All of these contributed to additional concerns for the patients. Patients expressed their wishes to have all procedures in one place. This was tagged by a patient as having a "…one stop shop". (Patient 2-NUH) I was interested to know what the patient meant by this expression. The patient then addressed the different procedures he needed to undertake in his diabetes life journey:

> *"You have the diabetic nurses, you have the diabetic unit, you have the drop-in service, which was fantastic, you had dietary and you had the orthotic. They were all here. That one stop shop had everything …. I think I will struggle now. It doesn't matter how good the people are and how kind they are and how caring they are and how well they do … but the one stop shop the fact is, all in one place."* (Patient 2-NUH)

In fact, other patients expressed support for the concept of a one stop shop as follows:

> "... it would be better if all is done at least in one place." (Patient 1-NUH)

Patients also expressed their dislike of the 'workload' they had to perform, even though this would help in controlling their diabetes. This situation poses a higher risk when there is complexity related to the patient's diabetes:

> *"Nurses try keeping me on track [with care plan]. Some of these meds fall. Put my hands up but I don't think there is any doubt in the world that I stick to it [management] 100%. I have had one or two extra cheese but nurse J has told me that the pancreas will deteriorate as I get older so I think I can't always follow with that."* (Patient 3-NUH)

Despite being told by the DNs about the consequences of not following the preventative measures in their management plan, some patients were not able to completely follow the plan of care. Bringing together the issues of multiple visits and complexity of treatments raises the risk of patients' non-adherence to their treatment plan. Furthermore, patients were not satisfied with the situation and complained about accomplishing their requested procedures at different times in different places; all of which impacted on the patients' circumstances and conditions.

The second area concerns the DN's role in patient care. Most patients viewed the DNs expertise as meeting their needs, which made them satisfied with the care they received and happy to see a DN. Patients also identified some known roles undertaken by the DNs and some not so well-known. Patients indicated their apparent awareness about what the DNs should be doing and should not be doing in terms of care. For instance, two patients had some background about what the DNs should be doing and understanding about their work within and outside the clinic:

> *"I know what diabetes nurses should be doing and I have some background of that."* (Patient 1-NUH)

> "I know very well about what nurses should be doing at the clinic here and out there at the community." (Patient 6-NUH)

A number of the patients interviewed described their experiences with the DNs using a range of words and phrases which are identified in Column 1 of Table 21 below. These indicators of positive actions and interactions clearly support the DNs in their roles as diabetes nurses. Furthermore, from the patients' perspectives, the DNs were considered to be competent healthcare providers experienced in diabetes care, as indicated in Column 2 of Table 21; which are the indicators for patients' views and experiences about the quality of nursing care.

The second patient commented that the DN was doing more than what she should be doing, which was appreciated:

> *"Nurse K is doing much more than what any nurse could do … I feel very grateful that they [nurses] are doing the extra job."* (Patient 1-NUH)

I asked the patients to consider if the DNs were doing more than what they were supposed to be doing. Another patient provided a detailed description:

> *"I know sometimes it goes over their time and it gets frustrating for them because they have got patients … I think nurse L is doing more*

> *than what she is supposed to do. She is always willing to listen … I mean every time you go any way, you know when you are walking around the corridor you will see her saying to you how are you feeling and she would actually stop and say those things ….”* (Patient 4-NUH)

Table 21 Indicators for patient’s views and experiences

Indicators of patients' experiences	**Indicators of patients' views of DNs' competence**
“Positive”	*“very thorough and their experience is very good”*
“Excellent”	*“respects me and my needs”*
“Brilliant”	*“listens and listens then provides … support and guides me …”*
“Very helpful”	*“will listen .. look at what is happening in my life …”*
“Helpful”	*“They simplify things to us ..They make us a plan to follow so we will not be worry about if there is a new treatment or plan … .”*
“Always reachable”	*“Nurse J has got to know everything that comes on the market .. She [Nurse J] made me drop my insulin down by one.”*
“Accessible”	*“She is always willing to listen ….”*
“Keeping me live”	*“they are very good at communicating and that make us understand better.”*

A major attribute of a healthcare provider is to be a very good communicator and the following comments by patients reported that the DNs' methods of communication were the main factors that facilitated their learning. Patients appeared to value the way the DNs were communicating with them:

> *“It is not like you do not understand what they [nurses] are saying; they are very good at communicating and that make us understand better.”* (Patient 4-NUH)

> “I just appreciate the way in which they [nurses] talk to me.” (Patient 2-NUH)

In addition to the DNs capabilities in communicating, the patients confirmed that the DNs were patient, as they did not mind repeating information they had already provided to the patients. The patients also indicated that the DNs never showed them that they were busy, although the patients knew they were often very busy:

> *"Nurses here [at the clinic] are very patient … they do not mind doing it [repeat information] again and again … they do not make you feel as if they are rushed or busy … well they are."* (Patient 1-NUH)

> *"If I came up with something they already talked with me about, they would welcome that like if it was about diet or something."* (Patient 2-NUH)

Being a competent and expert DN, as reported by a patient, was a significant factor in how the patient perceived their quality of nursing care. The patient stated that DNs at the clinic were better educators compared to doctors who facilitated learning. The patient stated that he goes to the DN after seeing the doctor so as not to worry about his plan of care:

> *"I see nurses are better in education than our doctors here. They simplify things to us after we come out of doctor office with confusion about what are we going to do now. They make us a plan to follow so we will not be worried if there is a new treatment or plan."* (Patient 1-NUH)

The comment above probably explains patients preferring to see a DN after meeting the consultant, as expressed in the following quote:

> *"She [the nurse] double checks that everything is ticked and ok. If anything needs adjusting, either a tablet or insulin, she [the nurse] will alter it."* (Patient 3-NUH)

For instance, the comment below explained how the consultant advised the patient to perform exercises, even though she explained to him that she had a problem with her leg:

> *"… I said [to the doctor] I can't do the exercise because I can't go walking outside because of my leg. He [the doctor] said sitting down will ruin your arms and your good leg."* (Patient 5-NUH)

Despite the consultant's advice to the patient about performing some exercises without guidance, the same patient said that the DN provided her with suggestions about which exercises would benefit her condition without harming her leg:

> *"… will say you have bad leg but you use body parts to move your hands and elevate your legs like when you do cycling and do the exercise."* (Patient 5-NUH)

Some DNs argued that patients had preferences between doctors and nurses. However, this particular DN was confident about her capability that patients do like to see her more often than their doctors:

> *"I do a joined clinic with the consultant and I don't ever have that problem once they've [patients] seen me because the nurse is experienced."* (Nurse 2-NUH)

Providing patients with solutions and alternatives to their problems contributed to patients' satisfaction with care. For instance, a patient was pleased about understanding his treatment and was confident to follow it. The reason for this response is that the DN used to update him with the treatment that probably benefited his condition. Most importantly, the patient was happy about his achievements, after following what the DN had provided for him, regarding his diabetes control:

> *"Whenever I come here, mainly to see nurse J, I could go away feeling a lot happier knowing what task I have got and the confidence I have got in them. Nurse J has got to know everything that comes on the market and tells me how to treat it and what to do. She [Nurse J] made me drop my insulin down by one."* (Patient 3-NUH)

The factors reported by patients about the DNs competency in the previous quote probably indicated patient satisfaction regarding nursing care. Some patients expressed their satisfaction and appreciation, which resulted from the methods the DNs utilised in providing guidance and support:

> *"… when I come to the clinic or ring her as she listens and listens then provides me with support and guides me to happiness if you would like to say. You know how does it feel when there is someone always there when you need especially people in my positions with kidney problem and nearly going for dialysis"*. (Patient 4-NUH)

Patients reported that they felt satisfied with the services provided by the DNs by showing their willingness to accept the advice and consequently follow it.

The third area relates to patients' adherence to their care plan. This was a main issue reported by the majority of patients interviewed, in which some patients were not able to manage their diabetes alone. In these cases, the DNs tried to resolve these issues. For instance, the DNs provided health education to the patient's caregivers, as they are often with the patient at home:

> *"She asked me to talk to my family about it [his condition]. Actually, she asked me to bring someone close in the next visit as she wishes to involve and teach a member of my family about helping me to overcome my problems …."* (Patient 6-NUH)

Some other patients needed more time to be convinced about their high dose medications, through which the DNs were able to accomplish their job:

> *"But hypothetically like Nurse C, says you've got to take 75 units of u-500 and I say I don't agree … she will sit and explain to me why I have got to take that 75 units. She would always explain it and tell you why you have to do it. Like Nurse C the other day put my insulin up by one unit technically it's five. But she turned around straight away to me and said, are you happy to increase it? And I said yeah because she knows what she is talking about and she always asks me."* (Patient 4-NUH)

Another factor that was perhaps related to patient non-adherence to a care plan was when the patient did not prefer to implement self-management of their diabetes. Despite the contributions made by the DNs in educating the patients about the importance of self-management, one patient reported that he did not believe the benefits:

> *"It really does not matter how many times DNs tell you about self-care. I do not think it makes a lot of difference because the consequence is very long term."* (Patient 2-NUH)

However, non-adherence to the care plan and refusing to self-manage resulted in healthcare complications for this patient, described as "long term complications":

> *"I understand that the nurse kept warning me about the retinal effect and kidney diseases resulted from diabetes, it took fifteen years before it started to cause me some problems. So, you get a bit you know, you think this thing will not happen and it only later you realise there is no escape."* (Patient 2-NUH)

In summary, patients described how they perceived the role of DNs in diabetes clinics in terms of quality. This theme has highlighted issues regarding patients' understanding about what DNs should and/or should not be doing. Several patients stated that DNs are doing more than what they should be doing. However, some patients did not specify precisely the duties that the DNs were doing, or were not supposed to be doing. The majority of patients perceived nurses as experts in diabetes care and believed that they were knowledgeable. The patients reported that they saw a DN after each consultant visit, when the DN went through all that had been said by the consultant. This led some patients to prefer to see a DN instead of the consultant. The patients' frequent tendency to accept the DN's advice could result in patients reduced involvement in their own care, where they follow as opposed to being involved.

5.4 Chapter summary

Chapter 5 has presented the findings of the UK case study (case study 1). The information resulted in three main themes: (1) the actual role of nurses in

diabetes care, (2) nurses' relationships with the guidelines, and (3) implications of nurses' performance.

The next chapter presents the main findings of case study two: Kuwait.

Chapter 6: FINDINGS FROM INDIVIDUAL CASE ANALYSIS CASE STUDY 2: KUWAIT

6.1 Introduction

This chapter presents the findings of the Kuwaiti case study. Data used to inform the findings in this chapter were obtained from multiple sources; with three methods of data gathering used in order to triangulate the findings in this case study. Data drawn from interviews with diabetes care nurses provided information about the actual role(s) that the nurses undertook in diabetes care. Interviews with diabetes patients revealed whether or not what nurses said they did in diabetes care actually happened. Further, to support these two sources of data gathering, observations were conducted which focused on the interaction between nurses and patients and sometimes the involvement of other healthcare providers in diabetes care. Furthermore, observational data was used to verify what was said in the nurses' and patients' interviews.

The findings arising from the case study of the nurses' actual roles and what has been suggested in the guidelines helped identify the differences and similarities between nurses' roles, which impact the quality of nursing care.

6.2 Study participants

The patient sample consisted of nine patients (three females and six males, ranging from 47 to 72 years old), all with T2D, who had been attending the clinic between two to 17 years. All but three of the sample received follow-up with the same nurse. The remaining patients were seeing two nurses, one had seen one nurse for three years (on 10 year's treatment) and one did not always see the same nurse. The nurse sample consisted of nine female participants (ranging from 28 to 38 years old) with nursing experience ranging from one year to 15 years. All had qualifications ranging from a Nursing Diploma to Bachelors' degree. Their years of experience in diabetes clinical care ranged from less than one year to ten years, with the majority having more than five years' experience.

6.3 Findings of case study 2: Kuwait

The data analysis produced three themes:

Theme One: Actual role of a nurse in diabetes care

Theme Two: Nurses' relationships with the guidelines

Theme Three: Implications of nurse performance.

From these themes emerged a number of sub-themes and each theme and sub-theme is discussed in detail in the relevant section, shown in Table 22 below:

Table 22 Findings of case study 2 - Kuwait

Themes	**Sub-themes**
Theme One Actual role of nurses in diabetes care	• Health education and health promotion • Providing patient support • Prescribing Inter-professional role
Theme Two Nurses' relationship with the guidelines	• Nurses refer to the guidelines in practice • Nurses' attitudes and perspectives towards the guidelines • Nurses' influences on policy change
Theme Three Implications of nurses' performance	• Nurses' perspectives about their own role • Patients' perspectives on the quality of their diabetes care

6.3.1 Theme one: actual role of nurses in diabetes care

This theme was developed from three data sources: nurses' interviews, patients' interviews and observations during nurse-patient consultations. These sources supported the development of descriptions of the actual role of nurses in diabetes care and the functions and tasks undertaken. This use of data allowed a level of triangulation to take place. Therefore, this theme includes descriptions of the actual role of diabetes nurses and the functions and tasks they undertook in diabetes management. This data was gathered through interviews and observed during nurse/patient interactions in consultations. To confirm what the nurses reported about their actual role and what was being observed, patients were interviewed to investigate the type of nursing care they had received during their visits to the diabetes clinic. These multiple sources of evidence led to four sub-themes emerging from this theme: i) health education and health promotion; ii) providing patient support; iii) prescribing; and iv) inter-professional roles.

6.3.1.1 Sub-theme: health education and health promotion

Data drawn from interviews with the nurses informed about their functions and tasks in health education and health promotion. These data were enriched by interviews with patients and observations that were conducted during nurse-patient consultations. It was found that the nurses followed strategic teaching plans from the time the patient was referred to them, until that patient's respective needs were met. This sub-theme can be divided into two parts: 1) health education and 2) health promotion. Each part is discussed below, starting with health education.

In this Kuwait-based case study, the nurses in the diabetes clinic(s) were identified to also practice the three phases that were identified in the UK case study, while initiating and developing diabetes patient health education. These phases are shown in Figure 17.

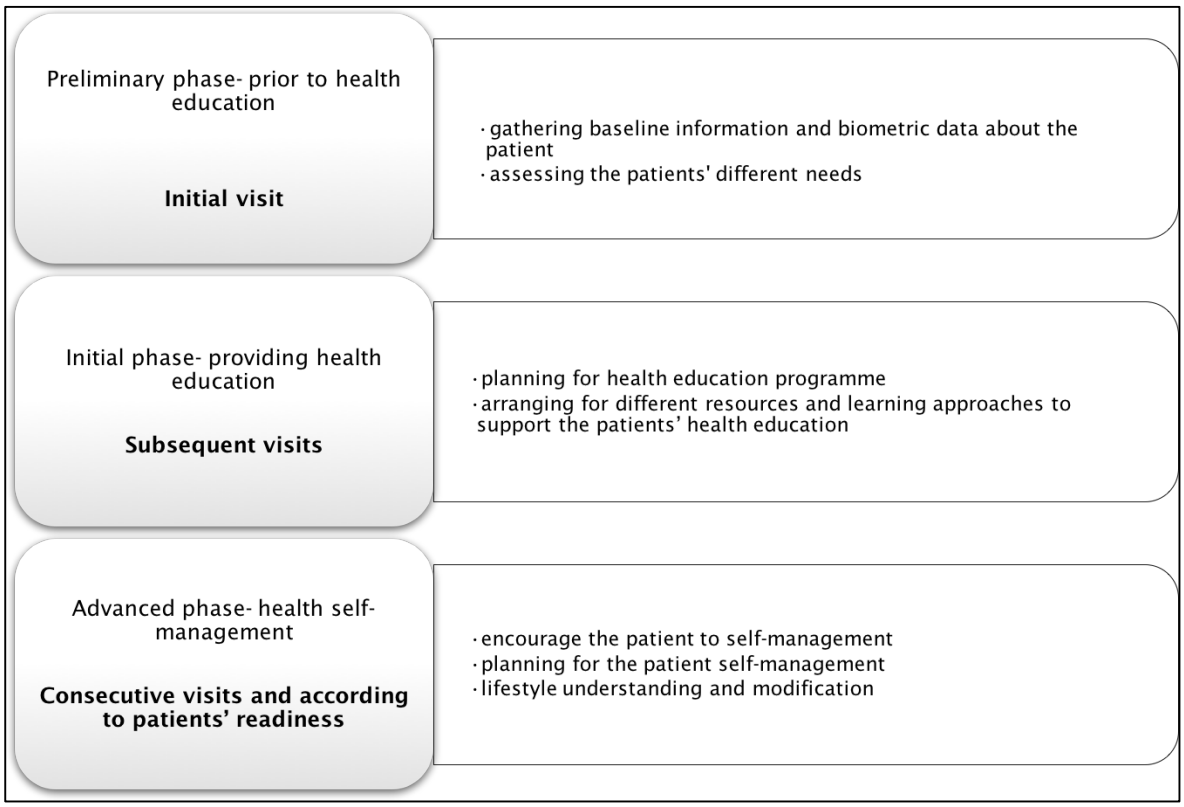


Figure 17 Actual role of a nurse in diabetes care

6.3.1.1.1 Preliminary phase: prior to health education

The nurses' interviews showed that nurses spent a considerable amount of time in patient consultations, gathering baseline information and biometric data, before starting a health education process as summarised in the following quote:

> *"According to the baseline data we establish a management plan; we can decide our education session to this patient in particular."* (Nurse 17-MoH)

This was confirmed during the observations: the nurse looked at the patient's diary. The nurse also looked at patient lab work and started to talk about the patient's HbA1c which was high ... (Observation 13-MoH) and furthermore by patients' comments.

For example:

> *"... She [the nurse] checks my diary first to see my insulin doses and blood glucose level... check what I have been eating ... ."* (Patient 15-MoH)

Like their UK counterparts, nurses in Kuwait first gathered information before starting the plan for patient education. This strategy allowed the nurses to arrange for a series of educational sessions necessary for and designed to suit each individual patient.

Examples of the interaction between patients and nurses regarding the strategies used to help the nurses while planning patients' diabetes education are presented in the following patients' quotes:

> *"What the nurse is doing is to welcome you with a smile ... then she starts checking my blood pressure, my blood glucose level, asks me about my last meal... checks my diary to read my blood glucose and insulin doses ...."* (Patient 7-MoH)

> *"Well, nurse A takes my weight, monitors my blood pressure, checks my diary... she brings to me all my lab work ...."* (Patient 12-MoH)

> *"Nurse N used to ask me how you are and she would check my diary...she monitors my blood glucose because last time I fainted as I did not have my breakfast ...."* (Patient 10-MoH)

These patients' experiences were confirmed in interviews with the nurses:

> *"We start to have our baseline data and start to record in our check list about the patient's details."* (Nurse 11-MoH)

Table 23 shows the various functions that the nurses performed before starting patient consultations. These functions were identified from three sources: observations: *Nurse checked patient blood sugar...* (Observation 14-MoH), patients' interviews where patients described what happened to them and nurses' interviews.

Table 23 Baseline data collected from multiple sources

Baseline Data	**Observation**	**Interview patients**	**Interview nurses**
Patient diary (diet, insulin, glucose readings)	x	x	x
Vital signs		x	x
Blood glucose	x	x	x
Blood pressure		x	x
Patient weight		x	x
Laboratory work	x		x

It can be noted from Table 23 above that during nurse-patient consultations the nurses were not observed to monitor patients' vital signs including blood pressure and checking patients' weight. These tasks were identified through the interviews with both patients and nurses as taking place. As in the UK-case study, patients reported that some procedures were not performed by nurses, which can shape an important issue to be drawn in the discussion chapter. This issue focuses on consideration of the power relations between nurses and patients.

These baseline data with other techniques used by the nurses, including reviewing and assessing patients' readings regarding glucose level, insulin dose taken, and a list of the foods eaten, helped the nurses to establish a preliminary plan about patient care. Some nurses reported that they monitored patients' vital signs, weight, and other biological data that would be documented in patients' records:

> *"The data we gathered from our patients will help us in planning for their treatment ...."* (Nurse 16-MoH)

> *"I check baseline patient data, his blood pressure, weight, lab results and assess his injection sites."* (Nurse 17-MoH)

The nurses were not observed to ask, nor did they report in their interviews, common questions in relation to how the patients felt they were coping with their diabetes:

> *"Sometimes we ask patients to assess the patient's level of knowledge and experience about his way of managing his diabetes ...."* (Nurse 17-MoH)

However, the information the patients gave was considered a useful clue as to whether they handled their diabetes appropriately or whether they still needed more help to achieve control of their diabetes:

> *"I have knowledge about nutrition, I perform exercises, I eat specific food, so I'm capable of controlling my diabetes, I know when to reduce the insulin and when to increase the dose … when I'm going for exercise, I will reduce or not take the dose of insulin …."* (Patient 13-MoH)

This comment indicated that this patient seemed to be capable of handling his diabetes in a proper way. However, other patients needed more information. For example, during observation, a nurse felt there was a need to gather more data about changes in a patient's condition since the patient's last visit, as she noted some changes recorded in the patient's diary. The nurse asked the patient and her daughter about her diet, medications for diabetes, other conditions, and physical activities. The patient's daughter informed the nurse that her mother had put on weight (two kilograms) and that she was not taking her night insulin. It took the nurse more than 10 minutes, during the consultation, before she was able to teach the patient and her daughter ways of dealing with the issues that arose during their interaction. For instance, regarding body weight, the patient informed the nurse that she cannot perform exercise as the weather is hot (48C). The nurse therefore advised the patient to walk in air-conditioned places like malls or sports centres. Regarding the patient not taking night insulin, the patient informed the nurse that she was worried about experiencing hypoglycaemia while sleeping. The nurse therefore explained to the patient and her daughter that this insulin works over 24 hours and does not cause hypoglycaemia, as it is considered to control but not to reduce blood glucose level. I observed this interaction between the nurse, patient and the patient's daughter, the following is an extract from the field notes that relate the interaction:

> *During consultation, the nurse asked the patient for her diary. She looked at the diary and asked the patient about any changes since the last visit regarding her diet, medications she is taking for diabetes and other conditions as the patient has hypertension. The nurse also asked the patient about information related to exercise. The patient replied that she is following the diet plan but not performing activities as the weather is so hot but the nurse advised her to walk in air-conditioned places and the patient was happy about this suggestion. The patient's daughter confirmed that her mother is taking her medications regularly but she is not taking Lantus, the night insulin. The nurse explained to them about the work of Lantus and that it does not cause hypoglycaemia as the work of this medication is different than other medications for diabetes; it is released slowly in the body over 24 hours.* (Observation 18-MoH)

6.3.1.1.2 Initial phase: providing health education

Some nurses expressed the idea that patients come with different needs. While some patients only had diabetes, others had additional medical problems. Some of these medical problems were related to diabetes and others were preceding conditions to their diabetes. In some cases, such as patients with kidney problems, the nurse was aware of fluid restrictions, as well as some of the significant lab results that would instigate the need for some medical interventions:

> *"I'm very careful about patients with kidney problems about drinking fluids and juices. I'm aware of that if they have high potassium, so I speak with the doctor … however, we still can give education, though these patients need a different pathway of care."* (Nurse 11-MoH)

The previous points, supported by patients' interviews and the observations, illustrated the means that nurses use to gather patients' data. These means helped nurses to plan the needed topics to be covered in subsequent patient diabetes education.

Nurses in Kuwait needed to deal with language issues, in a similar way to their UK counterparts; particularly potential language barriers with their patients. Firstly, for some patients' Arabic is not their first language. Given that Arabic is the official language of communication in Kuwait, patients from ethnic minority groups, whose second language is Arabic, or a patient who is not fluent in Arabic, could find it difficult to communicate with the nurse, due to those language issues:

> *"Some patients don't speak Arabic and they have different cultural and religious beliefs … they find it difficult to understand what we say…."* (Nurse 15-MoH)

> *"I think all of us [nurses] can speak Arabic and English … we have problems with patients who do not speak any of those languages …."* (Nurse 11-MoH)

Other patients had problems with language, due to understanding modern concepts:

> *"Old aged patients find it difficult to understand us… We have patients who are very old and have problems in understanding …."* (Nurse 19-MoH)

The nurses were familiar with the problem that language difficulties could impact on the consultation time and on patients not understanding what is being said and not being able to use other methods of communication, when needed. For

example, some patients were not able to use telephone consultations, as they could not express their needs:

> *"… some patients have a language barrier… they need more efforts compared to other patients… this obviously means more time is needed."* (Nurse 13-MoH)

> *"I tried to contact my patient over the phone to arrange an appointment for consultation, he struggled because he cannot speak neither Arabic nor English so he disconnected the call …."* (Nurse 13-MoH)

To overcome the language barrier strategies employed by the nurses included asking colleagues, at the clinic or at the hospital, who spoke the same language as the patient, to translate. For patients who could not understand Arabic, the nurses asked the patients to come with a family member who spoke Arabic to help with interpretation. For patients who could not read or write, the nurses also asked for a member of the family to help the patient at home in documenting or recording their readings in the diary. The following quotes illustrate these situations:

> "*We have a nurse here at the clinic from India and she helps us a lot with patients coming from India or other patients whom she can understand their language."* (Nurse 17-MoH)

> *"We used to ask some patients to bring someone in their family or a friend who can speak both languages …."* (Nurse 13-MoH)

> *"One of my patients from Armenian, brings her brother during consultation …."* (Nurse 17-MoH)

Furthermore, there are instances where the above strategies were unable to work. In such situations, the nurses showed a practical and caring approach, as indicated by the following comment:

> *"Even if the patient can't understand or he can't read, we explain in a simple way"* (Nurse 19-MoH)

The nurses had strategies for delivering efficient information, even in difficult circumstances such as language barriers. These strategies can be supported by nurses' utilisation of different approaches to providing learning, as some patients have different styles of learning. Some patients preferred pictures, while others liked drawings or real life demonstrations, as was explained by a patient:

> *"She explained in detail and with demonstrations about how to take the insulin and how and why to rotate the sites of injections… this was very useful to me as I can see exactly what I should do at home."* (Patient 10-MoH)

Other patients preferred pictures, as they are more informative than drawings:

> *"The nurse draws pictures for me and gives to me detailed information gradually, till she makes sure that I understand … sometimes she [nurse] brings a picture which is very useful."* (Patient 9-MoH)

In responding to the patients' different styles of learning, the different approaches enabled the nurses to clarify the information provided to patients. For example, during consultations, some nurses demonstrated about rotating the injection sites in order to teach the patient to ensure proper absorption of insulin. This was observed by the researcher:

> *Nurse demonstrated about blood sugar test and insulin administration- demonstrated how to use the pen and mixed insulin.* (Observation 14-MoH)

Other nurses' utilised artwork and toys to teach patients about the injection site technique, as described by both nurses and patients:

> *"I use illustrations to educate my patients, also use some dolls as to teach about injection sites and how to use syringes and pens."* (Nurse 16-MoH)

Though the nurses utilised multiple teaching approaches that facilitated patients' understanding, patients can be prone to mistakes. Similar to other learners, patients can have some misconceptions regarding diabetes management. This was observed in a nurse-patient consultation, when the patient informed the nurse about eating chocolate after he experienced hypoglycaemia. In this instance, it was observed that:

> *The nurse corrected some misconceptions the patient had about managing diabetes. For example, the patient informed the nurse that he experienced hypoglycaemia so he had a bar of chocolate. The nurse explained the slow absorption rate of chocolate and advised the patient to drink juice or eat biscuits instead … the patient informed the nurse that he read that from the internet* …. (Observation 14-MoH)

However, some nurses mentioned the internet as one of the resources that provided inaccurate information. The nurses however, guided the patients about where to obtain accurate information that they might need; a point illustrated in the following comment:

> *"We have some patients who come with puzzling information by searching the internet. There aren't many Arabic websites to provide information about diabetes, but we have other sources of information like Instagram, Facebook, and Twitter."* (Nurse 13-NUH)

During an observation session, the nurse was seen notice able to identify and correct incorrect injection technique. The nurse assessed the patient's injection

sites and found that there was a discolouration on his skin. The patient stated that he often experienced pain when taking his injection, indicating to the nurse that he was not performing the injection correctly. My field work notes showed that:

> *The patient informed the nurse that he frequently experienced pain in his left thigh when taking his insulin. The nurse examined the patient's sites of injections and noted dark spots on the left thigh (I could not see). She advised that this was probably related to using wrong injection sites. She asked the patient to demonstrate injecting the insulin and noted the patient's incorrect injection technique. The nurse demonstrated to the patient injecting insulin by using an orange and showed him the angle of the pen, and she brought a poster showing him the different sites of injection and how to be injected. The patient demonstrated correctly how to self-inject insulin* (Observation 11-MoH).

Therefore, the nurse not only provided advice to the patient on how to self-inject, but also demonstrated the correct way to the patient. She then asked the patient to demonstrate self-injecting. The information gathered by the nurses about their patients showed beneficial effects regarding having preliminary data before starting patient education. This background knowledge enabled the nurses to tailor the consultation, and the information given in the consultation, to the needs of the individual patient.

The nurses stated that patient education could be provided through various methods and according to each patient's preferences or conditions. Some patients reported that they learned better in a group, as this allowed for more interaction. Meeting patients with similar conditions also allowed them to hear about other patients with similar experiences, as reported by the patients who were interviewed. On the other hand, some patients had a preference for individual or face-to-face education as it is more focused. These approaches related to individual preferences and in some situations patients were open to face-to-face or in group programmes. Such patients could be in any programme, either alone or within a group. The following quotes illustrate the views of both nurses and patients:

> *"I also educate patients either individually that is face-to-face or within a group of patients with diabetes."* (Nurse 16-MoH)

> *"Sometimes we arrange group sessions so each one will have questions and sometimes they have similar questions so this participation will encourage patients to know more."* (Nurse 17-MoH)

> *"When I first came here, the nurse provided me with a series of educational sessions. These sessions were either individually designed for me or with other patients with similar conditions."* (Patient 12-MoH)

> *"... being with other patients with similar conditions would help me to speak about my diabetes and to hear about other patients experiences ...."* (Patient 10-MoH)

In fact, the consultation duration sometimes was not enough to cover all the information needed, so the nurse continued in a group session what she had already started in the individual consultation. Group sessions proved to be effective, just as they did in the UK. The nurse advised her patient to come for the next consultation session, which was a group session with other patients with similar conditions.

The nurses reported that they provided education in a structured manner. They introduced general information about diabetes from basic to more complicated issues during the sessions. For instance, they started with types of diabetes then moved on to pathophysiology and then continued to more specific areas about the signs and symptoms of the disease, as explained by the following quote:

> *"I play a big role in health education. I start to explain to him the difference between the types of diabetes, and what happens when he has diabetes. I talk about the pathophysiology in brief so the patient would understand more about the disease and will then follow my health education ... I educate the patient about diabetes, its symptoms, and complications, and educate him about the methods of injecting insulin and the different types of insulin beside the adjustment of insulin doses according to patient's tolerance and condition ...."* (Nurse 12-MoH)

The structured education approach enhanced the patients' understanding and acceptance of the information provided, in which they followed and grasped this information. Therefore, the patients did not face the issues of misunderstanding when the nurses continued to talk about different types of insulin, methods of injecting and adjusting medication doses.

Some patients were not aware about the issue of diabetes before their diagnosis. This information deficit could be related to the misunderstanding of signs and symptoms and other factors related to their lack of knowledge. It is crucial for these issues to be shared between the nurse and the patient. As some patients were not clear about various issues in managing their diabetes, the patients who reported that they managed to attend their consultations with the nurses were able to cover their needs and concerns in detail. Patients expressed how their knowledge about managing their diabetes had improved after attending the consultations:

> *"I didn't have sufficient information that keeps me on track in caring for my diabetes … that was before I saw nurse S, I became better in, at least, knowing what makes my condition worse …."* (Patient 15-MoH)

> *"She [the nurse] provided me with information about the injection sites, types of insulin, the emergency insulin…When I come, I find very useful information about diabetes and how to control it …."* (Patient 13-MoH)

In fact, this education process was observed during my consultations. Nurses provided education to their patients with examples and rationale to facilitate their understanding. In the following interaction, the nurse informed the patient about the consequences of uncontrolled diabetes that can result in complications:

> *The nurse provided education and gave an example about when the blood sugar increases or decreases … The nurse explained to the patient whether or not he experiences frequent hyperglycaemia, as happened last month [patient was experiencing frequent hyperglycaemia] and about the complications that might happen if prolonged high blood glucose continues*. (Observation 11-MoH)

As previously mentioned, nurses were found to treat each patient as an individual case according to the specific needs of the patient. The nurses identified and familiarised themselves with each patient's condition in advance:

> *"We have to know the patient first, what information he needs … we cannot use one plan of care for all patients, each plan of care must be individualised to each patient."* (Nurse 19-MoH)

Furthermore, a patient explained how a nurse introduced a tailored plan for him as he was considered to be a complex case, with other conditions beside diabetes:

> *"She advised me to be on a diet as I'm over weight, and my cholesterol and lipid levels were high. I feel that now I'm controlling my glucose levels with the follow up with a nurse either over the phone or by coming to the clinic... She also suggested to me a care plan including diet and exercise, like to walk 30 minutes a day."* (Patient 11-MoH)

6.3.1.1.3 Advanced phase: self- management

The nurses indicated the need to assess patients' ability to self-manage their diabetes before the patient empowerment phase could be initiated. In fact, the data drawn from three sources (nurse interviews, patient interviews and observations) indicated that the actions demonstrated by nurses in educating the patients were based on nurses' knowledge and communication skills to promote self-management. Actually, this was a positive strategy adopted by nurses, which came with expectations that the patients would then be able to adjust and

manage their medication and modify their lifestyles, as reported by both nurses and patients in interviews:

> *"I check first the patient's willingness to self-manage his diabetes as we have patients who are educated and able to do that … they [patients] are not coming constantly to the clinic and contact us over the phone when they have some issues … they mostly come for their laboratory tests."* (Nurse 14-MoH)

> *"I check about the patient, is he a new comer to the clinic or he has been coming for years. If I observe that he knows how to take care of himself at home, I start to prepare him with information about self-management."* (Nurse 13-MoH)

These expressions are also supported by observations:

> *The nurse asked the patient about how he adjusts his insulin and when to reduce the dose of insulin and when to increase it… the patient replied that when he goes to the gym, he reduces his insulin dose or sometimes he does not take his insulin. The patient also informed the nurse that he increases the insulin dose when he is invited for lunch or dinner ….* (Observation 20-MoH)

In fact, this patient reported that:

> *"After seeing nurse A for a long time, she taught me how to take care of my diabetes. She provided me with massive information about how to adjust my insulin dose, what to do during exercise and how to distribute my meals and snacks during the day … I feel my life has become easier than before."* (Patient 12-MoH)

The nurses confirmed that their patients were able to self-manage their diabetes as a result of the appropriate communication methods being used with their patients. The nurses discussed with the patients the different diagnostic procedures and the importance of the tests that would help the patients in preventing complications resulting from diabetes. Some patients do not like to undertake these tests; this was an important signal to the nurse on the need to provide more detailed information about these procedures and the need to accomplish them:

> *"… our patients usually know how to provide self-care as they know how to manage their diabetes and some of its symptoms… we provided them with proper education about self-care … we have been good with them and we have been using good manner of communicating with them …."* (Nurse 13-MoH)

> *"I explain to them the importance of screening tests that are done annually and that help to detect if there is a problem early and this could help to prevent problems. Some patients dislike going through diagnostic procedures because of the lack of information about what is going to happen in the procedure, so they just assume that they [the procedures] need some injections or take a long time or need fasting*

> *the night before. So my role is to explain about the procedure the patient is going to undertake."* (Nurse 18-MoH)

During a nurse/patient consultation, it was observed that:

> *The nurse advised the patient to have her annual check so as to make sure she is not going to develop future complications resulting from diabetes. The patient and her daughter asked questions about the screening tests and the duration of time will take and what is the most important procedure. The nurse explained to the patient that these tests will help them to know about the progression of their diabetes.* (Observation 14-MoH)

Actually, the nurses considered self-management as an essential part of diabetes care. A patient reported the substantial role the nurses played in providing him with information:

> *"She reminded me about the necessity of coming to the clinic as I need to give routine blood work and urine and do some screening tests for my annual assessment. She explained to me about all the procedures needed before I go and that's relieved my anxiety about the several tests I have to go through ...."* (Patient 15-MoH)

Further, this patient felt that he did not need to come to the clinic in the same way as he used to do before. He felt better, especially after being able to learn from the nurse about how to self-manage his diabetes:

> *"I don't come to the clinic like before... I'm in good health now, she [the nurse] taught me about the importance of self-management as diabetes can be dealt with by following what she told me before. Now I know what to do if I have a problem."* (Patient 10-MoH)

The data collected from the nurses' and patients' interviews and observations confirmed nurses' encouragement of patient involvement in decision-making about care and exercising self-management.

The second part of this sub-theme concerns lifestyle behaviour modification to support health promotion, including eating patterns, physical activities, and exercise, as these factors are crucial in diabetes management. Information relating to medications is also provided.

Nurses' and patients' interviews, together with observation data, identified common issues on health promotion; for instance, involving patients and relatives in health promotion activities in terms of providing patients with advice about lifestyle modifications such as diet, exercise, smoking cessation, and medication.

Lifestyle behaviour modification might be a key factor in diabetes control, because if the patient fails to change or modify these behaviours, he/she might end up with long-term diabetes complications as some of the nurses identified:

> *"We talk about diet, medications ... if the patient is obese; we talk about exercise ...."* (Nurse 13-MoH)

> *"We provide health promotion about exercise and the important of exercise in controlling hyperglycaemia."* (Nurse 19-MoH)

> *"I encourage patients not to smoke as this is a good manner life style behaviour that helps the patient to overcome, delay or prevent diabetes complications."* (Nurse 17-MoH)

During the observations, it was noted that:

> *The nurse went through the patient's diary and checked his HbA1c. She noted that his HbA1c was high (7.6) and advised the patient to repeat it after three months.* (Observation 19-MoH).

In a second observation:

> *The nurse discussed with the patient about the danger of not eating a balanced diet, as the patient was overweight and both his cholesterol level and lipid profile were high.* (Observation 16-MoH).

However, to one patient, not eating with his family had a social impact, the nurse provided the patient with suggestions about controlling his food by eating smaller amounts. The field notes explain that:

> *During consultation, the patient complained about his increased weight as he cannot resist his wife's cooking and also it is a social norm to eat with his family. The nurse provided the patient with some advice about the benefits of reducing his weight especially as the patient's blood pressure was high. The nurse also suggested that he could eat with his family but with smaller quantities of food portions.* (Observation 17-MoH).

What had been said by nurses and what was observed about nurses' advice to the patients on lifestyle behaviour modification, was reported by patients as well. These patients expressed nurses' involvement when suggesting to their patients concerns about the dangers of smoking on their health. The nurses stressed smoking can damage body organs such as the lungs and can contribute to other diseases caused by high blood pressure. Interestingly, nurses' comments had a positive impact on some patients who stopped smoking after listening to the advice:

> *"She [nurse] educated me about something very important, stopping smoking as I have hypertension. I did not stop directly but with her support, I stopped smoking gradually."* (Patient 7-MoH)

> *"I was smoking for 39 years and could not stop with all doctors' advice; what nurse S told me about the effects of smoking in all my organs not only my lungs and the effect of smoking on my blood vessels and how it causes the high blood pressure I decided to stop, and I quit smoking a long time ago now."* (Patient 15-MoH)

6.3.1.2 Sub-theme: providing patient support

Data from nurse and patient interviews, as well as observation data, informed this sub-theme, which focuses on nurses' roles in supporting patients. These roles include: identifying patients' needs, meeting patients' needs, and resolving patients' anxieties. Identifying patients' needs usually happened when the nurses met the patients to review and assess their conditions during consultations. This strategy not only allowed the nurses to identify patients' needs, but also to make decisions on the plan of care that would be appropriate for each patient. A patient sometimes may not understand what their doctor is advising them, so the nurse acts as a safety net to ensure the patient's understanding. A patient might request to see a nurse to clarify what the doctor had said. In these circumstances, a nurse would seek information to help her to plan what the consultation would include. The following quotes illustrate how the nurses respond:

> *"I should cover the important things in his [patient] treatment. Sometimes patients will just say I wish to communicate with you for my next appointment as I can't understand much of what the doctor said and you [the nurse] simplify things to me and in details. So here I know how to plan for next visit as I know what he [patient] needs."* (Nurse 11-MoH)

> *"These patients' diabetes became well controlled after seeing us."* (Nurse 11-MoH)

My observation showed how a nurse responded:

> *A patient brought his lab results with him. His cholesterol level and lipid profile were high. The nurse advised the patient to perform some exercises. However, the patient had a foot problem as a complication of diabetes. So, the nurse suggested he can go swimming or try floor exercises that does not require the use of feet.* (Observation 12-MoH)

Newly diagnosed diabetes patients are known to have different pathways of care at the beginning of their visits to the clinic, which later could be similar to the pathway of care of other patients. Nurses' duties in this case, would be to reassure the patient about their condition as a common health issue, as many people are affected. Other patients might have other health needs and issues, for which the nurses would spend more time with the patients and allow them to express their feelings without rushing. A nurse revealed that some patients have some private issues which she clarified:

> *"I reassure the patient if he is newly diagnosed with diabetes and inform him that diabetes is very common and that it's not only him who has diabetes. Sometimes we provide the patients with statistics about the number of diabetes patients around the world."* (Nurse 11-MoH)

> *"We [nurses] spend more time with them [patients], and allow them to speak freely without being restricted by time. One of my patients spoke to me about private issues. He [patient] has some sexual problem … I advised him that if he could control the level of glucose, he could minimise the problem if not completely resolve it."* (Nurse 11-MoH)

Psychological problems seem to be common issues to some patients with diabetes. Nurses' comments indicated that they play an important part in identifying patients who have psychological issues:

> *"We cover patients' emotions, which is the psychological aspect …."* (Nurse 11-MoH)

> *"Sometimes a patient doesn't follow what we say … he simply doesn't accept to be on injections … he is anxious and afraid from having daily insulin injections … we have to deal with those patients …."* (Nurse 19-MoH)

Meeting patients' needs followed on from their identification. The nurses started to plan the strategies of how to meet these needs using a patient-centred approach, by encouraging a patient to be involved in the planning, in order to enhance their knowledge about their condition. One patient described how the nurse shared with him all the procedures needed for his annual review, which relieved his anxiety about the procedures:

> *"During the consultation, she covers my needs and more than what is needed for diabetes and my other diseases like hypertension and my kidney problem as well as other complications of diabetes. Though she is not specialised in other conditions, she still she can afford me some other advice beside about diabetes…she asked me about how is my health and reminded me about the necessity of coming to the clinic as I need to follow up with the plan as to give routine blood work and urine and do some screening tests for my annual assessment. So she explained to me about all the procedures needed before I go and that relieves my anxiety about the massive tests … ."* (Patient 15-MoH)

As mentioned previously, some patients met the nurse for detailed information, especially when they received information from their doctors that they did not understand concerning their medications:

> *"The nurse taught me the right way of taking my insulin. There are two types of insulin I'm taking and the doctor was telling me how to mix them in a wrong way that the vial became clouded and not efficient…"* (Patient 7-MoH)

The effectiveness of the nurse-patient relationship was supported by a nurse:

> *"My patients are telling me that they like to see me as the way I communicate with them is very comfortable and the information I provide to them is very clear and useful."* (Nurse 12-MoH)

Resolving patients' anxieties was considered by the nurses in the way they encouraged the patients to consider ways of achieving this. During one of the nurse-patient consultations it was observed that the nurse was able to resolve the patient's issue:

> *The patient asked the nurse if there are any tablets that will help her reduce her weight. The nurse explained the danger of taking some illegal medicine ... She asked her about the food she is eating recently and if she is going for any walks but the patient said she is not performing any exercise. The nurse advised the patient to have a balanced diet and do some exercises. The nurse discussed some food options and provided her with a leaflet about healthy foods that include good nutrients that can help in reducing body weight without harm. The patient replied that she would arrange to go to the gym regularly* (Observation 15-MoH).

In fact, the nurse was not only meeting the patient's needs but also correcting some of the patient's misconceptions about some illegal medications. The nurses were also resolving patients' psychological issues related to patients' feelings of anxiety related to having insulin injections:

> *"… he [the patient] is anxious and afraid from having daily insulin injections… we have to deal with those patients…We discuss with them about the benefit of taking insulin and how important is that to control their diabetes. In that case, patient will comply with us and his anxiety would be relieved …."* (Nurse 19-MoH)

All these findings indicate the different aspects of care the nurses provided as on-going patient support. The nurses identified patients' needs first, before planning how to meet those needs. Psychological problems were found to be major issues for some patients with diabetes; the nurses therefore played an important part in resolving concerns related to patient anxiety.

6.3.1.3 Sub-theme: involvement in medication advice

Interviews with nurses and patients, in addition to data gathered through observations, confirmed nurses' contributions to medication advice. Though nurses in Kuwait do not have legal authority to prescribe medication for patients, they are involved in managing and monitoring medicines prescribed for patients by doctors. This role includes: providing information about the types of medication, whether injectable or tablets; providing information about the actions

of medications; and teaching patients about insulin adjustment according to patients' conditions:

> *"Further we advise our patients about taking their medications on time and not to miss their insulin … we advise them when to increase or decrease the dose of insulin …."* (Nurse 17-MoH)
>
> *"We provide a power point presentation about the action of insulin in the body. We also educate about the different types of insulin and how each one works and for how long."* (Nurse 13-MoH)
>
> *"She taught me a lot about insulin, how to store it when travelling, when to increase or decrease the doses and according to which circumstances. She even reduced the insulin from 3 times to 2 times a day."* (Patient 14-MoH)

Nurses' and patients' interviews and observation data have provided information that described the different aspects of health education and health promotion the nurses utilised in diabetes care. That these different aspects are considered as effective is indicated by some of the patients' expressions about their capability in managing their diabetes; particularly being able to self-manage their condition. In fact, most of the patients expressed their satisfaction regarding the way the nurses helped them to control their diabetes.

6.3.1.4 Sub-theme: inter-professional role (s)

The engagement by a nurse with other healthcare professionals is significant in diabetes management. Nurses in this case study provided positive comments about the encouragement they frequently received from their peers and other healthcare professionals including doctors and dieticians. In fact, the nurses were observed to be skilled with practical characteristics that helped them in the interactive process with healthcare team members. Three therapeutic interaction enablers were identified: professional communication skills, professional knowledge about diabetes care, and trustworthiness.

A teamwork approach is significant in improved patient diabetes care. The nurses reported their contributions with other health care team members at the clinic. One of the crucial factors in accomplishing a teamwork approach is the nurses' utilisation of their communication skills in presenting a patient's case to the team and discussing the need to modify the patient's treatment plan. A nurse in this case study explained what they did when the condition of a patient was not improving:

> *"I communicate with my colleagues and doctors at the clinic about some patients' current treatments and the need to change that as the patient is*

> *not benefiting and his condition is not progressing well. I provided them with some patient readings and lab results from his [patient] diary"* (Nurse 17-MoH)

Furthermore, the nurse used her teamwork and communication skills by organising a joint clinic with the dietician, after noticing that the patient needed a referral to the dietician. Actually, this was a nurse-patient consultation but the nurse called the dietician to attend. During the nurse-patient consultation it was observed that:

> *The nurse advised the patient to see the dietician as to plan a diet regimen for him. She called the dietician who was around and started a joint clinic. The nurse introduced the patient's information to the dietician. The dietician was able to plan a diet for the patient with the assistance of the nurse, as she was liaising between the patient and the dietician* (Observation 13-MoH)

Nurse interview data supported, by observation data, strongly suggested that the nurses in this case study are skilful regarding having good communication with their colleagues at the clinic. This skill perhaps could smooth the adoption of a collaborative approach during interaction, in which quality would shape the care provided at the clinic.

The nurses' frequent contact and interaction with other healthcare professionals encouraged them to enhance their professional skills and seek knowledge in diabetes care. Some of the nurses interviewed had attended training courses in both Kuwait and abroad, which made them qualified as diabetes educators to provide education to patients, nurses, and other healthcare professionals:

> *"I received intensive training abroad, in Egypt and UAE about diabetes. Now I'm a qualified diabetes educator... Most participants of the workshops and educational programmes I arrange are for doctors and some staff nurses …. Some doctors and nurses need to know more about diabetes medications, so this is also part of my role"* (Nurse 18-MoH)

Some nurses identified themselves as having more knowledge about diabetes medications, when compared to some doctors and explained that:

> *"We lecture doctors here not only nurses. I know more about insulin than other doctors here"* (Nurse 19-MoH)

The knowledge the nurses had acquired was gained with experience, as most of the nurses have been working at the diabetes clinic for at least three years. Through their knowledge and skills, the nurses have created a trusting relationship between themselves and other healthcare professionals. The nurses realised that trust between them and the doctors was a crucial aspect of their

teamwork effort. A nurse expressed this statement about trust the doctor had in her:

> *"I just call the doctor, and the doctor will give me the go ahead sign [agreeing with her]. He trusts me and knows that I have more than enough information about the insulin and diabetes medications, and the doctor accepts many of my suggestions"* (Nurse 11-MoH)

This trust relationship can result in a patient's improved care. Another nurse said that she discussed with the doctors the management options for patients; a situation in which she can advise about patient medications:

> *"We are discussing the treatments and managements with our doctors and colleagues to improve patient care... I can advise the doctor if specific insulin does not work with some specific patient and he [the doctor] usually agrees with me."* (Nurse 12-MoH)

> *"The dietician sometimes accepts my dietary plan for some patients. She will agree with my plan."* (Nurse 11-MoH)

In addition to doctors, dieticians also trusted the nurses by accepting their patient care plans. This collaborative working relationship was observed during nurse-patient consultations:

> *The nurse scheduled the patient's insulin doses and collaborated with the dietician about the patient's diet* (Observation 11-MoH).

These interactions lead to appropriate engagement of a teamwork approach, which should improve patient care. The following two comments support this view:

> *"I work with my peers and the diabetes team collaboratively as we support each other."* (Nurse 16-MoH)

> *"We are a team here and to improve patient care, we must cooperate and support each other."* (Nurse 18-MoH)

It is evident in this narrative that the nurses' inter-professional roles, involving collaborating with other healthcare professionals, would improve patient care. The nurses had some professional characteristics that enabled them to become active healthcare team members in diabetes care. These characteristics included having appropriate communication skills, knowledge about diabetes care, and establishing trustworthiness.

In summary, this theme has confirmed the substantial role undertaken by the nurses working in diabetes care. The nurses follow different strategies in health education and health promotion, starting from preliminary education in which they gather baseline data that helps them in planning for patient care. The nurses

in this case study had strategies for meeting patients' educational needs and encouraging patients' self-management, after making sure the patients are safe to self-manage their diabetes. The nurses also showed their professionalism in health promotion, by providing suggestions about lifestyle modifications and providing advice about medication. They worked collaboratively with other healthcare providers by communicating professionally with them, demonstrating knowledge about diabetes care that led others to trust their role, in which they can rely on their experience in planning and deciding on patients' management plans. Finally, this theme illustrates the different processes the nurses undertook, including the various areas needed in diabetes management; information based upon what the nurses and the patients said, in addition to the observation data. The actual roles the nurses in this case study performed are stated in the guidelines reviewed in Chapter 3.

6.3.2 Theme 2: nurses' relationship with the guidelines

Three sub-themes emerged from the nurses' interviews and documentary review of the guidelines; ADA, IDF, CDA, and doctors' guidelines (see Table 22). The similarities and differences are explained in the forthcoming sub-themes.

Within this case analysis of the Kuwait data, nurses' interviews and documents showed both similarities and differences between what the guidelines stated as being the role of the nurse and the activities actually undertaken by nurses in Kuwait. Whether the nurse is following what is stated in the guidelines, or diverging from the guidelines according to particular circumstances, will be explored here.

As described in Chapter 4, there were two types of guidelines that nurses at the clinic were advised by their doctors to follow: the international guidelines (designed for general health care providers in diabetes care) and the local guidelines (specifically designed for nurses only). Actually, nurses reported that the local guidelines were extracted from the international guidelines, so the local guidelines were expected to be up-to-date or evidence-based.

6.3.2.1 Sub-theme: nurses refer to the guidelines in practice

Information gathered from the nurses' interviews supported the view that the nurses' attitudes towards the guidelines varied. In some instances, nurses relied on the local guidelines as they were specifically designed to cover their roles. Other nurses followed the international guidelines and local guidelines, and on

some occasions, they relied on their experience and knowledge. All the nurses interviewed agreed that they were fully aware of both local and international guidelines in use in the clinical area.

Interview data showed that the nurses were aware of the importance of the guidelines in their practice. The nurses commented that the guidelines were used as a source of information that informed them about the minimum level of care expected in terms of patient education and key aspects of care:

> *"They help me as I consider myself to have information to be given to patients so when I provide education to my patients, I know that I talk from the ADA, which guides me."* (Nurse 16-MoH)

> *"They are established to help us and guide us to the right procedures and policies in patient care."* (Nurse 19-MoH)

The nurses expressed that they followed the guidelines their doctors advised them about. However, they recognised that these guidelines were not standards to be adhered to:

> *"Our doctors advised us to know about the ADA and they created guidelines for us at the clinic. So, we follow what is in the guidelines … we sometimes use our experience … they [doctor guidelines] are not covering everything … we have patients coming with different stages of their diabetes and they have different needs."* (Nurse 14-MoH)

Some nurses confirmed their utilisation of local guidelines, which are mostly found to be based on the medical school that the doctors attended. A nurse reported that:

> *"We are following our doctor's guidelines here … . If the doctor is coming from the USA, he will follow the ADA, or if he is coming from Canadian schools he will follow the Canadian Association so we follow the doctors' guidelines … we find them useful."* (Nurse 12-MoH)

Also, the nurses recognised that the guidelines were not applicable in all cases, as patients have individual needs:

> *"They will not be applied to all cases as patients are different."* (Nurse 14-MoH).

In such situations, the fact that both the doctors and the nurses were operating under the same guidelines was considered as a benefit and contributed to teamwork. The local guidelines were considered useful as they were designed to help the nurses, whereas the other guidelines are very general and broad. Therefore, to some nurses the local guidelines were often more detailed in the information they provide about care delivery. The nurses' attitudes towards the guidelines varied and they provided critical comments about the negative and

positive aspects of the guidelines. Some nurses preferred one set of guidelines over the other because of their flexibility:

> *"Some of our doctors are following the ADA which is very flexible."* (Nurse 11-MoH)

However, others nurse found the ADA guidelines contradicted other guidelines:

> *"The ADA has different criteria regarding hypoglycaemia. They stated that for a patient with hypoglycaemia, we must decrease the dose of insulin before food, others say take the whole dose before food."* (Nurse 11-MoH).

As a result of the variations in statements in the guidelines, some nurses considered the guidelines as restricting their work, particularly regarding medications:

> *"Guidelines are sometimes restrictive especially in the way they state about how to adjust the insulin according to patient readings."* (Nurse 17-MoH).

The comment above suggests that the guidelines do not include or cover all aspects of patients' needs and requirements. This was identified as a problematic issue related to clinical decision-making, for which the nurse relied on her own knowledge:

> *"I use my clinical judgment in the things not covered by the guidelines."* (Nurse 12-MoH)

This comment indicates that the nurses sometimes diverge from what is in the guidelines as they rely on their knowledge and experience, according to what they see as right for the patient. Such a situation is described by the following comment:

> *"I can't find everything in the ADA. We follow specific regimen for insulin doses with all patients, and one time I had a patient who is in old age and can't follow the dose in the guidelines, so I reduced the dose into half, and the patient did not have any problem."* (Nurse 11-MoH)

Consequently, these guidelines could confuse the nurses more than helping them. For example, the nurses might provide advice for patients with complex conditions (cardiovascular patients), as this is recommended by the IDF guidelines:

> *Provide aspirin 75-100 mg daily in people with cardiovascular disease or at high risk…Provide active management of the blood lipid profile … . Provide statins at standard dose …* .(IDF-MoH S54)

However, these recommendations are not specified for whom they should be applicable. The nurses might be confused as they might think they should advise about Aspirin, which is not appropriate for all patients with complex conditions.

The nurses themselves are also up-to-date with new care management regimens, as diabetes management is subject to on-going research. For instance, there are treatments for diabetes that are prescribed free of charge but only for Kuwaiti citizens, while it is very expensive for other nationals. One nurse explained how the nurses themselves found new less expensive treatments for diabetes and wanted to have these for their non-Kuwaiti patients:

> *"In our clinic, we have four members in one family who are non-Kuwaiti with diabetes … they needed the new insulin pen to be prescribed … unfortunately they cannot have it for free … we [nurses] found a new insulin pen which is effective and less expensive and we discussed that with our doctors to have this in our guidelines."* (Nurse 11-MoH)

This situation varies from that in the UK where the DNs were aware of alternative medication; the guidelines that they followed considered that:

> *There is no 'best' insulin regimen for patients with type 2 diabetes* (NDSAG-NUH).

From the interviews with the nurses in Kuwait it was revealed that they had suggested that the doctors prescribe this new treatment for these particular patients. This new treatment needs to be included in the local guidelines to become standardised in other clinics and wards. Therefore, these local guidelines need to be updated to be more cost-effective, in addition to adding new treatments:

> *"However, we keep updating ourselves about diabetes management … we are updating ourselves with information by reading some resources, so we don't rely much on the guidelines as they need a frequent update as there is always new treatment for diabetes."* (Nurse 12-MoH)

Therefore, the nurses do not always precisely follow the local guidelines, as the reality of life is different and guidelines are difficult to be followed in all real situations. In these cases, the nurses relied on their experience and what they have learnt:

> *"Though sometimes we see that real life is different, or they are difficult to be followed in real situations so I see that for some medications we can't just follow what is out there in the local guidelines, but we use what we have learned about the action of insulin."* (Nurse 19-MoH).

Sometimes the nurses used their clinical judgment about situations that are not stated in the guidelines:

> *"I use my clinical judgment in the things not covered by the guidelines."* (Nurse 12-MoH)

> *"I work with my patients in the ward and at the clinic independently; I make my decisions about patients and other plans in the clinic like referring my patients to the dietician, or the psychological clinic. In case I made a big decision or change patient plan of care, I have the autonomy to do that. Therefore, you could say that the way we communicate and plan care to our patients is fully independent. We use our own judgement or common sense according to experience and education at the college before ...."* (Nurse 17-MoH)

The international and local guidelines about diabetes care, and whether nurses follow them or not, was explained by the nurses. This section has also described the nurses' opinions about these guidelines, and has shown that in some cases the nurses do not always follow them, relying on their experience and judgement. Diabetes care is continually evolving as a result of on-going research and consequently diabetes management keeps developing. Reviewing the documentary data (see Chapter 3) shows that these guidelines are not up to date. Table 24 below presents the recommendations included in the guidelines as well as the supporting evidence.

Table 24 Guidelines recommendations and supporting evidences

	Kuwait guidelines				
Guideline recommendations	**IDF**	**ADA**	**CDA**	**Doctors' guidelines**	**Annotated sources**
Screening, prevention and early detection for diabetes	✓	✓	✓	✓	Patient 15 Nurse 18 Observation 14
Newly diagnosed patient with type 2 diabetes advice: activity, lifestyle, weight management	✓	✓	✓	✓	Nurse 11 and 19
Promoting self-care/self-management/ patient empowerment	✓	✓	✓	✓	Patient 10 and 15 Nurse 13 and 14
Mental health/psychological support	✓	✓	✓		Patient 14 and 15 Nurse 19, 11, 14 and 17
Nutrition- dietary advice	✓	✓	✓	✓	Patient 11 Nurse 13 and 11Observation

	Kuwait guidelines				
Guideline recommendations	**IDF**	**ADA**	**CDA**	**Doctors' guidelines**	**Annotated sources**
					11, 13,15, 17 and 18
Urine monitoring	✓				
Blood glucose monitoring	✓	✓	✓	✓	Patient 7 and 10
Oral therapies	✓	✓	✓	✓	Patient 9, 11, 12, 14, 15 Nurse 13, 14,17, 18 Observation 18
Injectable therapies/ insulin adjustment	✓	✓	✓	✓	Patient 10, 12, 13, 14 Nurse 11,12 and 17 Observation 11, 14,18, and 20
Hypoglycaemia or and hyperglycaemia/ glycaemic control	✓	✓	✓	✓	Patient 10, 11, and 13 Nurse 11and 19 Observation 18
Intercurrent illness	✓				
Managing diabetes in the hospital/ In-patient care	✓	✓	✓	✓	Patient 7 Nurse 11, 12, 13, 16, 17, and 19
Hypertension and coronary heart disease	✓	✓	✓	✓	Patient 8 and15 Nurse 12, 13, and 17 Observation 11. 12, and 15
Neuropathy/complications of diabetes	✓	✓	✓	✓	
Nephropathy/complications of diabetes	✓		✓	✓	
Retinopathy/complications of diabetes	✓	✓	✓	✓	
Erectile dysfunction	✓		✓		Patient 8 Nurse 11
Foot problems/ foot care	✓	✓	✓		Observation 12
Patient education	✓	✓	✓	✓	
Provide education to other				✓	Nurse 19

	Kuwait guidelines				
Guideline recommendations	**IDF**	**ADA**	**CDA**	**Doctors' guidelines**	**Annotated sources**
healthcare providers					
Older people	✓	✓			
Guidelines are specified to nurses				✓	
Guidelines are specified to healthcare providers for diabetes care	✓	✓	✓		

6.3.2.2 Sub-theme: nurses' attitudes and perspectives towards the guidelines

The nurses suggested that not all that is in the guidelines (international and local) is clear in terms of specificity regarding the role of nurses. Regarding the international guidelines (the ADA, the IDF and the CDA), the nurses viewed them as too general; considering them to lack the specificity about which activities nurses should undertake. Regarding the local guidelines, established by doctors working in diabetes care, the nurses viewed them as too specific and not including all that they do (see Chapter 3). This issue is discussed in more detail below. Though the nurses have their local guidelines specifically designed for them (described in Chapter 2), these local guidelines are described by nurses as narrow:

> *"Guidelines include basic work like monitor vital signs, patient weight ...."* (Nurse 19-MoH)

Furthermore, they do not include related guidelines for the activities:

> *"Guidelines give us rules about insulin doses, but do not consider rules for patient weight, age ... or if he [patient] has other conditions beside diabetes ...."* (Nurse 12-MoH)

The nurses reported that the local guidelines did not include all their duties, indicating that they were doing more than what is stated in the guidelines. A nurse commented that she was responsible for providing psychological support together with supporting patients' educational needs:

> *"For example, the guidelines say we can educate the patient about how to control his blood glucose by adjusting his insulin according to his diet, which must be controlled, and then taking his medication. Well, I can't start these before calming the patient down as most patients come to us stressed and worried especially about the insulin*

> *injection. … people cannot tolerate information while worried or anxious."* (Nurse 17-MoH)

Although the guidelines include supporting patients' educational needs, this nurse believed that they do not include information for supporting the patient's psychological needs. What this nurse said in the above quote is confirmed in Table 7, Chapter 3, which shows that the doctors' guidelines do not include nurse support for diabetes patients' psychological needs. Patients' psychological support is mentioned as part of patient education in the IDF.

> *…ensure that education is accessible to all people with diabetes considering; culture, ethnicity, psychological, and disability issues … .* (IDF-MoH p.21)

The nurses recognised that their role was to:

> *"… cover patients' emotions, which are the psychological aspect… this actually what patients are after"* (Nurse 11-MoH).

The IDF recommendation could be the reason why the nurses provided psychological support for their patients, as this is an important aspect of care to both patients and nurses. In addition to the above extracts, the nurses expressed the fact that their local guidelines were derived from the international guidelines. However, the recommendation about psychological support was not included in local guidelines, which indicates the need for the local guidelines to be updated:

> *"We have consultants here who are coming from different schools, so they made guidelines for us that we must follow at the clinic … ."* (Nurse 12-MoH)

> *"… the guidelines we have at the clinic are our doctors' guidelines. They made them based on other guidelines like the ADA and the IDF …."* (Nurse 16-MoH)

Psychological support was mentioned in three international guidelines (see Chapter 3) as an important area in diabetes care; it is an issue considered within professional standards in the IDF (see Table 7 in Chapter 3). The nurses can also update their information by referring to the international guidelines. For instance, a nurse commented that she could refer to the ADA as a guideline to:

> *"…help me as I consider myself to have information to be given to patient so when I provide education to my patients, I know that I talk from the ADA, which guides me"* (Nurse 16-MoH)

What nurses identified as not being mentioned in the local guidelines, is actually stated in the international guidelines:

> *Adopt a whole-person approach and respect that a person's central role in their care in non-judgemental communication and explore social situations, attitudes, beliefs, and worries related to diabetes and self-care issues* (IDF-MoH).

This actually supports the debate about the lack of specificity regarding the role a nurse is advised to undertake, according to the international guidelines followed in Kuwait. Nurses in Kuwait can clarify recommendations in their local guidelines by referring to the international guidelines (see Chapter 3). The nurses claimed that international guidelines are too broad and do not specify a nurse's role in particular detail, as the guidelines are established for general healthcare providers working in diabetes care. The way the international guidelines state their recommendations does not specify how the health care professional is expected to undertake their activities. Therefore, the nurses do not know who should meet some of the standards stated in the international guidelines, which could result in the need for more time and effort from the nurses to understand which recommendation or standard pertain to their roles:

> *"I have a patient with high dose insulin and he needs special considerations as this insulin is very critical… the guidelines [international] suggested to stop this insulin if the patient is having renal failure … who is going to stop this insulin?"* (Nurse 11-MoH)

> *"Each healthcare staff at the clinic knows about his role. The problem with our role [nurse role] is that it includes other healthcare professionals' roles. The guidelines do not help us to know which part is to be done by nurses and which part to be done by a dietician … this is confusing …."* (Nurse 13-MoH)

Therefore, the nurses were performing multiple tasks, considering patients' conditions as a priority. A patient reported that the nurses were meeting most of his needs, although he knew that there are other healthcare providers whom he would meet:

> *"There is a dietician, but she [nurse] is planning for my diet; there is a pharmacist, but she [nurse] is teaching me about my medications; there is a psychiatrist, but she [nurse] is supporting my emotions and feelings as I have more kidney problems than others."* (Patient 14-MoH)

For instance, a nurse met a patient who had multiple needs requiring social, psychological, medication, and diet advice. The nurse supported the patient socially and psychologically and provided her with suggestions about diet and medication. However, this work was time consuming, besides some of the interventions needing to be covered by other healthcare providers and not necessarily the nurse. Actually, what the nurses expressed was that they expected the international guidelines to detail the generic and specialised roles in diabetes

care, including those of each individual staff member. This lack of a focus on collaboration is illustrated by the following comment by a nurse:

> *"... the patient we had last week. She was worried, and she was crying and feeling sad ... . She was supposed to be seen by a dietician, as she needs diet advice. She was in need for psychological support as she was in an unexplained worry. I provided her with social, psychological support also diet advice and about here medication. I felt I did not do the job, as she needs to see specialists in these areas. Well, what I have done so far might be included in the guidelines, however; this work needs more than an hour to be accomplished and needs interventions by other staff. The guidelines [international] does not clearly specify or say this is to be done by a nurse, and this is to be done by a dietician ...."* (Nurse 14-MoH)

Such situations may have created conflict for the nurse between the role suggested in the guidelines, and the actual role she is undertaking to provide diabetes care. The nurse and the dietician offered care separately regarding the patient's health education. Therefore, the lack of specificity in the international guidelines may have led to an imbalance between what the nurse must do and what other healthcare providers should do.

The nurses tried to resolve their work conflict, for instance allocating and distributing the work to each member of the diabetes team; however, these members rely on the nurses to undertake their roles, as explained in the following comment:

> *"We are under severe pressure of work; there are seasonal times when we feel so frustrated and overwhelmed... We try to distribute the work between who needs to see us and who needs to see other healthcare professionals and some healthcare professionals do not finish their work. They depend on us."* (Nurse 11-MoH)

In summary, the nurses experienced conflict with interpreting or understanding the suggested guidelines, which are references that list recommendations to be used in diabetes care. The documentary review shows that these guidelines are more like frameworks that shape diabetes care. The nurses are at liberty to rely on their own knowledge and experience in demonstrating diabetes care and are conscious about how both the international and local guidelines give them direction to perform some of their work tasks. However, the guidelines only apply a limited perspective, so nurses often rely on their knowledge and experience, which is helpful especially when meeting patients with multiple needs and concerns.

6.3.2.3 Sub-theme: nurses' influences on policy change

This sub-theme describes the nurses' contributions to policy change, by being members in the healthcare teams or committees that establish some of the recommendations or standards in the local guidelines. Also, these nurses take part in modifying some of the criteria included in the guidelines. The nurses reported that:

1. They contact their peers or doctors about some issues they cannot find in the guidelines.
2. They introduce changes, modifications, and suggestions to the local guidelines, after discussing these issues with their colleagues and/or doctors.

The nurses suggested the need for the local guidelines to be updated as they were established in 2003, over a decade ago (see Table 7 in Chapter 3). In fact, the nurses identified the lack of evidence-based practice in their local guidelines; this is related to the need to have an updated edition. As a result, the nurses relied on their knowledge and skills in performing some tasks that were missing from their local guidelines:

> *"Sometimes there is updated information that is not included in these guidelines [local] so why not use my clinical judgment as I have the knowledge and skills ...."* (Nurse 13-MoH)

These professional inputs from the nurses have enabled them to introduce or suggest updates or changes in their local guidelines, which are usually accepted by the doctors at their diabetes clinic:

> *"We contact our colleagues or our doctors if we could not find what we need in the main guidelines."* (Nurse 11-MoH)

> *"When I first came to the clinic, there was a checklist that nurses are following. What I did is adding more things regarding medication to be covered...these documents lack evidence-based ... they don't include the new treatment regimen like the Ipro or GCM ...."* (Nurse 13-MoH)

The nurses indicated the need for the guidelines to be updated; however, the IDF (2013) stated that their guidelines are reviewed after 5 years and updated every 3-5 years. There is an example of a recent update to the guidelines, which is the added practical guideline for the Muslim event of Ramadan that lasts for 29-30 days. During that period, the consumption of food and drink, as well as oral and injected medications, is forbidden. Therefore, the IDF published new practical

guidelines that only pertain to people who are fasting during Ramadan. The guidelines addressed the topics of:

> *Pre-Ramadan education, Ramadan nutrition plan, and management of diabetes during Ramadan* (IDF-MoH).

However, the nurses who were interviewed talked about the information that is lacking in the international guidelines, and which should be included. For example, details about complications patients might experience as a result of uncontrolled diabetes should be featured in the guidelines. In one particular example, a nurse did not recognise that the changes in the appearance of a patient's face were a known complication of hyperglycaemia. Upon investigation, the nurse was not able to locate any information or reference in either the international or local guidelines about the symptoms the patient was experiencing. The nurse found in research, that flushed face is a symptom of hyperglycaemia, which can result from taking corticosteroids. The nurse discussed this new information with her peers and doctors, about it being considered in the future should they have similar patients:

> *"However, there are some important issues not mentioned in the guidelines like discolouring of the face in case of hyperglycaemia. This issue was raised by one of my patients during the consultation so I checked with my peers about that and we checked the guidelines and did not find about it. But we found recent research confirming that having red face is one of the symptoms of hyperglycaemia. We got the confirmation from our doctor here that we should consider this with our patients …."* (Nurse 18-MoH)

This incident indicates the level of evidence-based knowledge nurses hold and therefore their potential ability to make such decisions in practice, ensuring their patients are cared for safely.

The nurses reported that they did not solely rely on the guidelines in their clinical work and they gave examples of when they used professional knowledge and experience to guide their actions. Overall, the nurses followed their local and international guidelines and found them useful, and helpful to guide their practice in their duties and responsibilities in diabetes care. However, some nurses found that the guidelines did not include everything; therefore, they found them to be restrictive.

For instance, in terms of administering insulin based on patient weight and BMI measurement, the international guidelines recommend the administration of insulin therapy but do not specify about a patient's weight. Despite what the nurses thought about some of their activities not being stated in the local

guidelines, such as providing patients with psychological and social advice, these activities are stated in the international guidelines. The nurses are aware that the local guidelines were derived from, and supported by, the international guidelines.

The nurses viewed the guidelines as either too broad or too narrow. For instance, the international guidelines were considered to be so broad that they do not specify tasks according to specific staffing skills in the diabetes care team. On the other hand, the local guidelines were considered to be too narrow and do not include all the duties/roles that nurses undertake.

6.3.3 Theme 3: implications of nurses' performance

The implications of nurses' performance in diabetes care are addressed in this theme and are illustrated by data from three sources: nurses' interviews, patients' interviews, and observations. This theme includes two sub-themes: i) nurses' perspectives about their role in diabetes care which includes the promoters and inhibitors that have an impact on nurse performance. Nurses' contributions with some suggestions to resolve some of the obstacles they experience at the clinic that may influence the provision of quality nursing care, and ii) Patients' perceived quality of nursing care confirms what nurses perceive to constitute quality, as compared to the patients' perceptions.

The patients mainly had positive feelings towards the nurses' roles, when they were asked about the way the nurses were providing them with care. At the end of this sub-theme, patients provided some recommendations and suggestions to overcome some of the obstacles nurses face in diabetes care, and which consequently impact positively on their perceived quality of nursing care.

6.3.3.1 Sub-theme: nurses' perspectives about their own role

This sub-theme explains how the nurses viewed their actual role regarding quality of nursing care. Analysis of the data identified promoters and inhibitors to the provision of quality nursing care, as shown on Table 25. The findings for each item are discussed below:

Table 25 Promoters and inhibitors to quality of nursing care

Promoters	**Inhibitors**
1. Providing patient-centred care	1. Nurses' workload
2. Professional autonomy	2. Undervalued role by senior nursing staff
3.Extending the role - professional development	3. Power relations - senior management staff
	4. Lack of recognition
	5. Power relations - medical staff
	6. Lack of equipment in consultation rooms

6.3.3.1.1 Promoters

Promoters in this study mean issues that enhance the nurses' approaches to achieve quality care for their patients.

6.3.3.1.1.1 Providing patient-centred care

The nurses described their performance as valued roles in patient care, by providing patients with individualised and holistic care by meeting most patients' differing and complex needs. They suggested that the patients visiting the clinic needed more time, effort, and sometimes multi-disciplinary team support. In light with this situation, the nurses perceived that the strategies they utilised in their actual role needed to be informed by a patient-centred approach, where they cover most of the patient's needs holistically, as evidenced by improved outcomes:

> "*We provide care holistically by covering most patients' needs that can be physiological and socio-cultural … . We cover patients' emotions, which is the psychological aspect … this is actually what patients are after."* (Nurse 11-MoH)
>
> *"… the education we provide is patient-focused that covers most of their needs."* (Nurse 14-MoH)
>
> *"I see that the detailed information really matters to patients … if we can get everything right and as patient expects, his experience will be so good about what we do …."* (Nurse 17-NUH)

The nurses perceived that patient-focused care is an important element in providing patients with holistic care, as identified by nurses' comments:

> *"My patients are telling me that they like to see me as the way I communicate with them is very comfortable and the information I provide them is very clear and useful"* (Nurse 12-MoH)

> *"We have close contact with our patients especially when we want to tell them about new treatment"* (Nurse 15-MoH)

Keeping the patients informed about updates on their treatment and management of their diabetes needs the patient's involvement in their own care plan. In light of this, nurses ask and discuss with the patients, but do not dictate to them, about what to do, as this will enrich the patient with information about their own care. This approach is considered crucial as it leads to building a patient-nurse trusting relationship, as indicated by the following comment:

> *"We value the trusting relationship between us and our patients."* (Nurse 11-MoH)

6.3.3.1.1.2 Professional autonomy

The majority of nurses confirmed that they were "independent" in their work as they had "autonomy"; a view that is supported by the use of their "clinical judgment" in providing care to their patients. Essentially these elements can be related to the fact that the nurses have professional autonomy and independence in diabetes care. They have their own patient caseloads and they have their own ways of working for dealing with most patients' issues related to diabetes care and non-diabetes issues:

> *"Each one of us [nurses] has her own patients… we are responsible for our actions which are mostly appropriate …."* (Nurse 11-MoH)

> *"There is always something new in patients improved diabetes care. So we keep ourselves updated with what is going on around in research."* (Nurse 12-MoH)

> *"The doctor sends me the patient, I deal with all other issues related to patient care independently …."* (Nurse 14-MoH)

Nurses can independently provide care in different settings to safely introduce quality nursing care to patients, either at clinics or out in the community. Being independent at work optimises a nurse's skills to ensure the best care is provided. This approach is supported by the following quotes:

> *"We are very independent as each one of us has her own patients. We are responsible for our actions, which are mostly appropriate for patients' needs … we are covering and providing to patients with diabetes either at the clinic, at the ward, and at the community when we actively participate in different diabetes activities to safeguard the provision of the best care we can."* (Nurse 11-MoH)

> *"To me, I participate effectively in our diabetes team meetings, help my colleagues, educate other staff all over the hospital, arrange for educational sessions for both doctors and staff, I participate in research and I'm a responsible staff member that manages my time and adheres to the rules and regulations. So, why can't I provide quality nursing care."* (Nurse 11-MoH)

6.3.3.1.1.3 Extending the role - professional development

The majority of nurses interviewed had received training in a specialised training centre in Kuwait. Some nurses received training from other international courses:

> *"I received intensive courses abroad, in Egypt and UAE about diabetes."* (Nurse 18-MoH)

However, the nurses felt that there are still areas for improvement and development in their career skills.

> *"We are updating our information about diabetes management … we have to keep ourselves up to date …."* (Nurse 12-MoH)

Diabetes care is an on-going practice and the nurses reported that monthly meetings happen with their peers and doctors at the clinic to update each other regarding new treatments in diabetes. Doctors were found to rely on nurses for some medical interventions for a number of reasons; the doctors trusted the nurses' knowledge and skills to manage patients or when they were busy and referred patients to nurses to complete their medical interventions. However, the nurses referred the patients back to doctors once they found that patients needed medical interventions.

Though the nurses were aware of their limitations in practice, they were trying to meet patients' expectations as well as considering patient safety. The nurses were aware about the cases that they could not see but had to refer them to doctors, as they were not within the scope of a nurse's practice. This caution indicates the nurses' awareness about the need for development in their diabetes nursing skills, in order to keep them up to date.

6.3.3.1.2 Inhibitors

The inhibitors in this study mean the obstacles that might hinder or prevent the provision of quality nursing care.

6.3.3.1.2.1 Shortages of nurses

Shortage of nurses was an issue reported by some nurses, together with a number of factors resulted from it. Initially, nurses thought that their number

does not help to accommodate the number of patients visiting the clinic. This has resulted in working more than they were supposed to.

> *"… We are doing a job of ten nurses almost every day…"* (Nurse 19-MoH)

> *"As you can see, we are only four nurses and not all of us are working at the clinic during clinic times. One of us will be visiting her patients in wards and another one is working with patients with pumps …"* (Nurse 17-MoH)

Nurses can achieve these tasks as they have become used to do multiple tasks:

> *"We became super nurses as a result of the many tasks we are covering…"* (Nurse 12-MoH)

A patient visiting the clinic noted that nurses were undertaking administrative tasks. He was wondering about how nurses can do all these tasks beside their role in diabetes care:

> *"… but they cannot do all the work, it is too much as I have noticed, they are doing much and much more, they are even doing clerical roles, why is that? I don't know."* (Patient 13-MoH)

Nurses' well-being is an important factor in patient care and in the previous section it was indicated how exhausted nurses were due to performing multiple tasks that some were not related to their scope of practice.

6.3.3.1.2.2 Nurses' workload

Despite the tender nature that characterises a nurse's career, some of the nurses interviewed reported the severe workload pressure they experience at the clinic, which impacts on their ability to provide adequate quality care. While the multiple tasks they were undertaking varied, some were relevant to their role, others were not; but still the nurses were undertaking these tasks without any complaints. A number of nurses raised the issue regarding the pressure of the workload they experienced:

> *"At the end of the day caring is our job as well as educating and if the two things came together I have to do both… however, there is always the pressure and workload, which are exhausting…"* (Nurse 17-MoH)

> *"We feel overwhelmed by the different tasks we are undertaking; appointments, clinics, wards, referrals, communicating with patients and other staff, documentations, lectures for staff, educational sessions for patients, beside they call us for help in other clinics or departments"* (Nurse 19-MoH)

> *"Sometimes we [nurses] don't have time to do documentation*" (Nurse 12-MoH)

Considering the nurses feelings arising from other issues such as job titles and recognition, lack of consultation rooms, and financial benefits, there was one nurse out of the nine interviewed who complained directly about the workload and the multiple tasks they experienced. Simply put, the nurses are performing multiple roles, such as counselling, educating, supporting, and advocating. For example, an increased burden of responsibility, for what appeared not to be a part of the nursing role, was reported by the nurses who had been requested to undertake some tasks that were not under their speciality. For example, a nurse reported that a patient asked her to admit him to the hospital. The nurse explained to the patient that this was not part of her role and she was not authorised to do so:

> *"A patient came to me last week and asked me to admit him to the hospital … because he feels his high blood pressure causing him dizziness and he has no one at home to take care of him. I told him that I would refer him to the doctor to decide; you know he didn't accept that. The patient wanted me to speak to the doctor and convince the doctor to admit him to the ward; I became a bad nurse to this patient as he wasn't satisfied and left without seeing the doctor."* (Nurse 19-MoH)

Patients' expectations might be related to the ambiguity of the nurse's role. A nurse talked about a patient who experienced sexual problems in his relationship and asked her to find him a solution. In fact, the nurse reported that she had suggested to the patient, in a previous consultation about the effect of not controlling his diabetes. The patient however, was neglectful in controlling his blood glucose level:

> *"He [the patient] has some sexual problems … I advised him that if he could control the level of glucose, he could minimise the problem if not completely resolve it … the patient did not accept that … he wanted me to refer him to a clinic that doesn't exist. I feel like some of our patients don't know about our role in diabetes care … after a long discussion I referred him [the patient] to our consultant."* (Nurse 11-MoH))

6.3.3.1.2.3 Financial conflict

Nurses expressed concerns about not receiving fair salaries for the work they are doing in diabetes care. They were disappointed as they are receiving similar salaries just like ordinary 'non-specialist' nurses working at the clinic:

> *"… it is a shame that we do not receive a salary that covers the work we are doing. We are taking the role of ordinary nurse's work, ward nurses and our basic role in diabetes care…"* (Nurse 19-MoH)

> *"…nurses in wards are doing less work than us, but they are getting more salaries…"* (Nurse 16-MoH)

Financial disagreement by nurses did not inhibit them from providing the care to their patients whether at the clinic or other places like in the wards:

> *"Salary is not a big issue to me… I provide care to my patients because this is going to be back to me… you know they pray for me and my family… isn't that a goal in our lives…"* (Nurse 11-MoH)

6.3.3.1.2.4 Lack of recognition

The nurses considered their senior nursing staff's behaviour as devaluing their duties and tasks. This might contribute negatively, as some of the nurses expressed their feelings of being overwhelmed and frustrated by the tasks they were being asked to undertake by their senior staff. These tasks were not related to the nurse's role in diabetes care:

> *"We also feel that we are under pressure as sometimes you are with the patients and they call you to help in the wards…they give you work not related to your specialty"* (Nurse 16-MoH)

The nurses reported the behaviours of their senior staff as the major source of conflict they have at work, regarding equalising their work with other ordinary nursing staff in other clinics:

> *"They don't perceive us as nurse educators…They don't know that we finish our education session then go to the ward to see our in-patients then come back to the clinic to see other patients who need health education about insulin injections or have other issues and concerns. So, they [senior staff] keep overloading us with work that is even not under the scope of our practice in diabetes care…like helping in other departments"* (Nurse 17-MoH)

This situation is probably related to hierarchical organisational factors; being made worse as nurses in diabetes care do not have job descriptions that specify what their role is or roles are. The nurses identified barriers to providing quality care, as mentioned above, and provided some suggestions to be considered. The shortage of nurses at the clinic was a main concern for the nurses as it put them under serious pressure with a resulting lack of time to accomplish some of the fundamental roles related to patient care and necessary administrative work, such as recording and documentation:

> *"…there should be enough staff and place so I can have seven patients, 30 minutes with each one so if there is another nurse around she can take three and I can take four in addition to completing other work we have to do"* (Nurse 14-MoH)

Regarding higher level management staff and senior nursing staff, a nurse suggested that they were the ones who could solve the issue. They are

responsible for identifying the nurse's role in diabetes care to others and recognising what they are doing:

> *"It is the administrator's role now to sort this out. Nurse Coordinators [superior nurse staff] are the ones who could introduce our career and identify our roles to other so everyone will understand the effort we are producing"* (Nurse 14-MoH)

The nurses linked the lack of recognition of their role to their higher level management and senior nursing staff. The nurses pointed out that they should announce or publicise the existence of nurses in diabetes care, or as they titled themselves 'diabetes educators', at the diabetes clinics and the hospital wards. The duties of a diabetes educator should be perceived as a speciality at the hospitals where they should be allocated with suitable resources such as equipped consultation rooms:

> *"I strongly think that the officials' personnel at the hospital are the ones who should publish about what we are doing so people will know about our presence. They must know about the presence of our diabetes department*" (Nurse 14-MoH)

Despite what nurses reported previously about their professional autonomy and clinical judgment ability in work, they also expressed some organisational dynamics /politics, which inhibited them from providing the quality of care they aimed for. There were two major external factors putting nurses under pressure: their doctors and senior management staff.

The nurses raised some concerns regarding the hierarchy of management staff, a structure which does not fully acknowledge their role regarding their education and training, which allows them to be legally appointed as qualified nurses in diabetes care. The nurses expressed their disappointment about the lack of recognition of their role and related this issue to some factors that could be resolved, as discussed in the next sections.

The main factor nurses' mention is the absence of job descriptions for nurses in diabetes clinics. All job descriptions at MoH hospitals are standardised according to the nurse's rank or position. For instance, there is a job description for a junior nurse; staff nurse, head nurse etc. (see Appendix 3). There is no job description for a diabetes nurse or a nurse in midwifery and so on. This absence of a job description allocated to nurses in diabetes clinics weakens their position and authority and influences how doctors and senior nursing staff perceive them. In addition, job descriptions do not have a title such as 'diabetes educator' or 'nurse diabetes educator' under any band (degree):

> *"There is no specific job description to what we are doing, there is no job description for diabetes educators or nurse educators… instead there is a general job description included in all nurse levels and grades from junior staff nurse to chief nurse officer … ."* (Nurse 13-MoH)

> *"We want to have our own job description, not the one that is currently used as it doesn't state our work."* (Nurse 12-MoH)

> *"I'm a qualified diabetes educator though I'm still holding the title of a 'nurse'."* (Nurse 18-MoH)

> *"After all the training, you have received and all the education and certificates you have and to become a nurse educator in diabetes …."* (Nurse 16-MoH)

The lack of recognition of nurses at the diabetes clinic was clearly a significant professional issue as the nurses considered that people barely knew about the presence of nurses at the clinics, as one nurse indicated:

> *"People don't know about our clinic and that we run the diabetes clinic."* (Nurse 19-MoH)

Similarities between status and financial remunerations between the DNs in the UK and the nurses in the diabetes clinic in Kuwait were identified. The nurses in the Kuwait clinic perceived financial challenges to exaggerate the lack of recognition for their role and service and linked this to the absence of job descriptions. Despite the work they undertook, they still received less income compared with other nurses working in the ward. The nurses working at the diabetes clinic considered nurses working in the wards to have fewer patients and therefore doing less work:

> *"We must have different a job description as this will impact on better salary and other allowances."* (Nurse 17-MoH)

> *"We are treated like ordinary nurses. We are even receiving lower salaries than them."* (Nurse 17-MoH)

> *"The nurse at the ward gates more income than me which makes a big difference she receives 120 KD more than me monthly. She has two patients a day, while I have about ten patients a day, with 10 follow-up appointments and 20 records to complete this is a mess."* (Nurse 15-MoH)

The above claims on gaining approval exclusively for financial benefit, rather than investment in quality patient care, seems to contradict what the nurses expressed in previous extracts about their work, which mainly focused on the issue of improved patient care. Financial support can provide some motivation for the nurses, since they have already identified many conflicts they experience, not

only financial matters. If the lack of financial support is added to the list of issues, perhaps it will affect nurses' confidence and motivation to work.

Sometimes the nurses were unable to perform their scheduled daily tasks and duties as a result of actions by their senior nursing staff. At times the nurses have in-patient ward visits to meet their patients admitted to the ward, or patients who are newly diagnosed and admitted to the hospital to receive full educational programmes about diabetes. Unfortunately, the senior nursing staff interrupted the nurse's work by assigning them to do different tasks in other locations, which would impact on patients' continuity of care as a nurse reported:

> *"Not all that we do is according to our own decision. We have to inform our matron sometimes if we need to go on ward visits or sometimes they [superiors] will just call us to help in other wards or clinics and we can't say no."* (Nurse 19-MoH)

> *"We spend two hours in education then they will ask me, I mean the administration staff, to help somewhere in other clinics or wards. Then I will be back to find my patient waiting for me …."* (Nurse 16-MoH)

Some nurses perceived their senior nursing staff's interruptions as an indication of the lack of support for and recognition of their professional role:

> *"We have a lack of support from the administration here."* (Nurse 17-MoH)

and

> *"People surrounding you do not appreciate what you are …."* (Nurse 16-MoH)

The issues of a lack of recognition and undervaluing the diabetes nurses' roles are compounded by a lack of resources that the nurses consider they need to provide quality care to their diabetic patients. This inhibiting factor is discussed in the next section.

6.3.3.1.2.5 Lack of equipment and special consultation room

There are issues which the nurses are aware of regarding the centralised structure of their role, but which were not mentioned as being similar to other professions at the clinic. The nurses reported that people know about dieticians, podiatrists, and doctors as these staff have their rooms and clinics. The diabetes nurses are gathered in one office lacking a consultation room, teaching facilities and other influences related to organisational factors:

> *"As you saw, we [the researcher and the nurse] could not finish the interview without interruptions … we don't have a consultation room that is kept ready for our patients … the dietician has a room,*

> *podiatrist has a room and of course we are sitting here now in the doctor's room ...."* (Nurse 11-MoH)

Despite patients' positive comments about the nurses, I observed that the nurses were actively participating in assessment, planning and responding to patients' needs. The nurses faced several obstacles that hindered their provision of (optimal quality) care to patients as indicated by the following comments:

> *"We don't have a consultation room to meet with our patients. We are four nurses with our desks in one room and we meet our patients in this room."* (Nurse 11-MoH)

> *"This [absent of a consultation room] will affect patients' outcomes as they have needs ... . We used other staff rooms like doctors or dieticians' rooms which are hardly booked."* (Nurse 16-MoH)

> *"Actually our consultations can be interrupted either by doctors wanting their rooms, or we are asked to help in other clinics or wards ....* (Nurse 19-MoH)

In addition, from a patient's point of view, such situations might limit their ability to express themselves fully in the presence of other people or staff. The following patient's quote clarifies and supports these claims about the interruptions the nurses experience while they meet their patients:

> *"I remember one incident when I was with a nurse, and the head nurse came and asked her to finish quickly. The nurse was so confused. She told her that this is an educational session. The head nurse asked her to finish soon and go to help somewhere else.*" (Patient 13-MoH)

Patient privacy is a fundamental element in patient care, therefore the nurses tried to find a room in which to meet with their patients. This actually put the nurses in a difficult situation, since there was no guarantee that the consultation would not be interrupted. The notion about patient privacy is also described in the sub-theme about patients' perceptions regarding the quality of nursing care. This argument is drawn from the organisational dynamics that indicate power imbalance, in which there is a shift of doctors' work being loaded onto the nurses. Doctors were perceived to be delegating their work to the nurses and were not completing their own work. This shift is likely to impact on nurses' performance in which it might cause incomplete or inconsistent patient care. These situations indicate that the issue seems not to be related to the nurses but the power allocation to doctors at the organisational level. Another factor worth noting, in this instance, is related to gender.

All the nurses at the diabetes clinic were females, while in the medical profession there are mixed genders. Overall it can be argued that the nurses experienced

lack of recognition as indicated by being controlled at different organisational levels, including the hierarchical structure of nursing staff and doctors. This needs to be explored within the context of the power imbalance between nurses and these organisational levels.

6.3.3.1.2.6 Professional relations with medical Staff

Despite what the nurses had expressed previously about their professional autonomy and independence in their work, they mentioned some organisational dynamics which made them unable to provide the level of quality care that they aimed for. The pattern of work distribution among nurses and doctors at the clinic is considered asymmetric and caused by power imbalances between the two cohorts. The lack of relevant job descriptions limits the work of a nurse working in diabetes care. In this context, no mention was made about what nurses are not allowed to do, at the diabetes care level, by doctors. Doctors significantly influenced the diabetes clinic by taking up some roles and ignoring others; such as delegating, referring, not completing their tasks and establishing guidelines for nurses to follow. The nurses reported that they were unable to accomplish their tasks at the clinic. There was a lack of role distribution, which resulted in nurses performing complementary tasks, other than their main roles:

> *"We try to organise the work between who needs to see us and who needs to see another healthcare member in the team ...."* (Nurse 11-MoH)

> *"... we have referrals from doctors without specifying what patients actually need. Sometimes they [doctors] refer after 12 mid-day even when we tell them not to do so... we have other patients in the wards."* (Nurse 13-MoH)

Tension can be created as a result of some doctors informing their patients to follow up with a nurse, without considering that there are other tasks that should be accomplished by the nurse. Consequently, nurses felt they were undertaking the doctors' role, as indicated by the following comments:

> *"We are taking the medical part. For instance, requesting the patient to go for his HbA1C test. This should be requested by a doctor ...."* (Nurse 19-MoH)

> *"Doctors are not doing their job. They leave major parts to be completed by us. When the doctor prescribes insulin to his patient, he should talk with the patient about the specific type that he prescribed till the patient sees me. Then I could continue with ...."* (Nurse 12-MoH)

What the nurses indicated was that the doctors do not follow up what they have started, which can reflect the power imbalance between doctors and nurses. Also,

doctors refer some cases to nurses that do not require nurses' interventions. Nurses at the diabetes clinic provide a special type of education that is advanced but does not cover some areas that need medical nurses to cover. For example, some patients who take tablets, but not insulin, can be seen by the medical nurse on the ward or in the medical clinic. Doctors can also give these patients instructions about their tablets during their doctor-patient consultations. These patients do not need the diabetic education that is presented by the nurses at the diabetes clinic:

> *"The doctor refers to us some cases who are not supposed to be referred to us. Patients are on tablets like Glucophage, so these cases do not need health education the way we provide. We can talk about the diabetes type 2, talk about the hypoglycaemia and hyperglycaemia, but because he is not on insulin I will not speak about the correct dose of insulin as Glucophage does not cause hypoglycaemia."* (Nurse 12-MoH)

In fact, some of the patients preferred to see a nurse instead of a doctor:

> *"Patients will just say I wish to communicate with a nurse for my next appointment …."* (Nurse11-MoH)

For instance, one patient considered that the doctor did not offer sufficient input to his diabetes care:

> *"I would rather see a nurse than a doctor … actually the doctor does not do much apart from checking my HbA1C and prescribe me new medications when I need … even for those new medications, the nurse explained to me all about them not the doctor…she is so patient and has the knowledge to answer my 'question marks' [enormous questions patient has] …"* (Patient 15-MoH)

There are two factors that could be related to patient's preference to see a nurse, the first being related to doctors' lack of awareness that patients are waiting for long time and need to see them:

> *"Patients wait in the consultant's room for not less than two hours. When they meet the consultant, they [consultants] speed the consultation as they are busy."* (Nurse 12-MoH)

The second factor being that the doctors may think there is no need to spend time with the patients, as they can always refer them to the nurse. Some of the comments above indicate that the doctors believe in nurses' capabilities and competencies in performing multiple tasks based on medical interventions. On the other hand, the nurses disliked performing other roles not under their scope of practice, as they considered the matter of patient safety as a priority. The nurses identified multiple roles, with some related to their scope of practice, and

others that should be accomplished by other staff, including doctors. Actually, the nurses perceived this factor as an obstacle to performing their work appropriately:

> *"Doctors are in a hurry most of the time. They refer to us most of their cases even some patients come with complex needs and they need to be seen by doctors not nurses."* (Nurse 13-MoH)

> *"... we are undertaking; appointment, clinics, wards, referrals, communicating with patients and other staff, documentations, lectures for staff, educational sessions for patients, beside they call us for help in other clinics or departments... this is not part of our practice ...."* (Nurse 19-MoH)

Distribution of work was suggested by the nurses to overcome the issue of nurses performing multiple, including doctors', tasks:

> *"Distribution of work ... We cover the diabetes nurse educator roles and other nurses do their part, we cannot do all the work. I think and that is for the patient better outcomes"* (Nurse 17-MoH))

6.3.4 Patients' perspectives on the quality of their diabetes care

This sub-theme describes patients' perspectives about their diabetes care and the nursing care quality. Analysis of the patients' interviews and observation data showed that patients revealed three key areas that had implications for their care: 1) their relationship with the diabetes clinic, 2) the nurses' role in patient care and 3) their adherence to their care plans.

The first area concerns patients' views about their relationship with the diabetes clinic. Patients talked about the services at the clinic and reported some issues as problematic, particularly in the disorganised state of their appointments and lack of follow-up education:

> *"I have noted there is a lack of organisation in the work, the appointments, the appointment cards, a lack of follow-up, no doctors ... or when there are doctors they are busy and in a hurry."* (Patient 13-MoH)

However, it is important to note that these issues were not related to the nurses' practice in providing diabetes care, but more about the doctors and clerical organisation. However, the patient expressed that some of the tasks that were actually done by the nurses, such as follow-up care, were not considered as part of a nurse's role by the patients. This perception might be related to patients' preference to access nurses at the clinic, as they provide care. It is worth noting that poor organisation and work allocation between nurses and doctors in

diabetes care might be linked to lack of information and/or inaccurate information being given; such as insufficient information provided to the patient by the doctor on mixing their insulin, as illustrated by the following comment:

> *"My doctor did not talk about my medications. There are two types of insulin I'm taking and the doctor was telling me how to mix them in a wrong way that the vial became clouded and not efficient ...."* (Patient 7-MoH)

The consequence of this may be that the medication cannot be properly absorbed and utilised in the body, thereby leading to complications with T2D.

This nurse complementary role relates to the debate mentioned earlier in this chapter about nurses completing doctors' work, by providing patients with information which is supposed to be covered by the doctors. This can lead to more pressure on nurses and more workload, as described in the section about nurses' workload. If nurses are unable to pick up and then deal with this additional workload, patients' satisfaction with the care they receive is likely to fall, especially when what:

> *"... doctors were saying is that we [the patients] are the 'doctors' to manage our diabetes."* (Patient 14-MoH)

The patients identified their own workloads in life and felt frustrated by having to take on additional workloads by owning their own diabetes care, which could lead them to ignore the instructions given in relation to their care. The following comments pointed out some broader issues related to increasing the patient's responsibility and workload to manage their diabetes care:

> *"I can see that there is lots of work for the patient that he can't do alone without follow up or to share with health team members here."* (Patient 13-MoH)

> *"... we can't walk for a long distance and travel from time to time for examinations and appointments."* (Patient 8-MoH)

However, it was not clear who the patients were expressing their displeasure about; nurses or other healthcare members in the team. Actually, the notion about the burden of workloads can strongly relate to nurses. According to the patients' comments above, they complained about the pressure they experienced about coming to the clinic to meet their diabetes needs. In considering the above issues, it can be argued that patients face serious challenges in care from which negative consequences can result. This burden could probably be a problem for nurses, as when the patients are not happy they will not adhere to care plans and

this will need more effort by the nurses to teach the patients the importance of following their unique treatment plan.

The second area concerns the nurse's role(s) in patient care. Patients complained about the nurses' workload when they have to come to the clinic and meet different members at the diabetes clinic, and are required to perform significant procedures. These challenges lead some patients not to adhere to treatment and management plans, which consequently will impact on a nurse's performance. For instance, a patient can come to the clinic without their diary and having not performed the required blood tests, or not taken insulin. This patient will need more time and effort from the nurse to convince the patient about the consequences of not following their treatment plan.

According to some patients, the knowledge of the nurses working in diabetes care was effective. Patients perceived these nurses as competent, as indicated by the varieties of tasks they undertook in diabetes care. Interestingly, patients did not raise concerns about the nurses' knowledge and skills. This was expressed in the following comment:

> *"Nurses have information and have the ability to educate. My consultant asked me to take 12 units of insulin every 12 hours and that caused me to have hyperglycaemia all the time. I decided to see my nurse who regulates the doses to me... my diabetes now is within control. She is [the nurse] knowledgeable and expert. She doesn't forget …."* (Patient 10-MoH)

A patient expressed that nurses provided the best care. The nurses have the characteristics that any patient wishes any nurse to have:

> *"What is important to each patient is to meet with a person who is happy, accessible, spends time and sorts out problems and issues soon. The nurses here provide all that and more than that at the clinic … this is the best care any patient would want."* (Patient 11-MoH)

All these features make a nurse an ideal care provider/worker, who does not wait for a reward but is satisfied with her achievements, as summarised in the following comment:

> *"I find her [the nurse] an ideal nurse and she is not waiting for anyone to evaluate her work as she is satisfied with what she is doing."* (Patient 15-MoH)

Being competent in work, leads nurses to undertake multiple tasks. As perceived by this specific patient, nurses undertook a dietician's role, pharmacist's role, and a psychiatrist's role. The patient said that the nurse was supporting him all the way as he had other issues about his health:

> "*There is a dietician, but she [nurse] is planning for me my diet; there is a pharmacist, but she [nurse] is teaching me about my medications; there is a psychiatrist, but she [nurse] is supporting my emotions and feelings as I have kidney problems and others."* (Patient 15-MoH)

A patient commented that nurses were doing more than what they were supposed to do. When the patient was asked about these tasks, he answered that his nurse was undertaking some tasks that came under the scope of the medical role. The patient followed on by saying that the nurse continued what the doctors had started:

> *"I think she is doing more than what she is supposed to do. She is doing a doctor's role though each one of them is doing something differently but still she is doing more. The doctor prescribes insulin but doesn't explain to me why, when and how to take it; this is a doctor part …."* (Patient 10-MoH)

Nurses can achieve these multiple tasks as indicated by the patient above. However, another patient was pleased about the nurses being friendly, but he noted that they were undertaking administrative tasks:

> *"Nurses here are very friendly (darlings), but they cannot do all the work, it is too much as I have noticed, they are doing much and much more, they are even doing clerical roles, why is that? I don't know."* (Patient 13-MoH)

In fact, this patient was not happy about the nurse being overwhelmed with work and considered that she had many tasks to complete, little time and no suitable place to work.

> *"She is to the left, the elevator, so many things inside it and it can't move anymore. They have no time, no space designed for them and they are few"* (Patient 13-MoH)

According to one patient, "She doesn't complain about me if I do not follow her instructions …." (Patient 12-MoH).

This can be seen as patients wasting the valuable time of their diabetes care nurses; interestingly the patients considered that there were too few nurses to take up and deal with all the work that needed to be accomplished. Table 26 below shows patients views about the role of nurses in diabetes clinics.

Table 26 Patients' views about diabetes nurses

Indicators of patients' experiences	**Indicators of patients' views of nurses' competence**
"Positive"	*"but with her support, I stopped smoking gradually"*
"Excellent"	*"respects me and my needs"*
"Brilliant"	*"listens and listens then provides ... support and guides me ..."*
"Very helpful"	*"will listen .. look at what is happening in my life ..."*
"darlings"	*"prioritise you"*
"Always reachable"	*"value you"*
"Accessible"	*"accept your circumstances"*
"Keeping me live"	*"never complain"*

These factors about nurses' competency were reported by the majority of patients interviewed; indicating good levels of patient satisfaction about care received. Patients described how, in their opinions, the nurses: *"prioritise you"*, *"value you"*, *"accept your circumstances"*, and *"never complain"*. A patient expressed support for the nurse working with him to control his diabetes by providing him with information that he had never known before. The patient said that he was not skipping appointments anymore, as he was happy about following-up with the nurse:

> *"If you had seen me before seeing the nurse, you would not believe that my blood sugar was always high. I was admitted many times to the ward till I was referred to her [the nurse]. It is like I never knew about diabetes, the diet and never knew what to do. She gave me the whole information that was so useful and I never heard about before. Sometimes I compare myself before I met her and see that now I'm too different and can manage my diabetes. I'm now very happy about coming here and I don't miss anymore appointments with her [the nurse].*" (Patient 7-MoH)

Furthermore, another patient expressed his contentment about achieving a normal HbA1C level reading after his follow-up with a nurse. He was pleased with her explanation to him about managing his own diabetes and he became knowledgeable about that, in addition to the fact that his blood glucose level came under control:

> *"I'm happy now about the results of controlling my diabetes. My Hb1AC is excellent and within normal range. I'm good now, she taught me about the important of self-management … now I know what to do if I have a problem beside I can ring her if there is something urgent … I can say that now my blood sugar is under control; 9 or 10."* (Patient 10-MoH)

In Kuwait patients appear to have high expectations of nurses, which can be considered as significant barriers to the provision of quality care:

> *"I need nurse S to transfer me to another clinic… I don't feel I'm fine with my relationship with my wife after I had diabetes."* (Patient 12-MoH)

In fact, the episode that was reported by the nurses was also reported by the patient who was involved in the episode. The patient talked about the nurse's frequent advice to him about the complications of diabetes, but he did not follow her advice:

> *"She [nurse] spoke to me about the complications of diabetes and mentioned to me about the long-term complications of diabetes. I now have one of these complications, I'm only 58, and I have this sexual dysfunction … she talked to me about that several time and about keeping my glucose within normal level … I feel very frustrated as I spoke to my doctor about that and he said the nurse will help you."* (Patient 8-MoH)

Despite patients' satisfaction about what the nurses were undertaking to provide quality nursing care, the patients reported some of their ideas about achieving appropriate quality of care. In fact, the patients suggested several issues, not all relating to nurses and quality of care, as they are considered under the organisational sector, as explained below.

Patients articulated some recommendations that would help in patients' perceived quality of nursing care. They suggested that for a nurse to progress in her career, she needed to be involved in advanced training courses in diabetes. That will make an impact on both patients and nurses. Nurses will be able to provide their patients with up to date information about diabetes management:

> *"I see that the nurse here has a great amount of information but I don't feel she have the time to develop herself. I can suggest that some nurses need up-to-date training so they will be updated with what is out there about diabetes and so they can also update the patients with the development of diabetes care and management …."* (Patient 9-MoH)

It was also suggested by one patient that nurses need to take advanced roles in diabetes care:

> *"I feel that she needs to be treated like a doctor as she is doing more than what the doctor is doing for patients that is what I have observed during my visits to the clinic."* (Patient 11-MoH)

This suggestion indicates the competency of nurses in undertaking tasks that can be considered to be advanced medical level tasks. This perception complements the patients' views listed in Table 26 about the nurse being "*available*", "*accessible*", and "*friendly*" when meeting patients.

Though the previous patient suggested that nurses should become more like doctors, a nurse-prescriber role is not yet established in Kuwait. The high levels of expectations patients have about nurses, indicate the patients' beliefs that the nurse can meet most of their health requirements. Beside patients requesting to see the nurse first, as explained previously, those patients also wished that the nurses could prescribe their medications, as they viewed nurses as being able to run clinics by themselves:

> "*I wish that she can write for me my medications."* (Patient 9-MoH)
>
> *"They can manage a clinic by themselves."* (Patient 10-MoH)
>
> *"Patients will just say I wish to communicate with a nurse for my next appointment …."* (Nurse11-MoH)
>
> *"I think and I suggest any patient must see a nurse for diabetes education … she provided detailed information."* (Patient 13-MoH)

While patients' high expectations might be seen as wishful thinking, it can be considered as a call for nurse-led clinics in Kuwait, where the role of nurse-prescriber is considered as a recognised medical profession. It is simply a call for nurse-led care to be given to patients with diabetes, who can receive all their care from nurses, without the need for consultations with doctors.

There are some organisational obstacles that can prevent patients' wishes becoming reality. Maintaining patients' confidentiality was a major issue when they attended the clinic. The nurses previously commented about the lack of consultation rooms, especially when they are sharing the same office with other nurses working with them at the clinic. Equally, patients were aware about the non-privacy issue and reported their wishes to nurses to have consultation rooms in which to meet with them, without having to consider the presence of other individuals at the clinic:

> *"I wish the nurse could have a private room to see her patients, I can't speak about some issues in the presence of other people in the room*." (Patient 7-MoH)

> *"I don't like the feeling of being surrounded by other patients, nurses and other people … I can't talk and I feel horrible when seeing patients with one leg feeling depressed …."* (Patient 10-MoH)

One of the crucial aspects in patient care globally is maintaining privacy, which is not available in the diabetes clinic. Most of the patients felt that the hospital clinic design restricted nurses to a shared room in which to meet their patients. This is not appropriate, as most of the patients cannot speak in the presence of other patients or even nurses.

Despite the significant role nurses were undertaking as expressed by patient participants, nurses were not receiving their due reward for that. The patient who was disappointed by the way the senior staff nurse talked to nurses reported this. In fact, the patient witnessed the head nurse come into the room while he was with a nurse during consultation and asked the nurse to finish. Though the nurse explained to the head nurse that she was conducting an education session, the head nurse asked the nurse to finish and help somewhere else in the hospital:

> *"Nurses need to have autonomy in work … and more confidence. They are threatened by their line managers; let us say head nurses or matrons? They don't leave them alone. I remember one incident when I was with a nurse, and the head nurse came and asked her to finish quickly. The nurse was so confused. She told her that this is an educational session. The head nurse asked her to finish soon and go to help somewhere else."* (Patient 13-MoH)

The third area is related to patients adhering to the care plan. Regardless of the advice given to the patients by nurses, some patients had problems in adhering to their treatment plan, which was designed for them to prevent diabetes complications by controlling their condition. The reasons for non-adherence might be related to the fact that the patient might have some difficulty in dealing with this problem. The first reason for patient non-adherence, as this patient expressed, might be related to the fact that he was not able to see his doctor for a while:

> *"She [the nurse] spoke to me about the complications of diabetes and mentioned to me about the long-term complications of diabetes … however, I felt that I was ignored by my doctor …."* (Patient 8-MoH)

The other reason for non-adherence was reported by another patient, as he associated his non-adherence to social norms related to eating habits:

> *"For diet, actually she [the nurse] advised me but I'm not following as my wife cooks tasty food … I have my children I like to eat the same food with them."* (Patient 8-MoH)

Unfortunately, the reason for non-adherence by some patients was not clear or understood; some patients reported social factors, such as travelling long distances to the clinic:

> "*I travel all the way to the clinic and it is not easy to leave my work..*" (Patient 8-MoH).

For the sake of clarity and confirmation of what the patients reported in this sub-theme, a nurse's comment is presented:

> *"Our patients have other conditions besides diabetes, so we expect them to be in bad mood and a kind of not adhering to the treatment plan. We also expect them not to come frequently to see us so we contact them over the phone, some patients travel from far and they sometimes do not find their doctors ...."* (Nurse 11-MoH)

Patient non-adherence was observed during a consultation with a patient who had not contacted the nurse or the healthcare team members for a while. The patient was not taking her insulin regularly or monitoring her glucose level. My field notes show that:

> *The patient was skipping her insulin as the nurse noted the patient diary was not completed and the patient was not checking her glucose levels. The nurse asked her about the reason but the patient said she doesn't want to check her blood glucose level and doesn't remember to take her insulin ....* (Observation 13-MoH).

Patients' low motivation, or perhaps low awareness of their own condition, as indicated by not adhering to the plan of care, might be related to disjointed care where there is lack of collaboration amongst healthcare team members in diabetes care. For instance, this patient reported his inability to go for his annual review:

> *"I can't be off work for consecutive days ... Hospital departments are located in different places and that is difficult to me ...."* (Patient 8-MoH)

As indicated in the above quote, the patient received care from each department separately; for instance, the consultant, the nurse, the dietician, podiatrist etc. On this basis, it could be argued that one of the main reasons why patients do not adhere to their care regimen is the fragmented availability and delivery of that care. In light of this problem, it can be argued that patient non-adherence is considered to be caused by an organisational issue that consequently can impact on a nurse's role.

Associated with patient non-adherence to their care plans were the patient's perceptions about the availability of the nurses when they needed help or

support; particularly if this referred to telephone enquiries, as nurses provided them with their mobile numbers. Some of the patients had known the nurses for years, which helped them to work well with each other:

> "*Nurses are accessible most of the time ….*" (Patient 10-MoH)
>
> *"I was frequently contacting the nurse over the phone."* (Patient 7-MoH)
>
> *"One night I sent her text message when I had hypoglycaemia and she replied to my husband about what to do. We knew her for years and she is there whenever we need her even out of the working hours."* (Patient 11-MoH)

Patients stressed the approach being used by the nurses as being good listeners, despite the fact that they had other patients:

> *"She [the nurse] is excellent at work."* (Patient 7-MoH)
>
> *"Nurses here are very friendly (darlings) …."* (Patient 13-MoH)
>
> *"She [the nurse] is listening to me without showing discomfort… I know she has other patients …."* (Patient 10-MoH)

Although these comments from the patients are brief, they identify communication skills being used by the nurses in maintaining their relationships with the patients, as indicated by a patient:

> *"She has an excellent way of communication with patients, and I see this is very important for any staff here not only for a nurse."* (Patient 7-MoH)

The above comments indicate the various approaches the nurses followed to provide patients with guidance, including face-to-face consultations or via the telephone. The patients felt that the nurses had some characteristics that enhanced their adherence with care. For instance, the nurse gives attention to what was being said by the patient, even though she was busy. The ability to listen seems to support and enhance patient follow-up care.

At the wider level patients might lose trust in the nurses at the clinic and seek health care in other clinics, as this original clinic may not have a teamwork approach; this latter point having been raised previously as a significant contributor to quality in diabetes care. Lastly, the creation of a negative public image about nurses might be more deeply embedded, as diabetes nurses are still not being treated as colleagues by others in the same profession. This will consequently lead to devaluing the profession, which can lead to a lack of recognition by the wider community and ultimately a lack of people wishing to become nurses.

The above lack of recognition and lack of support for the role of a nurse in diabetes care is not unexpected, as some patients expressed that they did not know about the presence of nurses who are educating diabetes patients at the diabetes clinic. Patient 11 wishes that, other people should know about nurse educators:

> *"I hope that people know about the diabetes educators at the hospital here. You know I didn't know about them and many people don't know about them"* (Patient 11-MoH)

This issue is another problem related to how the organisation has failed to promote the role of nurses in diabetes care. It looks like a top down hierarchical process, in which the nurses contribute and show their effective role in diabetes care, albeit at a low-grade level. This inequality is maintained by their senior nursing staff who do not support them with adequate resources related to their specialities; in particular consultation rooms for privacy. It would also appear that line managers are not aware of the existence of nurses who provide this special care, as this is indicated by the fact that there are no job descriptions related to this nursing speciality: that of diabetes nurse educator. Without these specifications and acknowledgement to nurses' work in diabetes care, there is likely to be no recognition of the roles and regulations for diabetes care nurses in Kuwait.

6.4 Chapter summary

In this chapter I have highlighted three main themes that emerged from data analysis in the Kuwait case study: i) the actual role of a nurse in diabetes care, ii) nurses' relationships with the guidelines, and iii) implications of the nurses' performance. Overall the interviews with patients revealed their views and experiences about the quality of nursing care. The findings showed many positive experiences of the patients, in which they became advocates by valuing the professional characteristics of the nurses. Patients perceived nurses as being available, accessible, and friendly when they needed them. However, they disliked the lack of reward relating to status and recognition nurses received from their organisation, including their superiors and higher management. This 'neglect' reduced motivation among nurses. Nurses were undertaking roles that were not within their scope of practice and which added more pressure and responsibility to their workloads; for instance, undertaking clerical work. Patient satisfaction is known as one of the most significant indicators of the quality of nursing care.

Patients reported many examples of satisfaction with the care they received from the nurses. A cross-case analysis is presented in the next chapter.

Chapter 7: CROSS CASE ANALYSIS

7.1 Introduction

Miles and Huberman (1994) suggest that one aim of studying multiple cases is to:

> *"...understand how they are qualified by local conditions and thus to develop more sophisticated descriptions and more powerful explanations".*

A multiple case study allows the researcher to investigate differences within and between cases (Baxter & Jack 2008). Multiple cases will permit within and cross-case analysis, comparison and investigation of specific issues in more than one location (Stake 1995). Yin (2003) argues the importance of using multiple sources of data to explore a phenomenon in context, which provides a comprehensive approach in terms of "a form of within-method and across-method triangulation" (Jones &Lyons 2004 p. 73).

Eisenhardt (1989) puts forward a number of approaches to cross-case analysis, including the approach of selecting pairs of cases and then listing the similarities and differences between each pair. Such an approach can encourage the researcher to look for more subtle similarities and differences between the pair of cases (Eisenhardt 1989). Based on the paper by Merriam (1998), data analysis of multiple-case studies consists of two phases. In the first phase, which is termed 'within-case analysis', the data was analysed separately for each case, using a qualitative analysis process. In the second phase which was the cross-case analysis, the themes and sub-themes that were developed for each case study were compared in order to identify similarities and differences, and thus to detect the pattern and the degree of practice development.

In this study, the two cases concern nurses' actions and perceptions and patients' perceptions regarding diabetes care. Eisenhardt (1989) suggests that the close pairing of seemingly similar cases by a researcher can encourage the researcher to look for differences and similarities in a more sophisticated way to get a deeper understanding. Stake (1995) suggests that in some cases, there are new overarching themes that result from cross-case analysis. However, no new overarching themes emerged between the two cases in the current study. The UK

and Kuwaiti cases had similar themes within the individual case analysis. However, there were some differences in some of the sub-themes.

Nurses who were working in two UK and two Kuwait diabetes clinics showed their interest to participate in both interviews and observations. Therefore, all nurses were observed and interviewed. However, the scenario was different for patient participants. Some patients accepted to be interviewed, but were not observed, while others accepted to be observed but did not participate in the interviews. These factors were probably related to the personal preferences of the participants, with some preferring to talk while others had no objections to being observed. There were six patients in the UK who accepted to participate in interviews, with nine patient-interviewees in Kuwait (total of 15 patients in both case studies completed interviews); and 10 observations in the UK (one observation was a pilot), there were 10 observations in Kuwait.

In the previous two chapters (Chapters 5 and 6) the findings from the UK and Kuwait case studies have been presented individually. Based on the themes that emerged from the two studies, this chapter presents the cross-case analysis of these themes and sub-themes. In the current study, the cross-case analysis was carried out between both cases to allow for possible differences and similarities to emerge, and thus to detect the pattern and the degree of practice development. By using cross-case analysis a detailed and more informative picture has been developed on the similarities and differences in nurses' approaches and patients' perceptions of diabetes care in the two research locations.

To compare between the elements of each sub-theme in each table below, Yes or NO term was selected to indicate if the element was performed in each individual case or not.

The cross-case analysis is presented under the three themes identified in the within case analysis:

Theme 1: Actual role of a nurse in diabetes care;

Theme 2: Nurses' relationships with the guidelines;

Theme 3: Implications of nurses' performance.

7.2 Theme 1: actual role of a nurse in diabetes care

For the sake of clarification Tables 27, 28, and 29 below, present the elements of sub-theme 1: health education and health promotion. This sub-theme in the analysis process was divided into three phases: phase 1: nurses' activities in the preliminary phase; phase 2: nurses' activities in the initial phase; and phase 3: nurses' activities in the advanced phase.

Table 27 Nurses activities in the preliminary phase

Sub-theme 1: health education and health promotion: nurses' activities in the preliminary phase	Case study 1 UK	Case study 2 Kuwait
much time spent in consultation with patients	Yes	Yes
gathering baseline data about patients	Yes	Yes
monitoring of vital signs	No	Yes
prioritise patients' needs	Yes	Yes
responding to patients' learning styles	Yes	Yes
identifying language barriers	Yes	Yes
dealing with patients not being able to read	No	Yes
providing medical needs - practical instruction	Yes	Yes
enhancing patients' knowledge base	Yes	Yes
responding to language barriers	Yes	Yes
dealing with ethnic minority (group) patients	Yes	Yes
dealing with cultural barriers	Yes	Yes
identifying and responding to physical disabilities (hearing, wheelchair bound)	Yes	Yes
barrier to conducting telephone consultation	No	Yes

From the activities performed by nurses in both case studies the role of collecting preliminary data prior to health education was identified. As indicated in Table 27 above, nurses spent a lot of time in consultation with patients, gathering baseline information about them. In Phase 1 of this sub-theme, three activities were found to be different between the two case studies. In Kuwait nurses routinely monitor vital signs, nurses were dealing with patients who are unable to read and they also reported that they were unable to provide telephone consultations.

In both case studies, nurses identified barriers to health education. Nurses sought to identify and meet the needs of patients, who presented with particular focus on their needs for education about their condition and its progression and its treatment. Despite the different context, nurses in Kuwait had to help with language issues, in a similar way to their UK counterparts; however, different strategies were employed. In the UK, the DNs used drawing to communicate information with non-English speakers. On the other hand, in Kuwait nurses sought support from colleagues who spoke the language of the patient, or asked for Arabic speaking third parties to accompany the patient. In this case, the inference is that more than one visit to the clinic is required, to solve the issue of language interpretation. Furthermore, only in Kuwait did nurses identify literacy as a factor in health education and health promotion.

The summary of similarities and differences shown in Table 27, demonstrated the following: Monitoring of vital signs was only undertaken by Kuwaiti diabetes nurses. Also, dealing with patients who are unable to read was mentioned by Kuwaiti diabetes nurses only and they also reported that they were unable to provide telephone consultations.

Table 28 Nurses activities in the initial phase

Sub-theme 1: health education and health promotion: nurses' activities in the initial phase	Case study 1 UK	Case study 2 Kuwait
Assessing patients' diaries and records	Yes	Yes
Verifying patients' adherence with plan of care	Yes	Yes
Assessing patients' interventions to deal with issues of own condition	Yes	Yes
Planning for health education programme	Yes	Yes
Arranging for different resources and learning approaches to support the patient health education	Yes	Yes
Providing both face to face education or in-group education	Yes	Yes
Providing structured education	Yes	Yes

The summary of similarities and differences in Table 28 addressed the following: all the identified activities in this phase occurred in both case studies.

Table 29 Nurses' activities in advanced phase

Sub-theme 1: health education and health promotion: nurses' activities in the advanced phase	Case study 1 UK	Case study 2 Kuwait
encourage patient to self-management - providing consultation	Yes	Yes
providing proper counselling	Yes	Yes
planning for the patients' self-management- preparing patients for the process of self-management	Yes	Yes
patient empowerment- enhance patient confidence to self-management	Yes	Yes
provide detailed information about the importance of screening tests	Yes	Yes
teach patients to interpret their lab results	Yes	Yes
involving patient's family in providing health promotion	No	Yes
providing patients with life style advice and modification - smoking cessation; physical activity; dietary modification; weight control	Yes	Yes
providing advice about diabetes complications	Yes	Yes

Patient empowerment and encouragement for self-management was an important aspect that nurses in both case studies included in diabetes care. However, only the DNs in the UK were observed providing a special consultation on patient empowerment for self-management. The nurses in both case studies provided appropriate health promotion to the patients. In both the UK and Kuwait the nurses taught the patients to interpret laboratory results.

In Table 29 above, the summary of similarities and differences shown the following: In this phase, the only noted difference was the involvement of patient's family by the nurses in Kuwait, while in UK it was not being done

To summarise the cross-case analysis on sub-theme 1, before they initiate educational programmes nurses enhance their knowledge about diabetes patients

through efficient and detailed preparation; by being efficient in gathering knowledge and information and by being effective decision makers. This summarisation generates the outcome concept: "Nurses' approach to patient care".

In Table 30, sub-theme 2: providing patient supports is compared between the two cases.

Table 30 Sub-theme 2 providing patient support-elements identified

Sub-theme 2: providing patient support	Case study 1 UK	Case study 2 Kuwait
Differentiate between patients- patients' behaviours are different; nurses provide support to each individual patient differently	Yes	Yes
Patients have different queries- nurses support	Yes	Yes
Support patients' lack of knowledge about medication- patients have misconceptions about medications	Yes	Yes
Provide patients with psychological support- patients' fear of injections	Yes	Yes
Provide patients with sexual advice	No	Yes
Following strategies to meet patients' needs- spending time with patients	Yes	Yes
Clarifying doctors' medication advice	No	Yes
Assisting patients in planning to achieve normal glycaemic control	Yes	Yes
Explaining the different coping mechanisms to allow patients to meet their needs	Yes	Yes
Reducing patients' anxieties resulting from having insulin injection	Yes	Yes
Reducing patients' anxieties resulting from different healthcare providers' opinions and suggestions	Yes	Yes
Providing patients with advice about some wrong information – drinking alcohol	Yes	Yes
Providing patients with advice about some illegal medicine – dietary pills	No	Yes

As seen on Table 30 above, the nurses in both case studies provided support to their patients, as they have different queries. Patients' behaviours are different and the nurses needed to differentiate between their needs and support each patient individually. The nurses in the UK and Kuwait also had to support

patients' lack of knowledge about medication and provided psychological support for those with fears. However only the diabetes nurses in Kuwait said that they provided patients with sexual advice.

The literature recommends various coping mechanisms among T2D patients including use of conceptual, patient centred chronic care model that can be implemented in a hospital setting. The ADA recommends this model to help patients to cope with their illness and improves patient outcomes (Stellefson et al., 2010). Teaching and educating patients about self-care helps them to develop knowledge and skills in monitoring their illness and come to terms with the challenges (ADA, 2014a; 2013).

A summary of similarities and differences for Table 30 shown the following: In this phase, three differences were found such as nurses in Kuwait provided information such as sexual education to patients, clarifying doctors' medication advice and providing patients with advice about some illegal medication.

In Table 31, the sub-theme prescribing is compared across the two cases.

Table 31 Sub-theme 3: Prescribing-elements identified

Sub-theme 3: prescribing- providing medication advice	Case study 1 UK	Case study 2 Kuwait
prescribing medication	Yes	No
providing medication advice	Yes	Yes
adjusting insulin	Yes	Yes

While nurses in both case studies undertook an important role in providing patients with medication advice, only in the UK case study were nurses able to prescribe after successfully completing a prescribing course (see Table 31 above). In Kuwait, by law a doctor is the only professional who can prescribe. This is an empowerment and professional practice issue for the nurses in Kuwait.

A summary of similarities and differences shown the following: DNs in UK and nurses in Kuwait can provide medication and adjust insulin; however, in Kuwait nurses cannot prescribe medication.

Table 32 below addressed sub-theme 4 describes the sub-theme inter-professional roles, in which nurses were undertaking roles in collaboration with other nurses and healthcare professionals.

Table 32 Sub-theme 4: Inter-professional role-elements identified

Sub-theme 4: inter-professional role	Case study 1 UK	Case study 2 Kuwait
appropriate referrals- medical intervention or other healthcare providers' interventions	Yes	Yes
receiving referrals from other healthcare professionals	Yes	Yes
recognising the difference between their roles and other healthcare providers' roles	Yes	Yes
communicating with other healthcare professionals regarding patients' diabetes care	Yes	Yes
organising joint clinics	Yes	Yes
acting within the scope of their nurse practice	Yes	No
following a structured process in undertaking their roles	Yes	No
attending national and international diabetes care courses; receiving training in diabetes care	No	Yes
providing inter-professional education - providing education to other health care providers (doctors) about diabetes care	No	Yes
demonstrating trustworthiness in teamwork approach by establishing trust relationships with other healthcare professionals- doctors and dieticians	No	Yes

A summary of similarities and differences: In this phase, there were notable differences between the two cases. In the UK, nurses do not act out of their scope of practice; however, this does not indicate that in Kuwait nurses are not acting within the scope of their practice. Equal with this issue, it was noted that nurses in Kuwait attended courses about diabetes care and received training in this area; however, this does not mean nurses in the UK did not attended similar courses. The main difference that I noted is that nurses in Kuwait expressed their involvement in arranging educational courses for other healthcare professionals like doctors. But this was not expressed by the nurses in the UK.

Figure 18, below shows how the cross-case concept themes were generated from the cross-case elements identified from the within-case themes and sub-themes.

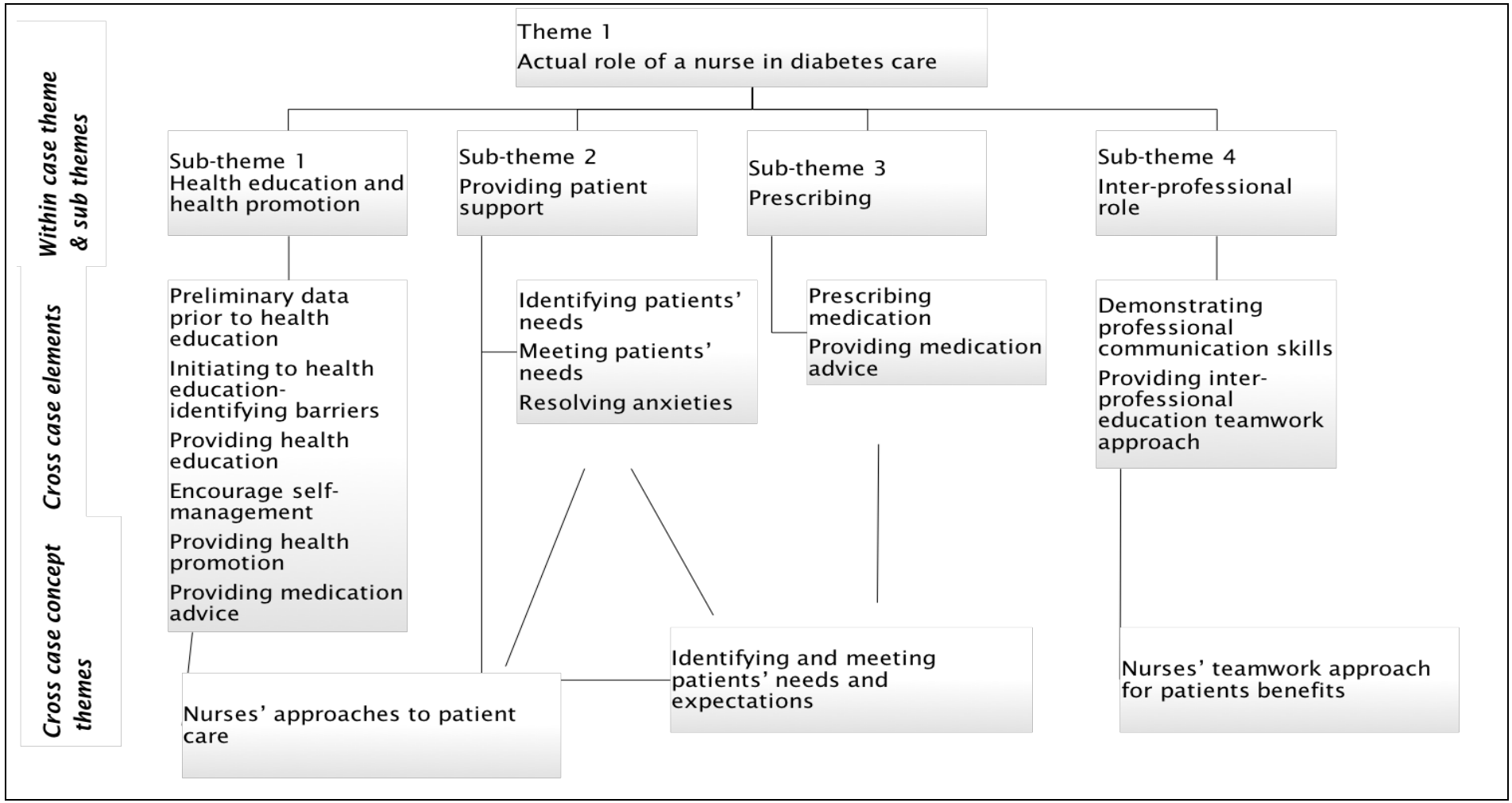


Figure 18 Cross case concept themes

7.3 Theme 2: Nurses' relationship with the guidelines

In the UK, the national guidelines - RCN and the NCF - were specifically designed for nurses, yet the NICE guidelines were designed for general health team members providing diabetes care. Guidelines in Kuwait (the ADA and the IDF) were designed for general staff who provide diabetes care.

7.3.1 Sub-theme 1- Nurses refer to the guidelines in practice

The DNs had different opinions towards the guidelines. Some of them found the guidelines to be helpful, able to guide them in their work, while others found the guidelines restrictive. However, in practice the DNs are obliged to follow these guidelines. All the DNs interviewed indicated that they were fully aware of national guidelines, which were used as a source of information that informed them regarding the minimum level of care. Similarly, in Kuwait the nurses mentioned the importance of the guidelines in their practice and used them to inform about the minimum level of patient care expected.

The developments of the local guidelines in each case study were achieved in different ways. With regard to the local guidelines in the UK, healthcare providers working under the same umbrella of diabetes care, designed the local guidelines. In Kuwait however, the doctors created the local guidelines for use at the clinic, but these were reported by the nurses as being based on the medical school that the doctors attended. If the guidelines vary, depending on the doctor's training background, this means that there could be variations in recommended approaches and actual practice. This could also mean that if nurses moved from one clinic to another, practices could vary, which could impact on patient care. However, the nurses considered the local guidelines as useful and helpful as they were more specific and focused compared to the international guidelines which were considered general and broad.

The DNs indicated strongly that there must be guidelines to guide their roles and provide protocols to follow, as they used them as a reference in their practice. The issue of the DN's safety was alluded to with a DN saying that having roles and protocols " *you will not put yourself in difficult situations as they are important and necessary … we refer back to them."* (Nurse 8-NUH).

In Kuwait, the nurses mentioned that when they and the doctors operate under the same guidelines, this is considered as a benefit and contributes to teamwork.

In practice, the DNs considered that the guidelines were not about having boundaries. *"Guidelines don't restrict me but they guide us."* (Nurse 7-NUH) but there are obligations stated in both the national and local guidelines which are supposed to be to be followed: *Use national guidelines* (RCN-NUH) and *Follow practice protocols* (NDSAG-NUH). In Kuwait, the nurses expressed that they followed the guidelines their doctors advised them about. However, they recognised that these guidelines did not fully cover all cases in every detail: "*... we sometimes use our experience ... they [doctor guidelines] are not covering everything ... we have patients coming with different stages of their diabetes and they have different needs."* (Nurse 14-MoH)

The variations in recommendations in the guidelines, followed by the nurses in Kuwait, led to some nurses considering the guidelines to be restrictive, particularly regarding medications. In such circumstances nurses indicated that they used their: *"... clinical judgment in the things not covered by the guidelines."* (Nurse 12-MoH)

7.3.2 Sub-theme 2 - Nurses' attitudes and perspectives towards the guidelines

Nurses in both case studies were found to be aware of how both international and local guidelines inform their work and give direction for their tasks. Some DNs thought that the guidelines could not fully address every patient's needs, such as psychological needs, as patients differ. However, patient safety concerns provide boundaries to the DNs abilities to use their knowledge and experience in practice. In Kuwait, the diabetes nurses considered that the guidelines provided a limited perspective, consequently nurses utilise their own knowledge and experience in demonstrating diabetes care, and this is helpful when treating patients with multiple needs and concerns.

A significant difference between the UK and Kuwait was the situation of nurses being able to prescribe. The DNs who were qualified as nurse prescribers still had limitations imposed on what medication they could prescribe *as: "... protocol does not include insulin and I cannot prescribe it. I have to wait for my consultant for that patient before that decision has to be made**....** This is one occasion yes where not everything is in the guidelines."* (Nurse 8-NUH).

In Kuwait, the diabetes nurses cannot prescribe medication; however, they are aware that if they had the ability to do so this would improve patient care.

Regarding their limited ability to decide about patient care, a DN considered that there was confusion between the national (NICE) guidelines and the local (NDSAG) guidelines regarding a particular type of insulin. The following statement indicates this:

> *"For example, NICE guidelines suggested a particular insulin that might be cheaper which in most cases would be fine but not with a high risk blood sugar. These guidelines [NICE] suggested another particular insulin which would be expensive but associated with lower risk of hypoglycaemia …."* (Nurse 3-NUH)

The above comment indicates that the role of nurse in prescribing is strictly controlled in the interests of patient and nurse safety. In terms of acting within the scope of practice, DNs reported that they would not act outside the scope of their practice. A similar view was held by the nurses in Kuwait.

Psychological support for patients was mentioned in three international guidelines (the ADA, the IDF and the NCF) as an important area in diabetes care and it is considered within professional standards in the IDF (see Table 7 in Chapter 3). In Kuwait, the local guidelines, which were derived from the international guidelines, were identified by the diabetes nurses as failing to include recommendations about psychological support for patients. Interestingly, in the UK case study one DN reported that the guidelines made little mention about nurses' duties regarding psychological support for patients. The NCF guidelines included this as part of a nurse's role: *Be able to offer the patient/family/carers emotional support* (NCF-NUH), as well as being able to *Recognise signs of needle fear/needle phobia and offer strategies to help manage this* (NCF-NUH).

The area of psychological support has been identified as an important issue in both cases. In Kuwait, there is the need for the local guidelines to be updated, to include guidance on psychological support, whereas in the UK the role of DNs providing psychological support needs to be clarified. There was no specific criterion in the local guidelines (the NDSAG) that included the aspect of patients' psychological support (see Table 7, Chapter 3). At present the guidelines contain recommendations about directing the patients to those who they could seek help from, instead of the DNs acting beyond the scope of their practice; a directive which could be seen as considering the DNs' safety. In the RCN guidelines, nurses are recommended to refer patients with psychological and/or emotional needs to specialists. In some circumstances, the DNs worked beyond the boundaries of the guidelines in order to meet patients' needs, which were sometimes critical. As a

consequence, some DNs thought they were undertaking more than was recommended by the national and local guidelines; however, they felt that they were not able to ignore or neglect patients' needs, as these are priorities for them.

Nurses were not autonomous in making decisions, they had to wait for the doctor. Nurses in Kuwait did not have their own consultation room, they had to borrow the doctor's room. Some patients needed more consultation time to be with the nurse, but due to long queues, some important issues were not discussed to make sure that all patients have been seen.

The DNs considered that the guidelines did not include all their duties and that they were taking on other roles such as providing dietary advice, even though there was a dietician at the clinic. The DNs talked about the need to have specially designed guidelines and one DN said that she could not find full specifications for her role in the national guidelines that were satisfactory. The Kuwaiti nurses stated that the international guidelines are too broad and do not specify a nurse's role. These international guidelines are established for general healthcare providers working in diabetes care, and they do not specify how the health care professional is expected to undertake their activities within the required standards. As a consequence, diabetes nurses considered that they did not know who should perform some of the activities, and which recommendation or standard pertains to their role. The following quote sums up the situation:

> *"Each healthcare staff at the clinic knows about his role. The problem with our role [nurse role] is that it includes other healthcare professionals' roles. The guidelines do not help us to know which part is to be done by nurses and which part to be done by a dietician … this is confusing …."* (Nurse 13-MoH)

In considering a patient's needs to be a priority, the nurses end up doing multiple tasks as identified through a patient's experience that:

> *"There is a dietician, but she [nurse] is planning my diet for me; there is a pharmacist, but she [nurse] is teaching me about my medications; there is a psychiatrist, but she [nurse] is supporting my emotions and feelings as I have more kidney problems than others."* (Patient 14-MoH).

7.3.3 Sub-theme 3: nurses' influence on policy change

The review of NICE guidelines (see section 3.3 Chapter 3) found that there was no specification about a DN's role within the guidelines. However, the other three guidelines (NCF, RCN, and NDSAG) were specifically designed for nurses working

in diabetes care. In both case studies, it was identified that the nurses took part in modifying some of the criteria included in the local guidelines. These contributions by nurses were commenced by nurses contacting their peers or doctors about some issues they could not find in the guidelines or introducing changes, modifications, and suggestions to the local guidelines after discussing these issues with their colleagues or doctors. It was only identified in the UK case study that some DNs actively contributed to changing or adding to standards and recommendations in the local guidelines.

The DNs highlighted that the guidelines (the RCN and the NDSAG), which were recommended to be used in their practice were neither evidence-based nor up-to-date. Nurses revealed that none of these guidelines reflected the best practice in diabetes care. Some DNs followed the guidelines while others suggested some changes were required, including changes to consultation procedures and methods of teaching, as these could result in improved patient care. In Kuwait, some diabetes nurses also identified a lack of evidence-based practice in their local guidelines. However, they reported that they were able to introduce or suggest updates or changes in their local guidelines, which were usually accepted by the doctors at their diabetes clinic. This result indicates the level of evidence-based practice knowledge nurses hold, and therefore nurses' ability to make recommendations for changes and updating the guidelines to be in line with their UK colleagues. The results show that nurses are responsible professionals, they ensure that they follow evidence based-guidelines to deliver care to T2D patients, furthermore they have experience in ensuring that guidelines, policies are followed to ensure quality care to the patients.

7.4 Theme 3: Implications of nurses' performance

7.4.1 Sub-theme - 1 Nurses' perspectives about their own role

7.4.1.1 Patient-centred approach

In both case studies this theme revealed a number of promoters and inhibitors that impacted on diabetes nurses' performance. In the UK, the DNs suggested that the quality of nursing care, as a concept, needed to be judged by patients, as patients are the receivers of the care and they are the best representatives to evaluate quality of nursing care. By providing a patient-centred approach, the DNs perceived the patients holistically, so they could meet different aspects of care that are not only relevant to diabetes. For instance, one of the DNs interviewed

reported that they provided advice on patients' cultural issues, financial issues, foot care, physical and psychological care, and social support. The nurses in Kuwait viewed their roles in patient care as being valued, by meeting patients' differing and complex needs, which can be psychological and/or socio-cultural, in a holistic manner. The DNs identified that on some occasions they were not able to personally resolve patients' concerns; however, they provided pathways for them to follow so as to address their worries and concerns. In fact, the DNs viewed these aspects of care as holistic and impacting positively on patients' outcomes. In Kuwait, what the nurses identified as not being mentioned in the local guidelines, is actually stated in the international guidelines, which they follow.

> *Adopt a whole-person approach and respect that a person's central role in their care in non-judgemental communication and explore social situations, attitudes, beliefs, and worries related to diabetes and self-care issues (IDF-MoH)*

The pathway concept provided for UK diabetes patients could be adopted in Kuwait as part of a patient-centred approach that considers cultural diversity. Thus, a patient-centred approach may be an appropriate approach that nurses can utilise to ensure improved outcomes for their patients. Such an approach is characterised by two-way communication, where the nurse understands and covers the patient's needs, which can sometimes be complex. This dedicated communication could lead to a trusting relationship between the nurse and the patient. In fact, the DNs were confident that their patients followed the treatment programme as supported by the following comment:

> *"I never have experience with patients saying they are not happy with a particular regimen."* (Nurse 1-NUH).

7.4.1.2 Professional autonomy

Expression of self-confidence can be considered as an enabler for the DNs' abilities to make decisions, solve problems, and plan patient care independently. The DNs provided comments that featured and shaped their self-confidence in diabetes care. They had their own patients, which ensured patients' continuity of care. In this area, there is a similarity with the diabetes nurses in Kuwait, who had their own patient caseloads and had their own ways of working for dealing with most patients' issues relating both to diabetes care and non-diabetes issues. Out of the two case settings the DNs were the only ones to mention that they adjust patients' insulin intake, if required. This factor enhanced the DNs' professional autonomy.

7.4.1.3 Extending the role: nurse prescriber/professional development

Some DNs reported the need to be authorised to prescribe for other conditions other than diabetes, as diabetes can contribute to other conditions but views varied amongst the DNs. This view was supported by one DN who said that she was unable to prescribe generally, as she was only allowed to prescribe for diabetes, which limited the role she could play. Extending the DNs' role and allowing them to prescribe for other conditions could save a patient's time and they will have a better experience because they will start their treatment immediately and as needed. However, in Kuwait the diabetes nurses mentioned that the doctors relied on them for some medical interventions, trusting in the nurses' knowledge and skills to manage patients or to 'fill in' when the doctors were too busy. Furthermore, some doctors referred patients to nurses to complete their medical interventions, but nurses referred the patients back once they found that the patients needed medical interventions. The role of nurse prescriber, as described by the DNs in the UK, suggests an area of professional development that should be considered in Kuwait. The DNs mentioned drawbacks to this function: firstly, some viewed prescribing as part of a doctor's role and secondly, it could be viewed as an unsafe procedure.

With regard to patient care, there was no consensus among DNs regarding the issue of prescribing other than diabetes; however, the ability to prescribe was viewed as time saving for both the nurses and the patients. The Kuwaiti nurses considered the provision of diabetes care an on-going practice and meetings with their peers and doctors at the clinic contributed to keeping their knowledge, regarding new treatments in diabetes, up-to-date. Developing the role of a diabetes nurse by extending their role and keeping up-to-date with new treatments and practice will contribute to enhancing patient care.

Inhibitors: In both case studies, two external forces placed the nurses under pressure and these forces are considered inhibitors to the quality of nursing care as they formed obstacles nurses experienced at work: 1) workload and lack of or inadequate resources, and 2) doctors and associated medical staff.

Shortage of nurses: The DNs identified a number of issues that could arise as a result of long hours and exhaustion. The DNs suggested that the limitations in staff numbers, including both doctors and DNs, required them to work more than what they were supposed to, which could impact on their work. Such a situation could affect patient safety.

Nurses' workload: The DNS considered that they were expected to undertake more than could reasonably be done on a daily basis. It appeared that senior staff had high expectations of the DNs and placed on them increased burdens of responsibility which required them to take on additional workloads. In Kuwait, nurses reported severe pressure of workload resulting from undertaking multiple tasks, some being relevant to their role and others not. In both case studies, it became evident that the DNs did not have sufficient time to fully manage all the aspects of patient care; a problem which impacted on their ability to provide quality patient care.

Financial conflict: A few DNs expressed concerns about not receiving an appropriate level of income to match their role. They complained that their income was just the same as nurses working in general departments, which are non-specialised.

Relationships with senior management staff and medical staff: Under power relations, the findings focus on: 1) senior management staff and 2) medical staff.

Senior management staff: Organisational dynamics inhibited the DNs in the UK from providing the intended quality care. There were two external factors that inhibited them: 1) their senior management, and 2) doctors. The DNs identified that conflicting expectations from senior management staff increased workloads and time pressure, as stated by one DN:

> "*So, you would not do anything you are not qualified to do. But there is always an expectation that you can have extra patients put into your schedule.*" (Nurse 2-NUH)

This lack of supportive administration has, in this DN's case, resulted in feelings of being treated unfairly. Similarly, in Kuwait, the nurses considered their senior nursing staff devalued their duties and tasks. Some of the nurses reported feeling overwhelmed and frustrated by the tasks they were asked to undertake by their senior staff. It is important to stress that, in many cases, these tasks were not related to the nurse's role in diabetes care. In the short term, interrupted patient care can delay a patient's improvement and reduce satisfaction. This situation is made worse as nurses in diabetes care in Kuwait do not have job descriptions that specify what their role is.

These barriers identified by the DNs, which inhibited their ability to provide quality nursing care, should be raised with the DNs' senior management. However, these barriers were: "... *often those demands come[ing] from higher up*

as they don't conform to the team. They come from higher management …." (Nurse 4-NUH)

Similarly, in Kuwait the nurses attributed the lack of recognition of their role to their higher level management and senior nursing staff. These are the personnel who, the nurses considered, are responsible for identifying the nurse's role in diabetes care to others and recognising what the nurses are doing. In both case studies, it was clear DNs lacked confidence in their senior management.

Medical Staff: The DNs reported interruptions in completing their tasks caused by both doctors and other nurses contacting them to accomplish tasks that could be simply done by others. The DNs undertook multiple roles, with some being outside their speciality. For example, one DN explained a situation:

> *"We have not got a doctor here at all and the next couple of days I'm going to be on my own here … . I do not have a registrar so I will be my own registrar … ."(*Nurse 9-NUH)

Additionally, the DNs indicated that some doctors referred cases to them that needed medical interventions, not nursing interventions, and that the nurse could not work outside their scope of practice. In Kuwait, the lack of a relevant job description for a nurse working in diabetes care resulted in nurses working beyond set limits. This situation was perceived by the nurses to end up with work distribution between nurses and doctors at the clinic being asymmetrical and inequitable, caused by power imbalances between them. Doctors significantly influenced practice at the diabetes clinic by taking up some roles and ignoring others, such as delegating, referring, and not completing their tasks. This questionable conduct is done with little regard for the nursing staff and without considering that there are other tasks that should be accomplished by the clinic nurses. Power relations between medical staff and nurses seemed to be more obvious and stressful in Kuwait than in the UK.

Lack of recognition: Nurses in Kuwait complained about their role being under-valued and not recognised by the Kuwaiti society. They attributed that many problem issues related to i) a lack of support from higher management and ii) doctors dominating the clinics.

Lack of equipped consultation rooms: Nurses in Kuwait also complained about not having equipped consultation rooms to meet their patient's needs. This resource lack impacted on patient's privacy, in particular, they were not being able to talk confidentially.

7.4.2 Sub-theme 2: patients' perspectives on the quality of their diabetes Care

Three key areas were identified regarding patients' perspectives that impacted on their perceptions of their care: 1) relationship with the diabetes clinic, 2) nurses' roles in patient care, and 3) patients' adherence to the plan of care. These are highlighted in detail below:

1. Beginning with the first area, the relationship with the diabetes clinic: in the UK case study this relationship included scheduling; time-tabling and transfer of responsibilities to the patient relating to clinic location and travel which consequently increased the patient's workload. Similarly, the patients in Kuwait complained about the same issues. In Kuwait, the disorganised state of their appointments and lack of follow-up education were not related to the nurses' practice in providing diabetes care, but were more about the clerical organisation, or lack of. In the UK, the situation was different but was probably related to the lack of DNs in the community service, which might have caused patients to experience problems as a result of the transfer of the services to the community. Patients' self-management of their own diabetes in both the UK and Kuwait was perceived by patients as being subject to a number of issues, including an increased workload for them. In the UK, problems related to the number of procedures each patient had to go through in their routine diabetes care at the clinic. The patients complained about having multiple procedures, which were often in different locations and therefore the different appointment intervals with different healthcare providers in the diabetes team. As a result, the patients talked about the ideal of a 'one stop shop'. In Kuwait, the patients identified their own workloads in life and felt frustrated by having to take on additional workloads by owning their own diabetes care and complained about the resulting pressure they experienced.

2. The second key area was the nurse's role(s) in patient care. Most patients in the UK case study indicated that the DNs' expertise met their needs, which made them satisfied with the care they received and happy to see a DN. In Kuwait, the patients felt that the diabetes nurses took on many, possibly too many, roles:

> *"There is a dietician, but she [nurse] is planning for me my diet; there is a pharmacist, but she [nurse] is teaching me about my medications ..."* (Patient 15-MoH)

In both the UK and Kuwait case studies the patients talked about what the nurses should be doing and should not be doing in terms of delivering patient care. One patient in Kuwait stated about a nurse:

> *"... she is doing more than what she is supposed to do. She is doing a doctor's role... . The doctor prescribes insulin but doesn't explain to me why, when and how to take it; this is a doctors part ... ."* (Patient 10-MoH)

In both case studies the patients valued the way in which the nurses communicated with them. For example, in the UK patients said:

> *"…they are very good at communicating and that makes us understand better." (Patient 4-NUH) and "I just appreciate the way in which they [nurses] talk to me.*" (Patient 2-NUH)

Similar comments were made by Kuwait patients:

> *"She has an excellent way of communicating with patients, and I see this is very important for any staff here, not only for a nurse."* (Patient 7-MoH)

These comments identify that the communication skills used by the nurses in their relationships with the patients were highly valued and, as educators, the nurses facilitated patients' learning about their own diabetes management.

In the UK case study, the patients felt satisfied with the services they received from the DNs; the patients showed a willingness to accept their nurse's advice and consequently followed it. In the Kuwait case study, patients appeared to have high expectations of the nurses, and thought they should take advanced roles in diabetes care. In both case studies, it was evident that the patients frequently preferred dealing with a DN or nurse rather than a doctor.

3. The third and final key area is patients' adherence to their care plans. This was a significant issue reported by the majority of patients interviewed, with some patients not being able to manage their diabetes care alone. Some reasons for this non-adherence included not always believing in the benefits of self-management:

"... because the consequence is very long term." (Patient 2-NUH), and low awareness and lack of motivation. Patients' low motivation, or perhaps low awareness of their own condition, might be related to disjointed or disrupted care, which has been identified as an issue in both cases. In Kuwait, patients'

perceptions about the availability of the nurses, when they needed help or support, was associated with patient non-adherence to their care plans.

7.5 Chapter summary

The cross-case analysis in this study has revealed that nurses in the UK and Kuwait had similar roles in terms of providing diabetes care. Nursing practice in Kuwait did not differ greatly from the UK, despite contextual differences between the healthcare systems. Nurses in both settings demonstrated various roles in diabetes care were similar, but with minor differences that are related to the infrastructure of both healthcare systems. Patients in the two settings provided positive feedback regarding the nursing care being provided.

The cross-case analysis has provided a clue that despite the fact that nurses in both case studies reported different guidelines, both healthcare systems were following the same international guidelines from the ADA and the IDF.

Nurses in both case studies had input in the clinic or local guidelines. Nurses were found to contribute to adding some of the criteria in the guidelines. Nurses were also updating themselves with the new guidelines regarding diabetes care.

Despite the contributions of nurses in both case studies, nurses were found to experience a lack of professional autonomy as a result of top-down hierarchy; an issue that was more obvious among nurses in Kuwait.

Therefore, the cross-case analysis of this chapter provides illumination onto different organisational contexts that would impact on the introduction of new nursing roles in Kuwait. The Kuwait case study mainly differed in one key area: it was dominated by members of the medical profession (i.e. doctors) far more than in the UK study. This situation appeared to be due to the size of the organisations; the UK healthcare system is a major healthcare system when compared to Kuwait's. In the UK's system, the nursing workforce have their councils and agencies, whereas in Kuwait there is only one agency that advocates for nurses' rights (the Kuwait Nursing Association). Additionally, I observed the strong nurse leadership influence in running different clinics in the UK, including those devoted to diabetes patients. This nurses' abilities made nurses visible at all levels as they were recognised as nurse coordinators of diabetes clinics. The next chapter is a discussion on the study's findings.

Chapter 8: DISCUSSION

8.1 Introduction

The aim of this research is to explore about the nurses' roles in T2D care and the impact of the different approaches on patients perceived quality of nursing care.

In this chapter, the research findings reported in Chapters 5, 6 and 7 are discussed with reference to published literature. This research has identified the different approaches to the role of nurses in diabetes care and explored how patients with diabetes perceive these different approaches of care provision. Data were gathered from two case studies - the UK and Kuwait - through interviews, observations, and compared with the outcomes of the revised documents. Each case study identified three overarching themes along with a number of sub-themes. Cross case analysis enabled a deeper understanding of the themes and sub-themes across the two cases. The key findings of this study are then discussed in relation to each of the research objectives and in relation to the conceptual framework presented in Chapter 2. Mapping the findings onto the NREM framework is used to assist in this discussion, as demonstrated in Table 33. The NREM is based on the *structure-process-outcome* model of quality of care by Donabedian (1988) and was developed to facilitate the identification and investigation of nurses' roles in providing quality care (Irvine et al. 1998b).

Table 33 The applied nursing role effectiveness model (NREM)

Structure	**Process**	**Outcomes**
Nurse attributes Knowledge, skills and experience Cultural understanding	**Nurses' independent, interdependent and dependent roles**	**Challenges in diabetes care** Power imbalances **Increased patient burden and non-adherence** **Patients' perceptions**

Structure	Process	Outcomes
Guidelines Standardised Guidelines informed-roles of nurses Models of care related to guidelines	**Patients empowerments** Patients empowerment through the guidelines	
Organisation The practice environment and quality of nursing care Language and culture Organisational hierarchy	**Top-down hierarchical** top-down hierarchical control impact of quality on nursing care	Communication channels between nurses and members of the management Nurses in Kuwaiti/UK used as interpreters for language translation.
Patients' characteristics	**Nurses as Street-Level Bureaucrats** Policy and practice	*Better quality of care* *Improved patient outcomes*

8.2 Structure

8.2.1 Nurse Attributes

8.2.1.1 Knowledge, skills, and experience

Various studies about nurses' educational levels have emphasised that high numbers of RNs with baccalaureate degrees firstly decreased the incidence of patient mortality resulting from diabetes complications (Aiken et al. 2003; Aiken et al. 2011) and secondly, improved the quality of diabetes care provided (Saaddine et al. 2006). Diabetes care is an area that is under research and hence the current study provides important new insights. In both the UK and Kuwait case studies, nurses with higher degrees were observed to have knowledge about different treatment regimen for managing diabetes. However, nurses with diplomas were also seen to have knowledge about different treatment regimen for managing diabetes especially in the different kinds of insulin and how they worked. One nurse from Kuwait was observed to provide information about insulin dosages for a doctor who attended one of her consultations. In fact, most nurses in diabetes care in Kuwait were observed to provide lectures to various healthcare professionals working in diabetes care and in medical care.

Doran et al. (2006) suggest that educational level and years of experience as a nurse are fundamental structural attributes in a nurse's role performance, which in turn contribute to positive patient outcomes. Nurses in both case studies had similar qualifications, ranging from Nursing Diplomas to Bachelor's degrees, with one nurse in the UK holding a Master's degree. These data contradict the literature that indicates that nurses' educational levels can impact on the quality of nursing care, in which there is a need for specialist trained and educated nurses in order to ensure high quality care (Laschinger et al. 2001). In this current study, I observed that the nurses in both case studies were able to fill most of the roles mentioned in the findings chapters that were also stated in the guidelines (see Chapter 3).

This view was supported by patients, who praised the nurses through positive phrases such as being competent and knowledgeable and understanding their needs; the nurses showed their competence in their role in basic diabetes care. The patients were different and their needs were different but nurses were able to tailor care plans for each patient to meet his or her needs. Regardless of their education levels, nurses provide similar quality of care roles. However, nurses with higher levels of education can hold higher positions than nurses with lower levels of qualification, as Aiken et al. (2003) propose that higher nursing education is needed for managerial roles.

In the UK, there are special requirements for entrance to the diabetes care programme, as stated by the Royal College of Nursing (Peters et al. 2001), which suggests the levels for diabetes nurses, according to experience and educational qualifications. The levels are as follows: diabetes nurses, diabetes specialist nurse, nurse consultant, and nurse practitioner (Freeland et al. 2011); also it is suggested that some specialties should hold a degree, such as a Master's degree or a PhD (Daly & Carnwell 2003). The situation in Kuwait is that there are four levels of basic nurse education and all nurses graduating from nursing schools in Kuwait, when employed, have the same job description. The nurses have similar responsibilities, but with some changes in their clinical roles and according to the hierarchy of their position in management (See Appendix C: Nurses in Kuwait job description). Nurses interviewed in Kuwait were found to be experienced in terms of their training and diabetes care and most reported that they have high diploma level qualifications. However, they are not permitted to undertake higher level roles, as can their counterparts in the UK.

Other literature, Blegen et al. (2001) and Clarke et al. (2002) consider that nurses' years of experience (>5 years) are more important in relation to better patient outcomes in terms of, for instance, reduced medication errors and health outcomes. In the current study, the majority of nurses had more than five years' work experience in diabetes care and both case studies identified training and skills development programmes that enhanced knowledge and practice of nurses in diabetes care. The nurses' experiences suggest that the level of education does not necessarily reflect good quality of care, but professional experience is a more accurate measure of that desired quality of care. However, while experience is important, a better quality of care can be achieved by combining experience and expertise (Ericsson et al. 2007). Benner et al. (2009) defined expertise in nursing practice as more extended evaluation of the nature of clinical knowledge, clinical inquiry, clinical judgment and expert clinical comportment. A nurse in the UK was observed to have these characteristics mentioned by Benner et al. (2009) and this was related to her clinical and academic qualifications. This nurse reported that she worked in special areas for diabetes patients with critical needs at the clinic, such as patients with end stage renal diseases.

Expert nurses' involvement in diabetes care was found to contradict some of the literature that emphasised including expert nurses in diabetes care is costly. Christensen and Hewitt-Taylor (2006) argue that accumulating experience and developing expertise in the same individual, which are often needed together to develop nursing expertise in providing quality care, is a costly undertaking for any health care system. Therefore, the literature is similar to findings from the current study that expertise is important, but is not the same as experience or education. This point is considered a key finding of the study, that the experience and level of education of nurses enables the provision of quality nursing care to diabetes patients. In other studies, patients who were assigned to nurses had better outcomes than patients assigned to doctors (Taylor et al. 2003; Lu & Harris 2013). Sidani et al. (2004 p.60) suggest that a "... staff mix with a higher number of registered nurses (RNs) has better clinical outcomes".

8.2.1.2 Cultural understanding

In the current study, nurses communicating with patients during consultations demonstrated cultural understanding, as witnessed by the researcher. The researcher found brochures and pamphlets distributed in the two clinics in the UK hospitals where the UK case study was conducted; for instance, about Ramadan, the Muslims' fasting month. Consultations were running smoothly in both case

studies without changes arising from patients fasting. The researcher's experiences in the UK clinics provide another indicator of the similarities of practices of the nurses in both case studies; for example, both sets of nurses have to deal with Muslim patients' health care requirements during Ramadan. Nursing, as a profession, takes on a cultural identity which can impact on patient care. Narayanasamy (2003) suggests that nurses should have an awareness of, and respect for, specific cultural and religious backgrounds, which are likely to relate to their provision of effective patient care. The aim of healthcare providers should be to provide patient-centred care in order to meet all patients' needs; a requirement which includes taking into consideration the spiritual aspects of these needs (Narayanasamy & Andrews 2000). Muslim patients during Ramadan are such an example. However, Narayanasamy (2003) argues strongly against "culturalism" - that is the making assumptions based on groups and generalisations, rather than treating everyone as an individual. Everyone's culture is unique to that person, although it is arguable that understanding a person's culture will ensure that T2D nurses provide patient-centred care in respect to the cultural background of each patient.

Spector (2002) indicates that there is evidence that healthcare professionals sometimes allow their own cultural background to interfere with patient care. However, caring for different ethno-cultural people has an impact on nurses. Within the UK healthcare system, nurses followed a strategic plan to support patients with different cultural and language backgrounds (Section 5.3.1). The study's findings highlighted that the nurses in the UK came from different language and cultural backgrounds, although it should be stressed that ethical constraints prevent the researcher from describing the biographical data of any of the participants. However, during the UK observational visits to nurse-patient consultations, the nurses were observed to know about their patients' cultural and language backgrounds and this facilitated the provision of care. This observation adds weight to the researcher's argument for the globalisation of diabetes guidelines for patient care.

8.2.2 Guidelines

Another major influence on the quality of nursing care is the provision of guidelines and the nurses' attitudes to, and relationship with, them. I undertook a documentary review of the guidelines. I identified that the international, national

and local guidelines in both countries showed variations in both content and application. To my knowledge document review of the guidelines is an area that has not been researched and therefore this study brings a new insight in the area of guidelines that are T2D relevant.

These guidelines included recommendations, policies and procedures that general healthcare providers, including nurses, can follow when providing diabetes care. Guidelines in this case can and do contribute to quality assurance of care. Glasgow et al. (1999) emphasised that the main role of quality assurance is to oversee the carrying out of policies to enhance the health of people with long-term conditions, including diabetes.

The national diabetes guidelines' main objectives spotlighted diabetes and health promotion factors as the main points to start the campaign for decreasing the burden of diabetes (Glasgow et al. 1999). The literature emphasises that guidelines should be standardised worldwide (Burgers et al. 2002). However, there are cultural and social variations between countries (Green et al. 2005) which motivate health professionals to establish individualised guidelines that can fit the specific needs of a healthcare setting or context. Guideline recommendations should be located within the context of patients' requirements, preferences, and acceptance (Inzucchi et al. 2012).

8.2.2.1 Development of standardised guidelines

Guidelines for diabetes management are established as a roadmap for practice in diabetes care and as such are evidence-based and patient-centred (ADA 2013a). It has been identified in Chapter 3 (section 3.5) that most of the guidelines are derived from the ADA and the IDF, consequently similarities appear in some areas. However, some slight differences were identified in some of the guidelines relating to the updates in diabetes management. For example, individuals might have the same condition and receive treatment following the same guidelines. However, different conclusions about their condition can be reached as a result of individuals' personal factors, such as cultural and social norms (McAlister et al. 2007). Some organisations may not adopt international guidelines if they contradict or are in conflict with the culture of that organisation. These organisations may standardise to meet the requirements or needs of the organisation but may affect the delivery of quality care.

Burgers et al. (2002) argued that globalisation of diabetes recommendations is not an easy step to be taken, as guidelines developed for certain healthcare

systems may not be applicable to others and this might be the rationale which prevents the establishing of sets of global guidelines. An issue related to globalised guidelines was identified by Chan & Zang (2007) who highlighted the importance of tailoring programmes to meet the educational needs of specific nurse specialist roles. It is argued that nurses need to have their own guidelines that are individualised for their specific roles in the field of diabetes care, regardless of the country in which the guidelines are established.

In the current study, nurses did not have guidelines specifically designed for them, resulting in them not understanding the recommendations offered, nor knowing whether they were relevant to them or to other healthcare providers working in the field of diabetes care. This confusion might be related to the nurses' lack of knowledge about the presence of the guidelines. The nurses not knowing that there are guidelines they can refer to and use as evidence-based resources could be due to ignorance; senior staff not advising them to read these guidelines or the nurses not going through these guidelines if / when they were offered. This omission could be an organisational failure, as management should ensure that the guidelines are known and followed by nurses.

Guidelines can be divergent in some key areas such as in diabetes, which can impact on nurses' decisions about the guidelines. One such example is nurses in diabetes clinics in Kuwait follow the ADA guidelines, which advise about screening tests for pregnancy based on patients' symptoms and family history. DNs in the UK delay the time for screening, as this is not considered to be a significant recommendation in the UK guidelines; a point mentioned during the UK nurses' interviews.

The NICE guidelines do not advocate the national screening programme and only mention it at later stages (NICE 2008b). Research by Simmons et al. (2010) identified that in the ADA guidelines, screening for diabetes should be done in the early stages. In contrast to the NICE recommendations, the ADA guidelines consider that screening should be undertaken early with high risk patients who have been detected via their family history (Simmons et al. 2010). However, the consideration in the NICE guidelines, about later screening, might reflect the aim and purpose of the organisations established to develop the guidelines. For example Robinson et al. (2008) places more emphasis on cost effectiveness than screening tests. This exclusion of screening tests in the early stages of a woman's

pregnancy could impact on patient outcomes and furthermore contribute to more financial drain on the healthcare services, in the form of the need for more medications and/or admissions.

Patient empowerment through self-management and conducting screening tests can result in early detection and diagnosis of problems which could prevent the development of complications in the longer term. These two courses of action can be summarised as the making of a financial choices between when treatment costs are incurred; early for the ADA guidelines or later in terms of the NICE guidelines. These differences in recommendations by the guidelines can impact on nurses' decisions about a course of action regarding patient care. In fact, this divergence contradicts with some standards of the NICE guidelines, which recommend establishing patient baseline data (NICE, 2008a). Therefore, the information can be compared with a patient's later baseline data, to record and show the patient's health progression.

8.2.2.2 Guidelines-informed roles of nurses in both countries

According to Irvine (2002), a healthcare structure includes nurses, patients, and organisations are factors that impact on the quality of the care provided. Nursing practice in Kuwait and the UK was found to be similar, despite the contextual differences between the healthcare systems and the approaches to care, such as the models of care followed in each country. In the UK, nurses follow the NCF and in Kuwait nurses are trained at the Dasman Institute, which currently follows the Kuwait Health Model (see Chapters Two and Three for details). Nurses in both settings demonstrated that their various roles in diabetes care were relatively similar, but with minor differences related to the infrastructures of both healthcare systems.

This research has identified a lack of comparison in the literature, with regard to the guidelines. I have clarified the differences and similarities between the three types of guidelines (international, national, local), which are followed by the two healthcare systems of Kuwait and the UK. Guidelines are considered to represent preliminary efforts to establish practical recommendations for healthcare providers for diabetes patients (Davidson et al. 2007). Nurses are supposed to follow theory guided, evidence-based practice (Fawcett et al. 2001); a paradigm that was supported by the treatment plans demonstrated during nurse-patient consultations and by what nurses revealed in their interviews.

The use of guidelines from different countries can allow for an exchange of practices. Bringing together guidelines established in other healthcare systems, can allow for the comparison of current practice with proposed practice, in order to develop and to validate best practices. For instance, the Kaiser Permanente Model (KPM) of managing long term conditions, established in California, USA for medical staff, was used in Birmingham, UK as a guide to shape the nurse consultant role (Hill 2008). The KPM is an integrated model of care (Hill 2008) and there is mixed evidence of the benefits of integrated care for people with long-term conditions, such as diabetes (Ham & Curry 2011). However, such evidence does not necessarily mean the model is applicable in any or all healthcare systems outside of its originating system. Any new system needs to be evaluated against the national or local conditions before it gains full acceptance. According to Harrison et al. (2010), clinical guidelines are published to address issues related to their implementation in practice and therefore, effective implementation of them must be in the local context, based on that healthcare system's requirements.

8.2.2.3 Nurses' degree of adherence to specific guidelines

This research found that nurses used the guidelines in different ways and degrees. There is limited research on nurses' roles in diabetes care, where diabetes care is related to specific guidelines (Burgers et al. 2002). In this current study, some nurses revealed that they followed the guidelines merely for guidance, while others used them to determine care given to patients with critical conditions. In both case studies, some nurses viewed the guidelines as a medical obligation to give them commands, instead of guidance. However, these guidelines were also perceived by some nurses to be sets of recommendations, rather than commands. Woolf et al. (2000) suggest that guidelines are sets of instructions to improve patients' quality of care. Clinical guidelines are known to underline the technical parts of care which, in turn, endorses quality care (Glasgow & Anderson 1999).

This study identified that the majority of nurses made use of the guidelines in terms of, for instance, advice about medication. A small number of nurses also identified difficulties associated with the present guidelines, as they did not know whether the recommendations in the guidelines pertained to them in practice, or to other healthcare professionals. This misunderstanding about which role is

performed by whom, together with a lack of evidence in the literature regarding the effectiveness of using the guidelines, can be considered as a barrier to nurses following, or not strictly, following the guidelines. The guidelines are recommendations that guide practice in diabetes care and ought to be rigorously developed and evidence-based (Grol 2001; Grol & Wensing 2004).There is the issue of the impact on patients' health when nurses do not follow the guidelines, as those publications are designed to provide recommendations for patients' status of health, such as insulin adjustment and medication advice in the field of diabetes care.

It was noted that the literature suggests that healthcare professionals, including nurses, have a tendency not to adhere either to their own roles or guidelines (Grol 2001; Parker & Lawton 2000). Nurses have to adhere to the guidelines based on their judgement of the situation they are facing with thoughtful and critical analysis of the scenario. Nurses recognised that guidelines are not applicable in all cases, as patients come with different needs. Firstly, they considered patients' issues and circumstances as a priority in care and then to think about what is recommended in the guidelines. For instance, patient education is repeatedly recommended in each set of guidelines reviewed in this study. The nurse's role is the key to enabling patient empowerment, which supports patient education (Glasgow & Anderson 1999). Based on this role, nurses could decide to follow the guidelines, which could be suggestions or recommendations, if they were considered appropriate to the patient's condition. McDonald et al. (2005) emphasised that nurses tend to be less individualistic, more organised, thoughtful, and careful compared to other healthcare professionals in adhering to their roles and to the guidelines. However, it could be that these different opinions in the literature are related to the differences in the focus and or the perceived importance of the guidelines in different healthcare systems. A given healthcare system might either establish or follow guidelines that meet the needs of the patients, which could result in having a variety of approaches in managing diabetes care. The healthcare professionals' roles within these systems need to have the scope of variance identified in the guidelines, including those recommendations or standards specific to healthcare professionals.

Nurses working in diabetes care develop knowledge and skills from both experience and education; it is therefore important to ensure that nurses continue to develop their skills and knowledge through evidence-based practice (Ciliska 2005). Guidelines were designed and meant to be followed to improve

quality of care (Larson 2003); however, the professional consequences of diverging from the guidelines must be considered (Hewitt-Taylor (2004). In the current study, nurses in both case studies reported that they were not using the guidelines rigorously but using them to help deliver good quality care. Most nurses in both case studies reported that guidelines are to protect their work and patient safety; in some instances, guidelines can actually guide aspects of their work. However, nurses reported they also rely on their clinical experience and use of their clinical judgment to inform their actions. For instance, in both case studies, nurses reported that their knowledge and skills in diabetes care allowed them to diverge from the guidelines. Polit and Beck (2008) suggest that healthcare providers' knowledge must be implemented within the context of their practice and based on their knowledge, which is in line with what nurses reported in the current study. Furthermore, nurses must choose, tailor and implement interventions for the application of that knowledge in patient-centred care (Harrison et al. 2010) regardless of what is recommended in the guidelines.

The nurses in this study, in general, found their guidelines useful, some using them to back up their practice if needed, which impacted on their approaches to performing their roles. In other studies, nurse directors encouraged nurses to adhere to guidelines (McDonald et al. 2005). However, in this research nurses in both case studies revealed that their senior staff did not provide them with guidelines when they joined the clinic but that they knew about the guidelines either during their practice or were informed by doctors. This situation should be a concern; such oversight as the non-provision of important information may impact negatively on patient care. Lack of orientation to the guidelines has an effect on the provision of patient-centred care which, in turn, affects the quality of nursing care provided to the patients.

8.2.2.4 Models of care in relation to the guidelines

In Kuwait, diabetes care is led by medical teams, while in the UK it is nurse-led. The ADA, IDF, CDA and NICE guidelines do not specify which staff should play what role. In the UK, various nursing roles are mentioned in the RCN guidelines and the NDSAG, which offer some diabetes' recommendations according to the nurse's educational qualifications (see Chapter 3, section 3.5.1). However, during patient care most of the recommendations were undertaken by nurses, apart from some critical cases, such as patients on high dose insulin. For example, the

U-500 insulin is only advised by medical staff or endocrinologists because of the need for an accurate dosage (Lane et al. 2009), a situation always handled by medical staff. This scenario was observed in the fieldwork in both case studies (UK and Kuwait). However, this example does not represent a major difference, relative to nurse practice even though not all nurses in diabetes care can make a prescription. The fact that most of the recommendations in the guidelines were undertaken by the nurses, adds support to the view that diabetes nurses should be given more specialised roles, especially in Kuwait, where they were observed to undertake tasks such as altering insulin levels and offering medication advice. In terms of NREM, nurses in Kuwait were able to perform roles related to insulin adjustments independently; this ability might have an effect on the power balance between the doctors and the nurses.

As noted in Chapter 3, guidelines were explicitly established to facilitate the coordination and implementation of procedures with a degree of quality control. Nurses have not always understood the nature of the guidelines and they frequently perceived them as optional accomplishments (Currie & Loftus-Hills 2002) or set of instructions (McDonald et al. 2005). Nurses for instance, are not expected to follow all the recommendations, or to apply them as a total entity in real practice, as some suggestions are not relevant to the diabetes nurses' scope of practice. However, healthcare professionals are accountable to work towards the improvement of quality of care via the utilisation of evidence-based practice (RCN 2000). This is the case in the current study; in order for nurses to provide quality care, they follow their updated guidelines, which are internationally certified regardless of whether they are locally or nationally publicised. There is evidence in the literature that nurses practice is evidence-based care to inform the delivery of quality care (Stetler 2001; Van Achterberg et al. 2006). However, it could be argued that despite nurses using the guidelines to ensure quality of care, nurses might not use the guidelines as measures of quality care, but they are following the guidelines to ensure they are providing quality care, which adds novelty to the study. Gabbay and le May (2004) emphasised that following evidence-based guidelines appropriately is a part of quality of nursing care, which is what the researcher of the current study explored.

In both case studies, most of the nurse participants considered the role of nurses, in regard to international, national, and local guidelines, as unclear in terms of some of the recommendations listed. When the nurses were asked about the rationale for having guidelines, the majority considered that the guidelines aid

their work, helping nurses to present the best evidence-based approach to care for patients with diabetes (Franz et al. 2008; Home et al. 2008; Paulweber et al. 2010). In terms of revealing the best practice for nursing, Houweling et al. (2009) showed that nurses who followed guidelines, achieved results equal to GPs for their assigned patients. Whilst most of the international guidelines are considered to be medically oriented, the UK national guidelines, and particularly those established by the RCN, were designed for nurses (see Chapter 3). Nurses successfully implementing these recommendations were evident from the observations and nurse and patient interviews in this study; for example, nurses were exemplary in recognising and supporting patients' cultural diversities, just as the majority of guidelines recommend. Patients showed positive responses, such as adherence to their treatment regimen, to nurses' initiatives to overcome cultural barriers mentioned above. In the current study, nurses' intentions to not to stick to the guidelines could be a misconception on their part, as to the effectiveness of such a divergence.

An important factor that arose about nurses working more than what is recommended in the guidelines is that despite what nurses thought, they undertook this additional work willingly regardless of whether or not the activity was stated specifically in the guidelines. Nurses used guidelines to help them provide the best quality care for individual patients. The guidelines empowered nurses to provide quality care and care was of greater quality if the nurse was more experienced. In fact, this is evidenced in the literature as part of providing quality service and quality care (Narayanasamy & Owens 2001). According to Erickson et al. (2003), maintaining patient safety is important to achieve quality nursing care, which is indicated by patients achieving the planned health outcomes. Nurses being responsible for more patients than they can safely handle would find difficulties in meeting the patients' needs, which could result in adverse outcomes related to the quality of nursing care provided (Al-Kandari & Thomas 2008).

In the current study, patients were at the centre of the nurses' decisions about patient care, despite the recommendations in the guidelines. This consideration is an attribute of quality of nursing care, as nurses' autonomy in taking decisions was identified as a significant characteristic in the study when testing the NREM model to find out about the relationship between nurses' interventions and patients' outcomes (Doran et al. 2006). Nurses following guidelines, as they are

to some extent evidence-based practice, is part of the quality of the nursing care agenda (Grol & Wensing 2004). However, a study conducted in Kuwait found that nurses considered that they were diverging from the guidelines on some occasions, so as to provide patients with what those nurses judged to be quality care (Al-Kandari & Thomas 2008). This action taken by nurses can be considered as contributing to quality care, as they are trying to meet patients' needs based on clinical judgment, which is an important component of general nursing care (Bucknall 2003).

Nurse participants reported that Kuwait's local guidelines needed updating; for instance, the guidelines include no mention of providing patients with psychological support as part of the nurse's role (see 3.5.2 in Chapter 3). It might be that the doctors did not include psychological support for some reasons, such as wanting the nurses to concentrate on patients' general diabetes conditions. Patients with complex needs could be referred to the clinic's doctors or to other specialist centres such as psychiatric or mental health clinics. In the UK, it was found that the DNs were involved in identifying patients' psychological needs, in some cases addressing these and in others referring the patient to an appropriate specialist. On the other hand, in Kuwait even though the nurses were involved in identifying patients' psychological needs, local guidelines do not include specific roles for nurses in this important area. In reality, the nurses were aware of the patients' needs and the need for updating local guidelines.

There are guidelines in the UK that are locally and nationally established and some are for nurses, but they are very specific or narrow and do not cover most of the nurse's role (see 3.5.1 in Chapter 3). All the guidelines ranged from general to specific, but there is not one single guideline that covers levels of nursing care. Additionally, what roles nurses play in diabetes care might be different from what these guidelines recommend or state. If a single comprehensive set of guidelines were to be available, it would enable nurses in diabetes care to only need to refer to a single source. It is also worth mentioning that nurses provide patient care, without considering if this is part of their role or not, as long as they are not compromising patient safety.

The generic recommendations in the international guidelines result in nurses performing multiple tasks as nurses, seeing such guidelines as important to patient-centred care, which they strive to deliver. For instance, nurses in the current study reported, and were observed supporting, patients with psychological needs or patients with issues related to sexual health. This nurse

involvement in multiple tasks that might have two impacts; one: where the guidelines are potentially extending the nurses' role in ways that could impact on patient safety and two: to have nurses who are extending their roles to provide quality nursing care.

The data from the interviews and observations showed that nurses acknowledged that they are doing this role or that particular role because it is part of their professional responsibility, not solely because of the guidelines. Guidelines do not tell nurses what to do or what not to do; nurses know their work boundaries (Gask 2005). Nurses have guidelines that they follow in diabetes care; however, the guidelines that are followed in the UK and Kuwait are not specifically designed for nurses. This non-specificity of the guidelines arises an important point about the need for nurses to have designed guidelines that only specify their role in the different levels of nursing care for diabetes patients.

8.2.3 Organisation

8.2.3.1 The practice environment and quality of nursing care

While providing health education, nurses in both case studies identified commonalities in nursing practice in diabetes care which they encountered, such as language and ethnic differences that influenced nurse-patient interaction. The understanding of the cultural differences of patients in need of, and receiving, health care is well established (Powers et al. 2015). Healthcare organisations are required to provide information about care that considers patients' language, culture and ethnicity (Andrulis & Brach 2007).

8.2.3.2 Language and culture

It was found that patients in Kuwait spoke different languages. However, these were fewer than the numbers of different languages spoken in the UK. The UK receives patients from European countries (Shenfield et al. 2010) and Middle Eastern countries (Lunt et al. 2014) which include Kuwait, Saudi Arabia, Qatar, UAE and Oman to receive treatment in the UK. This situation is dissimilar to Kuwait, which is a small country with few people coming from different regions. Most people in Kuwait are able to speak English (Honna 2012), which is spoken in Kuwait's hospitals (Shah et al. 1996a).

Speaking a common language has a positive and facilitating impact on effective communication (Leonard et al. 2004; Andrulis & Brach 2007). Some patients in the UK case study did not speak English, so the nurses adopted strategies to assist their understanding. These strategies included identifying learning styles and different forms of presentation of information such as drawing pictures, as well as demonstrating some procedures that can be performed by the patients. However, in the Kuwaiti case study many patients who visited the clinic, came from countries that staff members also came from. The nurses in both case studies were observed calling for a member of the family or a staff member at the clinic who could speak the language of the patient. Such a strategy might not be considered effective, based on the suggestion by Karliner et al. (2007) that a professional interpreter who is (at least) bilingual, trained and licensed to work in the hospital, should provide this service. However, whilst a professional interpreter may facilitate the communication process and pathway of care, in which both patients and nurses understand each other, a family member or member of staff may provide a more personally acceptable approach for the patient. This research did not measure improved patient outcomes when family members had been involved, but two types of situation were identified. The first situation is where a patient would feel uncomfortable about talking in front of a stranger, e.g. in a group consultation; the second situation is where a family member or friend would be a more flexible or available resource than a professional interpreter.

Nurse participants in both countries, were aware of patients' different needs and in order to provide quality care, nurses made great efforts to understand patients' cultural and language differences (Cioffi 2003). This was specifically found in the UK, with its multi-culturally diverse structure (Vertovec 2007). In fact, nurses in both case studies were observed to effectively manage patients with different cultural and language backgrounds from themselves. Despite the interesting fact that patients are likely to gravitate to staff who speak the same language (Karliner et al. 2007), patients in the current study were found to follow nurses who they were assigned to, without complaint about the language issue. This conclusion is based upon the fact that the patients came to their follow-up appointments and did not ask for a change of nurse.

8.2.3.3 Organisational hierarchy

The findings from nurses' interviews and observations show the diabetes nurses in both the UK and Kuwait undertake specific tasks, such as education,

consultation, research, management, leadership, collaboration and coordination. Nurses in the UK reported that they are given titles according to their specialities; however, despite the roles that diabetes nurses in Kuwait undertake, they are not given titles such as 'diabetes educator' or 'diabetes nurse', to reflect their responsibilities. Such organisational attitude can influence two factors: firstly, nurses' performance (Patrick & Laschinger 2006) in which nurses in Kuwait reported that their level of performance might be altered as a result of not being provided with specifications for their role in the form of a designated job description with titles. Secondly, a drop in nurses' motivation levels (Laschinger & Havens 1997; Moody & Pesut 2006), which might result in a lack of productivity or even leaving the job. Some nurses in the Kuwait case study reported their attempts to claim for their rights to have a title and a job description that specifies and describes their role. A study from Kuwait found that in Kuwait a lack of nurses' motivation led them to experience adverse physical, interpersonal, and emotional outcomes which was evidenced by incompletion of tasks (Al-Kandari & Thomas 2009) and/or even leaving the profession (Al-Kandari & Ajao 1998). Nurses in both current case studies were observed to be motivated to work despite the lack of incentives or material rewards and lack of support they reported, which might impact on the quality of nursing care.

8.2.4 Patients' characteristics

In both case studies, nurses considered patients' needs and requirements as an important factor of good quality care. This view is in agreement with Laschinger et al. (2005), who confirmed that patient satisfaction is an indicator of quality of nursing care. This result adds weight to previous literature (Schouten & Meeuwesen 2006), where nurses' advice and patient satisfaction and adherence to medication were found to be influenced by individuals using different languages. Communicating in the patient's language is important because they are able express themselves freely about their problems to the nurse. However, from the economic point of view, diverse language requirements can add more pressure to, and increase the need for more resources from, a healthcare system (Jacobs et al. 2007). In the UK healthcare system accommodating cultural diversity, where treatment plans for each patient are individualised and therefore might be different and costly, has probably resulted in the need for more resources. One potential solution to resolve resource pressure is having diabetes

management programmes conducted using a group approach (Mensing & Norris 2003). This option would probably suit long-term patients who need only minor contributions from nurses, as they know about their treatment plan and only need to be monitored to ensure that their plan of care continues to meet their needs. However, there is a drawback to this option, which is that patients may have different languages and levels of understanding.

Self-management interventions may be used to minimise costs. Strong body of evidence from randomised controlled trial among a chronic obstructive pulmonary disease population, participants who received a self-care education intervention showed fewer hospitalisations, reduced emergency department visits, and unscheduled physician visits resulting in lower use of hospital resources (Bourbeau et al. 2006). Self-care helps to improve quality of life of patients and help to reduce the intensity involved in the management of chronic disease in healthcare systems (Bury and Pink 2005; Rogers et al. 2008). A meta-analysis among patients who were taught self-monitoring of blood sugar levels compared to patients who were not taught self-monitoring of blood sugar (Poolsup et al. 2009). There is some evidence that use of group-based interventions to provide health education is cost-effective and may help to save time for the nurses, where the same information can be provided to a group of patients during the same period of time. Group-based interventions also ensures participation and sharing of experiences among the patients (Hoddinott et al. 2010).

Nurses in both case studies conducted group consultations, and / or drop-in sessions, which reduced the amount of time and effort needed from nurses, for individual consultations and for individual patient's health education. Whilst group consultations have been proved to be cost-effective (Tang et al. 2006), it may not always be practical for patients coming from different language backgrounds, which may therefore mean patients will require individual consultations. Furthermore, the cost of interpreters can have a negative impact on healthcare systems (Flores 2005). This study suggests that group consultations should be based on appropriate and considered criteria, defined by the nurses based on their knowledge of their patients.

In summary, the structure of an organisation, in terms of guidelines, nurses and patients has an impact of the provision of quality T2D care. The nurses in the current study were knowledgeable and used guidelines where necessary to provide care for the patients. The next section is a discussion on process.

8.3 Process

8.3.1 Nurses' independent, interdependent, and dependent roles

The process component of a nursing role, is about nurses' tasks and responsibilities that is; (1) the nurse's independent role in which she/he takes full responsibility for patient care and does not require a doctor's intervention, (2) the nurse's interdependent role in where nurses are working collaboratively with other healthcare members; and (3) the dependent role is when the nurse has less authority in patient care and may, on occasions, be obliged to defer to other healthcare professionals (Irvine et al. 1998b). In the current study, nurses were found to perform these various roles based on the area of nursing practice in diabetes care, as explained in detail in the following sections.

8.3.1.1 Nurses' independent roles

Practical autonomy was found to be in line with Doran et al. (2002) in having associations with nurses' independent role performance; behaviour which was practically identified by patients' perceptions of the quality of nursing care. Nurses in both case studies demonstrated commitment in addressing patients' needs, through a patient-centred approach and showed their ability to work independently and autonomously. For example, the nurses in the Kuwait case study were observed to be able to run and coordinate diabetes clinics successfully.

Complaints about professional autonomy, and frequent interruptions to their work by others, were reported by nurses in both case studies. In terms of autonomy, a difference between the nurses in the UK and Kuwait was noticed. Many of the nurses in the Kuwaiti case study considered that they had autonomy in some areas of their work, such as in organising patient care, patient support and health education. However, nurses did not have autonomy in relation to organisational issues; for instance, in Kuwait the nurses lacked equipped consultation rooms and did not have a specific job description and title, all of which impacted on the quality of care provided. Aiken et al. (2002) considers that healthcare systems with weak perspectives about nurses' contributions are twice as likely to contain nurses dissatisfied in their jobs, with patients giving a 'fair to poor' rating about the quality of the care provided.

Whilst no nurses in the current study mentioned leaving the profession, some of them reported dissatisfaction regarding their workload. In Kuwait, some felt devalued; while in the UK the concern was the low salary. The diabetes care nurses in both case studies reported their lack of motivation resulting from not receiving a similar income to other comparable specialist nurses. The literature suggests that nurses' lack of motivation impacts on the global shortage of nurses, as nurses either choose not to join the profession or continue to leave it (Burtson & Stichler 2010). Furthermore, Aiken et al. (2011) advised that nurses have needs in the work environment and not meeting these needs could contribute to poor outcomes which could, in extreme situations, lead to reductions in patient care standards. Whilst not measured in the current study, nurse retention is influenced by motivational factors such as lack of support (Graber & Mitcham 2004); whereas, empowering nurses and giving them more authority will ensure quality of nursing care (Laschinger 2008).

Doran et al. (2002) considered nurse role performance to be an intermediated relationship between structural variables and patient outcomes which is influenced by nurses' education and experience, task tension, autonomy and time. This research identified two significant differences which relate to professional autonomy and the downgrading of the diabetes nurses' role in the Kuwaiti context. Nurses in the field perform their role based on their clinical judgment, experience, degree of autonomy and educational levels, regardless of any organisational obstacles they experience. These skills indicate their independent capabilities, which are shaped by each nurse’s sense and perception of their autonomy.

Doran et al. (2002) emphasised that patients view nurses' autonomy as an effective approach in terms of the nurse spending more time to provide care. In other studies, nurses' interactions with patients were brief and patients’ outcomes were only partially successful due to nurses not spending enough time with the patients (Robinson et al. 2008; Street et al. 2009); a situation which negatively influenced the pathway to diabetes care (Nam et al. 2011).

There were several issues surrounding nurses in Kuwait, regarding their professional autonomy, in which nurses reported their belief that they did not have the authority to be independent professionals. Despite patients’ positive feedback about the nurses, the researcher observed during nurse-patient interaction, that the nurses faced issues that hindered their provision of quality care to patients. For example, nurses were unable to find rooms in which to meet

their patients and had to arrange to meet them in doctors' rooms, when doctors were not around, or in the general office with other patients if the patient's condition did not require a private room. This 'lack of resource' situation identifies that the nurses have a responsibility to deliver care but little authority in its arrangement. In addition, some patients were not able to express themselves well in the presence of other patients or staff, which impacted on outcomes regarding needs, requirements and care quality. These identified issues were found to be specific to nurses in Kuwait and indicate that, although nurses intended to promote diabetes care, this would not be evident in their practice due to factors outside of their control. The nurses believed they had little control in their role, as a result of lack of independence in carrying out their role in diabetes care.

Nurses in both case studies were found to provide quality care demonstrated by their level of control and their independent role in various interventions, such as: assessing, supporting, educating, and other independent roles described in Chapter 5 and Chapter 6 of this thesis. Sidani & Irvine (1999) suggest that the NREM includes the 'independent nurse' role, in which nurses are accountable and have autonomy for the various functions they perform without physician input. Based on Irvine et al. (1998a), these roles comprise the accessibility to health services, clinical environment, practice model (nurse-led or medical-led models of care), role authority and workload. These independent roles (mentioned in Chapter 5 section 5.3.1 and 5.3.3 and Chapter 6 section 6.3.1 and 6.3.3) were observed and expressed by nurses and patients in the current study. The nurses were able to take the lead in health education and health promotion for patient self-management support, as well as in relation to medication advice, including medication adjustment and, specifically in the UK, prescribing.

The ADA asserts that every patient is different and therefore their needs are different (ADA 2006). In the two case studies, it was identified that the nurses followed a strategic plan for each patient before initiating any health education, as each nurse spent a considerable amount of time in patient consultations, based on needs and requirements, in order to take account of the individual patient's goals, priorities, and lifestyle. Patient involvement in deciding about their own care, is a more recent approach (Epstein & Street 2011). Nursing care is highly dependent on nurses' interpersonal skills (Fosbinder 1994) and counselling skills, which are needed in order to provide effective health education (Juul et al

2012). However, literature suggests poor patient outcomes may result from nurses' poor consultation skills and insufficient time to conduct a thorough consultation (Jansink et al. 2010).

Patients in qualitative study suggested that: “continuity of relationship, flexibility over consultation length, nurses' interpersonal skills and specialist diabetes knowledge are crucial to good quality care” (Stenner et al. 2011 p.37). The nurses in both case studies, were observed to address all patients’ needs in which patients showed understanding of, and became knowledgeable about, controlling their diabetes. Based on the nurses' and patients' interviews, as well as observations of nurse-patient consultations, nurses were found to be skilled in providing appropriate consultation sessions. Greater autonomy experienced by nurses led to their ability to support autonomy in others such as their patients. This study found evidence to support the view that the nurses were skilled in consultation, as patient outcomes were positive. Patients in the current study reported that nurses offered suitable choices regarding achieving the established goals for managing their diabetes during consultations, which is similar to the findings from the study by (Stenner et al. 2011) described in Chapter 2. In the current research, a nurse was observed to have the ability to decide about patients’ care which, with the patient’s agreement and involvement, is considered a positive outcome for the quality of care provided. Patients in another study reported that nurses’ tendencies to broaden the consultation time in order to meet most of their needs, including their lifestyle issues, had a positive impact on their health (Stenner et al. 2011).

Furthermore, the enhancement and encouragement the nurses received from their patients in both case studies probably encouraged the nurses to be more independent and gain autonomy at work. In the present study patients were found to prefer to be seen by nurses, rather than doctors, as the nurses were considered to understand their needs and were able to resolve their problems.

Nurses in the UK demonstrated self-confidence, as indicated by their ability to refer and receive referred patients and/or being able to refuse work that was not under the scope of their practice. These factors contribute to show that the DNs were able to lead and coordinate diabetes clinics. Despite the nurses in Kuwait showing their abilities to run the clinic, in which patients were coming to see them directly, they lacked sufficient self-confidence or sufficient autonomy to actually lead or run the diabetes clinics in practice. Nurses in Kuwait reported that they used their clinical judgment with their patients and that they contributed

significantly to patient care, but felt significantly undervalued and insecure in their careers. Despite experiencing these inhibiting issues nurses provided care in different settings to safely introduce quality-nursing care to patients at clinics or out there in the community. Being independent at work can maximise a nurse's skills to ensure quality care. Trans-nationally, nurses have developed accountability and autonomy in practice, at the point of delivering nursing care (Stewart et al. 2004; Barazzetti et al. 2007).

Nurse-patient interactions were observed in both cases in which nurses showed good communication skills, which were valued by the patients and demonstrated via nurses encouraging patient involvement in their own care, as well as engaging their patients in decision making about their own care. Nurses were also observed to provide patients with emotional and psychological support, which reduced worries and anxiety about a sudden drop in their blood glucose level while they are sleeping, and fears and concerns about using needles. Gore et al. (2000) found that patients' quality of life was enhanced as a result of nurses supporting patients' psychological needs. In relation to NREM, the ability for nurses to provide psychological support is a positive empowerment to the nurses and patients, as the nurses are able to focus on other issues that may affect their patients, rather than being restricted to physical care.

Some nurses in Kuwait expressed the feeling that they were performing complementary roles. This attitude can explain why patients prefer to be seen by nurses rather than other healthcare providers, including doctors, because doctors did not spend enough time with them; doctors did not consider the patient as a whole person (holistic care), only focusing on their biological needs. According to a study conducted by Siminerio et al. (2007) about nurses' and physicians' perceptions of nurses' involvement and roles in diabetes care, nurses mentioned the differences between themselves and the physicians. Nurses in Siminerio et al.'s study reported that they provided better health education to their patients; they spent more time with their patients, have better communication skills and are good listeners. Furthermore, they know their patients better than the physicians do; however, these were views from nurses and the results can be biased, so it would have been better if these or similar views also came from patients. Patients in the current study reported that they would go to see the nurse, to have her explain what the doctor had just told them. Patients' preferences to follow up with a nurse are probably related to the fact that nurses

are more likely to educate patients about behavioural changes. The nurses were also considered to have the necessary knowledge to explain to the patient in simple terms for easy understanding, a further indication of quality of care being delivered by the nurses.

In both case studies, patients appreciated the knowledge displayed by nurses, a finding supported in the literature emphasising that nurses' knowledge is an important strategy that ensures quality of nursing care (Kvåle and Bondevik 2010). The literature also identified two key factors associated with good quality care: a) flexibility over consultation length (Stenner et al. 2011) and b) strategies and techniques that support the patient (McCabe 2004). The practices of the nurses in diabetes care in both case studies tended to focus on either individual or group health education activities that could help patients in controlling their diabetes, as well as the complications resulting from uncontrolled diabetes. In addition to the elements identified by Stenner et al. (2011), the current study also found that nurses showed the ability to provide effective information based on individual patient's needs, which varied considerably. Most patients who were interviewed and/or observed in the two case studies demonstrated trust regarding their nurses' suggestions and recommendations about care. This attitude might be related to patients' beliefs that the health care professional is qualified to do what they do, and can therefore be trusted which, in Bandura and Walters' (1977) social learning theory, are seen as factors that can prevent emotional distress.

Trust can also be demonstrated by openness in communication. It was observed that patients were freely interacting with nurses and that they did not hide inappropriate behaviours related to their; for example, informing the nurses about incidences when they had not followed their treatment plan. Nurses were also found to read their patients' diaries and ask questions about some abnormal findings, and the patients responded to the questions without being hesitant to admit to their incorrect health behaviour. This behaviour indicates how the patients trusted their nurses, as they met their preconceived expectations of what a nurse should be and do (Johansson et al. 2002). The nurse meeting patients' expectations is most likely to impact on levels of patient satisfaction; however, if patients' expectations are low, their satisfaction level will be higher (Laschinger et al. 2005). From the patients' perspective, they appeared to respond well to receiving information from the diabetes nurses and this appeared to be related to the therapeutic relations and trust already established.

The majority of nurses in the current study were trained in/ held a qualification as a health educator: a professional who provides patients with appropriate counselling by spending sufficient time with them, despite a heavy workload and time limitations. On the other hand, the literature suggests that nurses, rather than working in partnership with patients and empowering patients to decide about their own care, empower themselves to take on a position of care (Kuokkanen & Leino-Kilpi 2000; Henderson 2003). The study in Holland by Jansink et al. (2010) found that nurses preferred to provide patients with suggestions about their diabetes control, but were not ready to allow patients to make decisions for themselves. It was revealed that the Dutch nurses were controlling patients and restricting their ability to plan for their own care. Nurses gave priority to patients, based on their needs. This priority attitude was observed in both case studies' fieldwork where nurses reported that each patient's consultation lasted for 30 minutes; therefore patient(s) with special needs were allocated the last appointment(s) so the nurse could spend more than 30 minutes with them. This caring option probably impacted on the nurses' workload and time; the nurses did not complain about this, but such generosity has been reported in the literature to impact on nurses' productivity (Williams & Jones 2006). Workloads make it difficult for nurses to focus on different aspects of each patient's health needs (Houser 2003) and there may be some involuntarily negative outcomes, such as nurse burnout or staff turnover (Leiter & Maslach 2009). However, there was no evidence of these two potentially negative issues in the current study and nor were they reported.

In the UK, nurse-led clinics have been established in some specialist areas, such as in long- term conditions (New et al. 2003) and in diabetes care (Carey & Courtenay 2007). Nurses viewed their performance as being competent by demonstrating professional roles in different areas, such as prescribing medications in the UK context. A nurse's ability to work independently can be affected by role authority; for example, waiting for a physician's opinion, can cause a delay in dealing with a patient's management or treatment regimens (Irvine et al. 1998b).

It can be reported that in Kuwait quality of nursing approaches in diabetes care was evident. Nurses in Kuwait were observed to overcome some barriers, such as doctors and senior nurses interrupting their patient-nurse consultations or being called to help in other places that were not relevant to their specialities. Nurses

reported their ability / strategies to avoid these interruptions and to manage their working environment, in order to provide their best efforts to ensure high quality care was always offered. According to the findings of this study, both patients and nurses reported nurses running the clinics, with patients viewing their nurses to be competent professionals. Similarly, the nurses were involved in providing and organising care to meet the physical and psychological needs of their patients. These nurses' contributions in diabetes care in Kuwait strongly support the researcher's belief that nurse-led clinics in Kuwait are needed, and there is an evident to the need for role recognition involving the nurses' increased responsibility. This recognition could be readily achieved by expanding their role and increasing their remuneration.

In the literature, there is growing support for nurse specialist roles in diabetes management (Fiandt et al. 2010; Boström et al. 2014b). Gabbay et al. (2006) found that nurses were trained through a series of seminars with dieticians, a certified diabetes nurse educator and an endocrinologist. The nurse participants established individualised care plans, educated patients about self-management and used established beneficiary recommendations for patients, derived from the ADA diabetes guidelines. This process suggests a link between nurses who are trained and have experience and their ability to provide quality-nursing care. Patients, in both case studies, expressed positive views about their satisfaction with nursing care. Literature from Kuwait suggested that not only patients hold positive views about nurses but so do other cohorts of respondents (e.g. high school students) who viewed nurses as honest, caring, responsible, and educated (Al-Kandari & Lew 2005). These views, and the views of patients in both case studies, are likely to be related to the knowledge and experience the nurses gained through professional training in diabetes care; an issue which was often mentioned during their interviews.

8.3.1.2 Nurses' Interdependent roles

The nurses' interdependent roles cover the tasks and responsibilities that nurses share with other members of the healthcare team, to ensure the integration and coordination of patient care (Irvine et al. 1998b). Nurses' utilisation of different approaches in the diabetes care has an impact on the provision of quality of nursing care, as perceived by both patients and nurses. In the current study, DNs performed various interdependent roles with patients, doctors and other nurses, as well as other healthcare professionals. These roles occurred in diabetes clinics, in different areas in the hospital, and out in the community. Nurses were also

performing coordinating roles; a duty that was specifically explored in the UK case study.

Patients in both settings had a number of views about how they perceived nursing care. The findings indicate that the patients considered the collaborative role the nurses played with other healthcare professionals to be a key approach that can result in improved quality of care for patients with diabetes. Doran et al. (2006) identified nurses' interdependent role performance as the quality of nursing, in relation to nurses' communication and coordination of care. A collaborative teamwork approach is considered to be one part of nursing that promotes patient care, in that all members of the team should work together in the best interests of their patients (Kalisch & Lee 2010). Furthermore, according to Wagner (2000), patients prefer to be looked after by a team of healthcare individuals, as the outcomes of the visions from different bodies of knowledge and a broader range of skills, is commonly considered to be a benchmark of high quality care. This perception is reflected in the guidelines used by nurses which suggest a teamwork approach can enhance patient safety outcomes, in addition to quality of care levels (Leonard et al. 2004).

Wilson et al. (2012) found that patients with chronic conditions, including diabetes, dislike disjointed care and the group consultations they sometimes received, and wanted to have all their conditions managed in one appointment. In the UK case study, a teamwork approach, or what patients referred to as a 'one stop shop', saw the DNs provide effective patient-centred care in addition to the medical collaborative role performed by doctors. The DNs focused on a joined-up clinic between nurses and other healthcare professionals, which constitutes the basis of a collaborative teamwork approach. Collaboration and trust in working relationships, as well as coordinated care, support the nurse in delivering quality care.

The current study explored whether nurses understood their scope of practice and accordingly whether they decided to play within, or diverge from, the scope of their practice in order to accomplish their patients' care needs. Lillibridge et al. (2000) suggested that nurses experience difficulties in understanding their scope of practice, though they know about their boundaries, which they navigate within their work conditions. Nurses in this study understood their scope of practice, which is in line with the literature that considers that nurses who have undertaken

educational preparation, which has made them competent, are in a position to control their roles (MacAlister & Chiam 1995; Aiken et al. 2003).

Jones (2005) considered that a medically orientated role could increase nurses' confidence, by allowing them to perform more advanced duties. This view is supported in the two case studies where nurses wished to have extended roles and to advance their nursing practice to include some medical practices, such as being able to prescribe for diabetes and non-diabetes conditions. However, other nurses in both settings complained of undertaking some medical roles that should be performed by the doctors in the clinics. Nurses in both case studies suggested that each member of the health care team should carry out their own duties, as the concerned nurses found themselves playing multiple roles, including some elements of the roles of dieticians and doctors. Lenz et al. (2002) found that nurses were more likely to promote education about diet, weight, exercise and medications, than were doctors.

A study by Lenz et al. (2004) on the role of nurses in monitoring patients with chronic illnesses, found comparable results between nurses and doctors regarding health outcomes and patients' satisfaction. Nurses working in diabetes care demonstrate a good example of explaining the role of nurses in chronic disease management. Literature, El-Deirawi & Zuraikat 2001; Taylor et al. 2003, indicates how confident nurses working in diabetes care, are working with patients, and discussing their patients' care with doctors and other healthcare professionals. These highly capable nurses are providing their patients with health education and health promotion, medication advice and information about diabetes complications. These factors are confirmed by the competent nurse role in diabetes care, as expressed by most of the patients and nurses interviewed in the current study. Nurses deliberately involving patients' caregivers and/or family members in their care showed that such a strategy promotes patient adherence with care, which can contribute to improving a patient's physical condition (Delamater et al. 2001).

Nurses in both case studies described how they worked within their professional boundaries, but some nurses mentioned incidences where they decided to diverge from these boundaries, with the doctor's agreement. This observation is in contrast with the findings from a study conducted by Griffin and Melby (2006), in which doctors raised concerns regarding the educational preparation of nurses to undertake advanced roles/duties, which are traditionally under the scope of a medical practice. Whilst nurses diverging from their role boundaries can be seen

as being an unsafe option, nurses in this study reported that these actions would not mean acting beyond the scope of their practice. Nurses in both case studies consider these 'outside-the-boundaries' actions as improving their position in their careers, in that they gained professional autonomy.

8.3.1.3 Nurse dependent role

In the process construct in the NREM (Irvine et al. 1998b), the nurse dependent role covers the tasks performed by nurses as a response to medical requirements. It was observed that prescribing is still not clearly located and is a duty somewhere between the dependent and independent roles; mostly it was considered dependent, as nurses in both studies are still not fully authorised to prescribe medications. For some nurses, prescribing is considered an independent practice. This was observed by the researcher and reported by nurses and patients interviewed in the UK case study. However, there were several nurses in both case studies who did not prescribe, as they waited for the doctors to prescribe medicines for them to enable the doctors' medication orders to be carried out.

There has been a move towards nurse-advanced roles in the UK, such as prescribing (Courtenay et al. 2007a). Nurse prescribing is a successful practice that supports a range of services such as prescribing for chronic diseases (Courtenay et al. 2007a; Sheer & Wong 2008), including diabetes (Courtenay et al. 2010). Some nurses in the UK case study were able to prescribe, in addition to providing extensive information about diabetes medications including injectable or oral therapies. In the UK, nurses who prescribe talked about being involved in completing the whole episode of care, such as providing full detailed information regarding patients' medications (Courtenay et al. 2007b; Courtenay et al. 2010). This can provide nurses with motivation to undertake extended roles with more autonomy, which may result in decreased nurse and patient delays in dealing with medications.

The literature highlights the implications of nurses' involvement in prescribing medications. A study by Carey et al. (2010) identified advantages of the nurse prescribing role which included establishing improved and timely access to patients' medications and better use of health care professional roles, including those of nurses. Nurses were able to make effective use of their knowledge and skills to overcome delays in treatment and provide faster access to prescribing

patients' medications. In the UK case study, nurses who worked in diabetes care and finished the prescriber course were able to prescribe for diabetes. For instance, a nurse in the study wished to prescribe statins so as to save a patient's time and their own time as well; however, she said that this was not within the scope of her practice. Houweling et al. (2009) identified that nurses in the Netherlands were able to prescribe antihypertensive drugs, as this role was recommended by the Dutch Diabetes Federation. This role is similar to the UK, where qualified nurses have the legal authority to prescribe drugs (Courtenay et al. 2017: Courtenay et al. 2007a). Interestingly, only a few nurses from the UK case study expressed their disappointment at not being able to prescribe other than for diabetes, a restriction applied by their employers as part of clinical governance. Nurses prescribing for diabetes was acceptable for patients with diabetes, and there is evidence to suggest this initiative can and has improved quality of care (Courtenay et al. 2010). To become competent to prescribe for other conditions associated with diabetes, nurses need training to diagnose the condition and a good knowledge of appropriate drug therapy.

In Kuwait, the nurses were only allowed to adjust insulin levels, although they were able to provide suggestions and advice to junior doctors and other nurses about specific medications and insulin used in diabetes management. Interestingly, their suggestions were accepted in most cases. This unofficial role of ‘expert’ undertaken by the nurses in Kuwait is aligned with a study by Carey et al. (2010), which identified the involvement of nurses in providing staff with information about medications. However, the nurse prescriber role *per se* does not as yet exist in Kuwait, as has been shown in the cross-case analysis (see Chapter 7).

There are five models identified by Al-Jarrallah et al. (2009) and Buchan et al. (2007) for modelling nursing workforce supply in Kuwait: i) needs based, ii) utilisation based, iii) effective demand, iv) effective infrastructure, and v) models of care. The nursing workforce in Kuwait probably focused on covering basic needs for patients with different conditions and needs, excluding prescribing. The lack of nurse prescribers in Kuwait might be related to three factors: i) doctors are reluctant to accept non-medical prescribers or prescribers less qualified than they are (Bradely and Nolan 2007); ii) most nurses in Kuwait are with diploma and BSN and the nurse prescriber role needs higher educational qualifications, such as in the USA and Australia that requires Master’s level as a minimum (Gardner et al. 2006), and iii) from personal experience as a nurse,

clinical instructor, and lecturer, there are claims by nurses to have autonomy and authority in practicing their general practice roles such as in diabetes care and as shown in the current study. Therefore, nurses in Kuwait to have an advanced role such as prescribing, is unlikely to be accepted by their current health-system's management. Nurses might mostly be needed in the various areas of patient care but not yet in the field of prescribing duties. Nurse prescribing has traditionally been associated with doctors (Bradley & Nolan 2007), therefore the move towards the nurse prescriber role in Kuwait will need organisational action by nursing bodies in the healthcare system of Kuwait, in order to plan for nurse prescriber courses. If this should happen, nurses' lack of autonomy will be minimised, as the diabetes nurses in Kuwait will become more independent and task responsible. In Kuwait case study, the nurses were found to be involved in various activities related to medications, such as advising about the blood glucose strips, sizes and prices of insulin pens, lancets and insulin syringes and pens. The nurses were also explaining and recommending their patients' types and doses of insulin treatment to doctors and junior doctors at the diabetes clinics.

They sometimes wrote the prescription forms for the doctors including the treatment they found to suit their patients and the doctors would sign them. The inability of nurses to prescribe in some healthcare systems, such as Kuwait's could impact on the quality of nursing care provided. For instance, waiting for a physician's opinion can cause delays in the patient's treatment (Irvine et al. 1998b), which might consequently impact on the patient's health outcomes. Doran et al. (2001) evaluated patients' health outcomes within 24-48 hours from admission to 24 hours after discharge and found patients functional condition, psychological condition and pain to be improved. Health outcomes are a result of provision of care (Donabedian 1988) and require treatment and management within a timeframe appropriate to patient's needs.

In summary, nurses' contributions in the current study are influenced by some factors related to power imbalance in their working environment. Addressing these factors can lead to better quality care, a structured health system and healthcare providers' satisfaction (Amaral & Vidinha 2014). In the holistic approach, recently considered as the patient-centred approach (Ekman et al. 2011), nurses' utilization of patient-centred approach assured patient-improved outcomes. Such an approach is characterised by two-way communication, where the nurse understands and meets the patient's needs. This quality service is

consequently reflected in the trust relationship between the nurse and the patient, as mentioned by both nurses and patients in both case studies, and as noted in the literature (Robinson et al. 2008).

The literature suggests that appropriately trained nurses are perceived as high quality care providers who can maintain good health outcomes for patients (Laurant et al. 2005). The nurses in Kuwait received training in a specialised training centre in Kuwait's Dasman Institute. The Institute works in partnership with highly qualified personnel from developed countries, to provide training and education for multi-disciplinary healthcare providers, including nurses. Other nurses had received training about diabetes at other international centres in Egypt and the UAE and have received certificates as qualified diabetes educators; however, these qualifications are not approved by the MoH in Kuwait.

The diabetes nurses in the Kuwaiti case study reported that they are not considered as 'diabetes specialist nurses'. Whilst they have been employed in diabetes clinics for a minimum of five years, they still complain about not having a specific title pertaining to them and neither a job description that proves their difference and expertise as diabetes educators. One of the striking findings in the current study, identified by the nurses in Kuwait, was their lack of empowerment to make decisions, despite showing evidence of professional autonomy and independence during nurse-patient consultations that were observed by the researcher. The nurses in Kuwait lacked the authority to make decisions, which is in line with the views of (Manojlovich 2007), who described nurses as being disempowered and lacking autonomy in their roles.

This situation in Kuwait is related to the lack of support nurses receive from the higher levels of the nursing hierarchy in the MoH. Nurses in Kuwait perceived their inability to practice independently as impacting on their contribution to patients' quality of care. According to Irvine et al. (1998b), the component of the 'process attribute' related to the independent, interdependent, and dependent role of nurses, is their role in the provision of patient care. In the NREM, the independent role that nurses undertake is related to functions and responsibilities without physicians' collaboration. The interdependent role relates to working with other healthcare providers. The dependent role includes tasks and functions that are carried out according to medical orders.

8.3.2 Top-down hierarchical impact on quality of nursing care

In Kuwait, a priority matter is the documenting of nurses' roles to raise awareness and consequently raise the value of their role with all members of the healthcare team, with the managers and senior nurse directors and with patients. The undervaluing of a nurse's role in the UK is represented in the form of interruption of their work by senior nursing staff. In Kuwait, however, nurses were called to help in areas that are not under their speciality such as doing clerical work.

Al-Kandari and Thomas (2009) argued that nurses in Kuwait are unable to complete their work due to both nursing and non-nursing workloads. In addition, Al-Kandari and Lew (2005) identified that nurses perform physically exhausting jobs, as well as lacking autonomy and decision making power; all of which discourages high school students in Kuwait from choosing the nursing profession as a career. I believe, as supported by the findings of these case studies, that the level of autonomy among Kuwait nurses is more apparent, yet lower, than in the UK. Nurses in the UK were found to coordinate diabetes care clinics in which they coordinated alongside doctors and dieticians; whereas the nurses in Kuwait complained about the lack of encouragement from their superiors and lack of autonomy to run the clinics. Despite what the literature indicates about nurses working in diabetes care and their level of confidence (El-Deirawi & Zuraikat 2001; Taylor et al. 2003), the long-term effect is that nurses might lose confidence in their role and themselves, as high level management staff behaviour appears not to value what they are doing (Mooney 2007).

Mistrust arises when there is a lack of support from managers and staff (Spence Laschinger et al. 2002). In Kuwait case study, an example of this is when nurse-patient consultations were interrupted by a doctor who needs the consultation room. This relationship between nurses and employers in these case studies has raised the issue of trust. Nurses in both case studies demonstrated confidence which is described in the literature as a feature of nurse trust in performing their roles (Spence Laschinger et al. 2002). Nurses should be given the opportunity to make better use of strategic positions, such as case manager, nurse educator or clinical nurse specialist, in order to show the public what their work really entails, which should result in increased confidence in their own professionalism (Hoeve et al. 2014).

8.3.3 Nurses as street-level bureaucrats

Under Lipsky's theory of 'Street-Level Bureaucracy' (Lipsky 2010) nurses can be referred to as street-level bureaucrats, as they are public service workers who interact directly with the public to undertake a certain governmental role, in this case nursing. However, street-level bureaucrats undertake different directions in following or diverging from this role; especially when the policies included are not an obligation but recommendations or guidelines to support their work. Despite the current practice in which the top-down approach dominates the practices of diabetes care, as shown in this study's findings relating to both countries, nurses have established their own guidelines and practice, tailored to patients' needs, as a result of the lack of specific guidelines necessary to do their job effectively. In order to provide the best care for their patients, nurses will, within the limits of their professional roles, adapt guidelines within legal and medical limits to support their patients. Therefore, nurses can be considered, at times, to adopt the role of street level bureaucrats (Lipsky 1980) in order to provide quality care to their patients. In order to provide the best care for their patients, nurses are the frontline staff doing the providing and supporting. To sum up, nurses as street level bureaucrats became the outcome in the NREM, in which they were the frontline staff who are willing and able to provide the best care for their patients. In the NREM nurses have become street level bureaucrats resulting from the structure and process as well as providing an outcome, which is improved patient care. Therefore, the concept of a UK diabetes nurse as a street level bureaucrat, in this study, is both a process and an outcome.

In Kuwait for example, nurses revealed their contributions to the local guidelines by adjusting some of the recommendations stated in those guidelines in order to overcome barriers and make decisions about the use of resources and facilities. Those decisions were able to ease their interactions with patients, as well as helping them to become effective in their practice. In the current study, nurses are considered as frontline staff in diabetes clinics, who meet patients first and nurses whose comfort should be highly considered. Nurses are responsible for healthcare delivery; for example diabetes care in the current study, and they provide culturally proficient services (Kim-Godwin et al. 2001). These actions by nurses have impacted on the recent direction of diabetes care and therefore, Lipsky’s (1980) theory serves to make some sense of the struggles nurses experience in finding and using suitable resources that are designated for them.

The international guidelines reviewed in this study include generic recommendations, resulting in nurses performing multiple tasks that might not be relevant to their role, and this lack of focus and relevance might impact on nurses' levels of performance. Lipsky (1980) suggests that individuals tend to work in non-encouraging conditions that impacted on their job performance. However, Langfred and Moye (2004) contradict Lipsky (1980) and suggest that the accomplishment of multiple functions increases an individual's autonomy and levels of interdependency. These autonomy and levels of interdependency are exemplified by the nurses in the UK who were involved in updating guidelines in their roles as active healthcare professionals. Top-down and bottom-up strategies are both needed (Ham 2003) in order to create a balanced working environment in diabetes care, in which healthcare providers, including nurses, are motivated to work. Lipsky (2010) suggests that in order to improve policies, and in this study's area of interest, diabetes nursing care, an understanding of the context of nurses' work is essential. The guidelines I explored specified what the different interventions for diabetes care are, but did not specify who should do what. In the current study, frontline nursing staff determine how guidelines are delivered and implemented in practice (Lipsky 2010; Lipsky et al. 2012). In the UK, practice allows DNs to be involved in evaluating and examining the already established guidelines and to determine which of these will accomplish a given set of goals (Sabatier 1986). However, in Kuwait the situation is a top down, physician-led hierarchy, in which medical staff are controlling the diabetes care model that is offered.

Lipsky (2010) presented policy change as a dynamic and collaborative process which needs individual input in order to recognise the individuals' work environment, so as to understand why policies do not achieve expected outcomes. A significant discovery in the current study was that both sets of nurses were found to be 'policy changers' in the context of contributing to and being part of updating guidelines; the local guidelines in Kuwait and the UK. These local guidelines were derived from the ADA and IDF, as the nurses reported. Further in the review of the documents I found that the national guidelines also stemmed from the international guidelines, the ADA and the IDF. Nurses, particularly in Kuwait, demonstrated their practice within limited resources, such as not having equipped consultation rooms, or any rooms offering privacy; yet in both case studies nurses demonstrated their willingness

and ability under pressure to meet their goals of practice. Irvine et al. (2007) suggests that lack of time and resources are barriers to nurses who are trying to provide effective health promotion. However, this study identified that in the UK there are current mechanisms which allow nurses to contribute to amending and updating guidelines. The DNs have managed to influence policy change, at both local and national level, by being members of healthcare teams or committees which established some of the recommendations and standards reflected in the guidelines. Nurses' contributions to the guidelines reflect Sabatier (1986) argument that individuals must have a hand in establishing policies, especially those who come from different organisations but share the same set of beliefs and goals.

8.4 Outcomes

8.4.1 Challenges in diabetes care

8.4.1.1 Power relations

A situation that arises as the result of a process taking place within a structure can produce outcomes which include power imbalances between the individuals involved in the process. Within the structure of the diabetes clinics, power imbalances can occur amongst nurses, patients, doctors, management and senior staff.

8.4.1.1.1 Power relations between the nurse and patient

This research has shown that there were no negative feelings or opinions reported by the patients, about the nurses. These positive attitudes could be related to three factors:

Firstly, it could simply be that patients believed their care needs were met by nurses; therefore, there was no necessity to comment negatively or critically. In consultations, the nurse and the patient share power as the patient has a measure of control by asking questions and directing the path of the consultation (Kettunen et al. 2002). This dynamic was noted in both case studies in which some patients were observed to participate and pose their own opinions about self-care.

Secondly, a power relationship is demonstrated, where patients hesitate to report a negative act about a nurse, as they might consider that this could affect their

level of care. It is possible that patients prefer to appraise nurses instead of expressing criticism about issues regarding their care (Henderson 2003). Patients in both case studies were happy about the nursing care they received from the nurses in the diabetes clinics, and expressed many positive comments (see Tables 22 and 27). However, if patients are hesitant about expressing how they really feel about the nurse's role in their care, this caution might be because they have concerns that the quality of care that they receive might be impacted. Alternatively, patients might lack knowledge about their condition, which inhibits them from expressing their views and opinions about the care they receive (Kettunen et al. 2002). Furthermore the patients may, for psychological and socio-cultural reasons, be passive and accept whatever the national healthcare delivery presents (McCabe 2004).

Thirdly, as observed during consultations, patients trusted nurses' decisions and opinions about their own care, as the nurses have medical knowledge about patient care (Kettunen et al. 2002). Patients trust the nurses' knowledge and so they tend to obey and stay calm during consultation and follow what their nurse advises. Patients prefer to listen and slip into a traditional role, allowing the healthcare professionals whom they trust and appreciate to make decisions on their behalf (McQueen 2000).

8.4.1.1.2 Between the nurse and the doctor

While nurses in the UK identified the difference between their role and doctors or/and other healthcare professionals' roles, nurses in Kuwait expressed that they are undertaking some other healthcare professionals' roles. Doctors would refer patients who require simple nursing procedures, like checking for BP, to the diabetes nurses' and this further added to the diabetes nurses' workload, instead of referring such patients to other nurses who could easily perform this simple procedure. Nurses in Kuwait expressed their dissatisfaction about some doctors' behaviour; for example, referring patients to the nurses in busy hours and appearing not to care about their nurses' workloads. On the other hand, nurses in the UK have power in diabetes care, as they have their caseload of patients to follow-up and scheduled activities to be accomplished during the period of their working day.

The findings from the current study are consistent with those in previous research about the issue of unequal professional power that exists in some

healthcare systems, where doctors are the top level of the hierarchical structure (Street et al. 2005). It has been identified in the current study that the nurse/doctor power relationship is minimal in the UK but is still considered an issue in Kuwait. Some nurses in Kuwait disapproved of tasks being delegated to them by the doctors, as these added duties meant more responsibilities and workload for them. On some occasions nurses went to doctors asking them to speak to their doctor colleagues to refrain from referring patients to the nurses at the last minute. These differences in the two cases are probably related to the differences between levels of autonomy between nurses in the UK and Kuwait. It was observed during consultations that doctors in Kuwait involved nurses in most of the activities needed in diabetes care including counselling, requesting lab work (HbA1C level), adjusting insulin and referring, during which nurses in Kuwait demonstrated a teamwork spirit. This relates to the culture of each career (nursing career and medical career) and to the obstacles between nurses and other healthcare providers in a team. For instance, physicians who were trained in a culture to assume responsibilities for decision-making (Hall 2005) would see nothing wrong with delegating an action.

Nurses in both countries showed their competency derived from the knowledge base and skills they gained during practice, which means nurses can also wield power over diabetes care practices. Nurses experiences and educational preparations are key requirements to provide optimum patient-care (Manojlovich 2007). Nurses in the UK were able to refuse delegated job if not under the scope of their practice, which indicates nurses in the UK have professional autonomy. Although nurses in Kuwait were able to negotiate about refusing some referrals, they still lacked professional autonomy and recognition. This situation may have an impact on the quality of nursing care if the nurses are not performing within their scope of practice; they can make errors and may not discharge their duties correctly. Furthermore, patients may lose trust in the nurses if they realise that the nurses lack autonomy (Laschinger et al. 2001).

Nurses' in both countries interviews indicated that they need to have good working relationships between themselves and their doctors, who were supportive and understanding most of the time. The literature highlights the importance of good working relationships between healthcare professionals, as there should not be a hierarchical power imbalance. It is important to consider power within a teamwork approach based on knowledge, skills, and experience (Baxter & Brumfitt 2008), rather than on role or title (Llahana et al. 2004). This

means power is dependent on scope of practice rather than on a person's role. In fact, a working relationship is considered an important characteristic of quality nursing care to patients (Shiu et al. 2012), as demonstrated by nurses in both settings when they demonstrate their competency and knowledge. Additionally, the nurses in both sets showed their support for collaborative and working relationships with the doctors, regardless of the factors described earlier in this section.

In the current study, both sets of nurses reported good work relationships between themselves and doctors, regardless of the issues raised and discussed previously. Literature explores medical dominance in team working (Baxter & Brumfitt 2008), a situation which can contribute to nurses lacking sufficient power to change their work status. In fact, in relation to nurse-doctor relationships in the current study, nurses did not mention hierarchical issues between them and doctors as major issues, apart from unnecessary referrals and involvement in medication. These points were considered as nuisances rather than major issues compared to other hierarchical interaction, such as with their senior nursing staff. Professional power control is minimised in the UK as a result of nurses' ability to lead diabetes care, manage diabetes clinic and to specialise in different areas of diabetes care. Nurses are also able to work and discharge duties within their scope of practice. Nurses in the UK can refuse doctors' orders if they know that this is beyond the scope of their practice; for example, a nurse reported her refusal to a doctor asking her to go to the ward to discharge a patient, when there are nurses in the ward who can do this and doctors in the ward are available to do it.

8.4.1.1.3 Relationships between nurses and senior staff

Despite the points nurses in both sets raised about issues of power relation between themselves and doctors and patients, the third type of power relation was the significant one reported by nurses and patients in both case studies and observed by the researcher. Nurses in both case studies expressed concerns regarding relationships with senior nursing staff, which led to some of the nurses becoming dissatisfied and uncomfortable as a result of the way their senior staff treated them. The approach that senior staff followed with nurses in this study conflicts with what the literature has reported about how senior staff, who have managerial control over nurses and supervisors, support and motivate nurses to

enhance high quality nursing performance in patient care (Laschinger 2008). This approach involves organisational hierarchy, which was considered by all the nurses in the fieldwork as the most complex cluster of factors that could restrict their role and resulted in their feelings of lack of power. In particular, the nurses in Kuwait possessed lower levels of autonomy regarding their decision-making duties, compared to the levels of autonomy enjoyed by nurses in the UK.

The nurses' interviews from Kuwait suggested that they often experienced negative comments from their senior staff about the work they were undertaking with their patients, which the senior staff considered not significant as demonstrated by relationships between nurses and their senior staff. This scenario was considered as threatening by some of the nurses in Kuwait, who reported such criticism as being a potential threat to their professional autonomy.

Lipsky (2010) emphasised that frontline employees in public services (e.g. nurses), are considered to share responsibilities such as teaching, judging and decision making which can impact on patients' lives by interacting with them. Lipsky (2010) highlighted that these tasks require a person who is creative and has awareness about the needed practices. Though nurses in the current study were observed to have these characteristics, they did not possess the necessary authority, especially in Kuwait. The nurses in Kuwait reported their lack of personal and organisational resources that they needed to perform their job effectively, in addition to the lack of motivational aspects such as titles, public recognition and detailed job description. Additionally, nurses in both Kuwait and the UK reported they are facing a high demand for their services, together with the associated stress that goes with such a demand level. Despite the factors described above, nurses in both case studies reported that they did not allow their relationship with their senior to impact on their relationship with their patients or the care provided to their patients; behaviour that was confirmed through the process of observation by the researcher. Nurses need to have a comfort zone in which they have their own protocol and job description. Nurses need to have secure jobs and feel safe in their careers in order to provide quality care (Begat et al. 2005). Exploration of these imbalances between nurses and senior staff in both countries can contribute to current knowledge regarding the importance of the relationship between nurses and their senior staff, in shaping the organisation of nursing practice at diabetes clinics. In fact, implications for organisational strategies lie in the hands of senior nursing staff. They can improve the status of the role of nurses through such reinforcers as support,

praise, and recognition of their performance in diabetes care. Strategies to address hierarchy may include involving managers in operational decision making for example identifying areas where the organisation can cut costs. Involving staff in review and updating guidelines and policies, this will boost morale among staff members as they will have a sense of pride to have been involved in decision making process.

The findings of the current study are similar to those of Onishi & Kanda (2010) who found that staff in the hierarchy did not encourage or motivate nurses. In direct contrast, in a study by Aiken et al. (2001), nurses described senior staff as open to listening to their worries, allowing them to participate in making decisions and recognising their contributions to patient care. However, in the current study nurses in Kuwait reported a major lack of recognition of their roles and what they were doing, resulting from a lack of understanding of the role of nurses in diabetes clinics shown by other healthcare professionals, such as doctors and senior nursing staff.

Furthermore, nurses in Kuwait could be perceived by patients, as staff who lack autonomy and confidence, as they are vulnerable to the instructions of their seniors regardless of the circumstances. Patients might lose confidence in the nurse's authority and expertise and then perhaps associate this with a nurse's lack of experience, lack of knowledge and/or expertise in diabetes education or signs of limitations in their ability to organise their own time. Such situations could be considered a global issue. These situations influence the patients to request that their next consultation should be with a doctor (Collins 2005), as the nurse does not own her time or have adequate time to consult with the patient (McCabe 2004).

The cross-case analysis was able to show differences between the two health care systems of Kuwait and the UK. For instance, patients in the UK mentioned that they have been with the diabetes nurse educators for more than five years (See Chapter 7). However, some patients in Kuwait mentioned that they did not know about the presence of the diabetes educators in the clinics they were attending. This is because nurses in diabetes clinics in Kuwait are not given a title, nor do they have their own job description which should clearly specify their role. The perception of the Kuwait-based nurses in the current study is that this lack of recognition will consequently lead to devaluing the nurse's role, which can lead to

both ignorance and a lack of appreciation in the wider community. This problem highlights an issue related to how the organisation of diabetes care in Kuwait has failed to promote the role of nurses in diabetes clinics, as some nurses reported. To the Kuwaiti wider community, it looks like a top down hierarchical process in which the nurses contribute and show their effective role in diabetes care, but at a low-grade level. This inequality, as reported by nurses from Kuwait, is maintained by senior nursing staff who do not support them with adequate resources, related to their specialities; such as the case in Kuwait of having no dedicated consultation rooms to facilitate nurse-patient privacy. This lack of consultation rooms impacted on patient care, as patients were attending consultations while other nurses or patients were present in the same room. This negatively affected some patients who were not able to talk about some private issues, thereby creating a barrier to the provision of quality nursing care. Nayeri and Aghajani (2010) identified two indicators of quality of nursing care: respecting patient privacy and patient satisfaction.

Nurses in both case studies reported their concerns about the salary they receive, as it is equal to other ordinary nurses' salaries. The nurses in this research felt their role and the care they provide is specialised and individualised, and that their salary levels should reflect this 'expertise'. However, there was no evidence to suggest financial issues were linked to, or impacted upon, the care nurses in both countries provided to their patients. A factor that had an impact on their work was the level of control exerted by their hierarchy i.e. senior nurses asking them to help somewhere else, and being overwhelmed due to the shortage of staff. In fact, nurses in Kuwait expressed feeling anxious and threatened in their work as they became increasingly discouraged.

In both case studies, financial reward was mentioned. The nurses in the UK may have been more able to express their discontent and a few referred to their incomes and how they did not equate to their specialised roles. However, in Kuwait nurses linked financial reward to lack of recognition and absence of job descriptions. One major factor highlighted by Al-Kandari and Ajao (1998) regarding lack of recognition about nurses' contributions in Kuwait was related to the lack of information about the nursing profession. It was frequently reported by nurses in Kuwait case study that people do not know about the availability of diabetes educators. Also, there were patients who said they did not know about the presence of nurses providing care for diabetes in Kuwait. In the literature the issue of nursing's unattractiveness as a profession has been related to various

social and cultural factors (Al-Kandari & Thomas 2008). These views about nurses were obvious in Kuwait, as the number of Kuwaiti-born doctors highly exceeded the number of Kuwaiti-born nurses by a ratio of 4 : 1 (40% doctors and 11% nurses) (WHO 2011). Similar report was raised by Toumi (2017) that Kuwaitis represent six per cent of the 22,000 nurses working in the country compared to 30 per cent Kuwaiti doctors.

In Kuwait, the "financial aspect" seems to extend beyond personal rewards, to include the resources available to the diabetes nurses to fulfil their non-specified yet demanding role. Al-Kandari and Ajao (1998) found that nursing in Kuwait was considered a ‘powerless’ profession and related that to the profession’s low salary and low status image held by the community, including family members and friends. The differing cultural contexts of the diabetes nurses in both cases may have played a noteworthy role in the way the nurses viewed financial issues related to their work. Cultural differences regarding nurses' financial views toward their career were examined by Aiken et al. (2001) in five countries: the United States, Canada, England, Scotland, and Germany. They found nurses in the UK were not satisfied about the salary they received, whereas nurses from the other countries were satisfied in various levels.

In both cases, these issues are firmly placed within the structure from which diabetes nursing care is delivered. The implication here is that there may be a deeper discontent about the value of the role that diabetes nurses are undertaking. This aspect may have an influence on the process of diabetes care delivery, in that the issue of role conflict may affect nurses' motivation and willingness to deliver quality care. This situation can then affect the outcome, which is the patients' perceptions of the care they receive. These factors about cause of decreased motivation, including financial issues besides the lack of recognition, have been described in the literature; in particular, that such factors can lead nurses to feel discontented with the very demanding and responsible jobs they do (Fitzpatrick 2002; Nayeri & Negarandeh 2009; Hill 2011).

A significant challenge in diabetes care arises from patients' negative attitudes and perceptions and one aspect of this is the preference towards meeting nurses, instead of doctors, which has been discussed in the literature (Shum et al. 2000; Courtenay et al. 2010). In the two case studies, patients reported dissatisfaction when trying to get help from doctors. These findings about patient preference

contradict some of the literature, which identified patients' preference to see doctors rather than nurses (Say & Thomson 2003; Say et al. 2006). However, these studies covered areas other than diabetes treatment from nurses. In both case studies the negative experiences patients described were related to similar factors, including doctors' communication styles that resulted in a lack of organised work and patients lacking information about their own health care and what it might entail.

8.4.2 Increased patient burden and non-adherence

The cross-case analysis showed that there were different burdens that arose from each case, which impacted on the patient in terms of the quality of nursing care on offer. The increase of the patient's burden, where they might begin take responsibility for their own care, is a result of some aspects of the 'self-management of your condition and treatment' approach which may have an impact on the quality of nursing care. Nurses played a major role in encouraging patients to self-manage their diabetes. Nurses' lack of control over external factors, which influence coordination of a patient's self-management process, has created inconsistency of care received. In both case studies, patients faced serious challenges in their diabetes care, from which case negative health consequences could result. For example, in Kuwait there was the issue of travel where the patients objected to travelling to the clinic at different times, with multiple appointments. They stated that this would put extra pressure on them to travel to the clinic to meet all appointments.

In the UK patients complained about having multiple procedures, in different locations and with different appointment intervals with different healthcare providers from the diabetes care team. These differing obligations burden patients and their families with financial costs and time pressure. Access to healthcare services and travelling are perceived as pressure on patients using healthcare services to deal with their diabetes (Wellard et al. 2008). Additionally, a patient's burden, and its impact on their lifestyle, can increase feelings of frustration by having to self-care for their diabetes (Wolever et al. 2010). This may lead them to ignore the care instructions given.

Say and Thomson (2003) suggest that some patients prefer to be informed about the choices of treatment they have, regarding their conditions, yet they might not wish to actively participate in planning or making decisions about their own treatment. In this study, some patients' low motivation, or perhaps minimal

awareness of their own condition, was indicated by not adhering to their plan of care. Such a lapse might be related to the disjointed care and lack of collaboration amongst healthcare team members in diabetes care. As outlined in the findings, the patients from the UK and Kuwait received care from each department separately; for instance the consultant, then the nurse, the dietician, podiatrist etc. On this basis, it could be argued that one of the main reasons for patients non-adherence to their care regimen was fragmented care provision. Therefore, in the current study, patients intentionally choose to adhere or not adhere to their plans, based on specific circumstances such as taking up the role of self-management, which some patients found to be heavy. In this case, patients would intentionally choose not to adhere to their unique plan of care. Patients' participation in care played an important part in supporting patients' adherence to health behaviours, which in turn impact clinical outcomes (Pooley et al. 2001). In the light of this influence, it can be argued that patient non-adherence can be an organisational issue that can influence patients' poor perceptions about the care they receive. However, instead of appreciating these initiatives, patients can withdraw themselves from self-management procedures, as a result of the workloads they are expected to undertake, even though these loads are directly related to their personal health benefit.

8.4.3 Patients' perceptions

In this study, the outcome component is reflected in patients' perceptions about the work nurses do to assist patients in terms of self-care and management of their diabetes. The component includes patients' physical status and performance, in addition to their self-care ability in managing disease, symptoms, and treatment (Irvine et al. 1998b).

There is a lack of research about understanding patients' perceptions about nurses' roles in diabetes care. This current study has taken a novel approach in that it has used observation data and interviews with patients to provide evidence of how nurses use their knowledge and skills to understand and meet patients' needs. Patients from both countries interviewed about their perceptions of nurses' roles offered positive opinions about the roles nurses played in their care. This was supported in the literature where nurses were found to be highly effective in routine management of long-term conditions, such as diabetes (Litaker et al. 2003). Providing patients with efficacious, effective and efficient

healthcare services, based on the most up-to-date guidelines, will assure quality of care, which is mainly achieved by meeting patients' needs (Mosadeghrad 2012).

Despite the issues mentioned in this section about patients' load of responsibilities to self-care, patients in the two case studies expressed positive feelings about their nurses and some of their statements are indicators of their perceptions of the quality of nursing care available; for example: *'she respects me and my needs*', '*excellent'*, '*listens then provides support and guides me'* and *'accepts your circumstances'.*

Based on the NREM, Doran et al. (2006) emphasised that patient outcome measurement is considered the foundation of evidence about effective nursing care. From patients' perspectives, quality of nursing care is classified into levels ranging from *poor* to *high* (Irurita 1999). These classifications, according to Irvine et al. (2002) are patient structure variables, which include patient characteristics and health expectations that might inform how patients perceive nursing care. Patients in both case studies might have felt under pressure to make positive statements, as they might be concerned that their care could be negatively affected if they offered any critical observations. In fact, Irurita (1999) suggests that patients, in some instances, do not know where to go to complain about their nursing care. Previously, patients from Kuwait have expressed dissatisfaction about the care they received from nurses (Al-Kandari & Ogundeyin 1998). This dissatisfaction may relate to the fact that patients' expectations about care are different from nurses (Ahmad & Alasad 2004). In the current study, there were no patients' complaints about nursing care, an outcome which might be related to the fact that patients have their own thoughts and expectations about what nurses are supposed to do (Al-Kandari & Ogundeyin 1998), even though other findings from Kuwait revealed a lack of information about the nursing profession in the country. These conflicting views might be the result of power relations highlighted in this chapter.

The patients in both case studies, when asked about what they considered as being quality care or what might nurses do to provide the best care they can, responded that they considered nurses to be competent and have expert knowledge. Literature El-Deirawi & Zuraikat (2001) and Chan & Zang (2007) has addressed patients' observed knowledge about nurses' competency and these aspects are seen to be basic in nursing practice. In patients' language nurse competency is about providing the best care, which is in line with the model of

quality of nursing care (Donabedian 1988). To patients in this study, the professional competency and knowledge which nurses have regarding diabetes care, reflect patients perceived understanding of quality care. Patients reported that competent nursing is not only about the knowledge nurses have, but is also about the caring spirit and the on-going support they receive from nurses; admired characteristics which contribute to patients feeling safe and in good hands. In another study conducted in Kuwait, nurses were found to postpone their own needs, such as having a tea break, in order to meet their patients' needs (Al-Kandari & Thomas 2008).

A nurse's competence, skills and knowledge make patients feel safe and secure (Kvåle & Bondevik 2010) and these characteristics contribute to quality of nursing care (Boswell et al. 2004). Patients in both case studies reported that nurses had a good caring spirit, were always available, approachable, accessible, patient, listened to them attentively, empathetic, considerate, fair, good communicators, kind, responsible, and trustworthy. Nurses 'being there when needed' was a key finding in a study about quality of nursing care from patients' perspectives (Irurita 1999). This finding is similar to what patients in the two case studies expressed and appreciated about their nurse's; they were 'accessible', 'available' and 'being there when needed'.

In both case studies, other nurse attributes identified by patients that they considered to be desirable characteristics of quality of nursing care, included: i) involving them in decision making about their own care and ii) being able to choose between the options of care available. Despite what is considered in the literature regarding patient satisfaction as an indicator of the quality of nursing care (Larrabee & Bolden 2001; Johansson et al. 2002; Larrabee et al. 2004), nurses in the current study, when asked about how they view their roles, did not provide information about whether they perceive their own role to be of acceptable quality; instead, they provided information about their actual roles in diabetes care. Nurses in this study indicated that the notion of quality nursing care can only be expressed by patients, and not by the nurses employed to provide it. This finding contrasts with the literature, that quality of nursing care is traditionally identified and evaluated from the nurses' point of view (Leino-Kilpi & Jaana 1994; Burhans 2007; Burhans & Alligood 2010; Kvåle & Bondevik 2010). The nurses in this study considered that it was not their position to judge whether they have administered quality care but it is patients' experiences.

The nurses in both case studies reported how patients expressed what needed to be included in the broad concept of quality nursing care: i) being cared for by nurses who successfully communicate with them, with their caregivers, and other healthcare providers ii) the provision of emotional, psychological, social, cultural and spiritual support and iii) being empowered by nurses through health education during proper consultation sessions. These views strongly suggest that these factors can be considered to constitute quality nursing care and indicate that nurses have knowledge about their patients' satisfaction regarding the care they provide to them (Findik et al. 2010). In each consultation the researcher attended, in both countries the nurses were observed to meet patients' requirements and when the patient had issues such as anxiety or worries, the nurses worked with the patients to resolve these issues.

Attree (2001) describes care that is not related to need as 'not so good' care. Nurses in this study utilised various approaches to demonstrate quality in nursing care, which are considered as quality indicators. Among the nurses interviewed it was considered that being accessible, available (Dierick-van Daele et al. 2010) and utilising a patient-centred approach (Robinson et al. 2008) were seen as main factors of nursing care provision.

8.4.4 Extending the NREM

The discussion of the findings from this research has been presented within the framework of the NREM and within its three components of structure, process, and outcome. Though educational systems for nurses and organisational structured service delivery do not rely on guidelines, including them in the conceptual model is a way to ensure quality of nursing care. In fact, that is the reason the governments utilise guidelines and why health bodies adopt guidelines, because those 'parcels of information' are the basis for creating quality care for patients, professionals, and organisations. The findings from this research have identified new knowledge that can inform the development and introduction of improvements to nursing care for diabetes patients. This research proposes a model that will shape the role of nurses in diabetes care in particular settings; particularly the healthcare system in Kuwait. The proposed model is based on a suggested refinement of the NREM (Irvine et al. 1998) to include another element - nursing guidelines - as one of its components (see Table 33).

The literature argues that guidelines established by nurses are not research-based (Thompson et al. 2001). Gerrish and Clayton (2004) suggest that nurses already

have the skills and practices that are evidence-based. Nurses in both case studies demonstrated their roles according to what they already knew from nursing practice regarding diabetes care. The research identified that some nurses in the UK were participating in processes to modify and develop guidelines, based on their expert knowledge and skills in the treatment of diabetes, which put them in a good position to use appropriate evidence to develop guidelines. However, in Kuwait, nurses were more aligned to the role of 'street level bureaucrat', at the point of interaction with the patient. In future, maybe these nurses in Kuwait will receive recognition through the creation and implementation of job descriptions, role definitions and status details, which would allow those nurses to develop their own guidelines for T2D patient care. Provision of quality nursing care can be considered as a consequence of nurses adopting similar roles, with the quality of their nursing care agenda deriving from these similarities. Throughout the world, the healthcare needs of diabetes patients might have some similarities (Skovlund & Peyrot 2005). Additionally, having a unified diabetes care system within different healthcare settings is a positive step, as effective diabetes care stems from a unified approach to its delivery.

8.5 Chapter summary

This thesis sought to answer the main research question and the four aims as answered, restated and discussed as follows:

"How do the different approaches to nurses' roles in diabetes care impact patients' perceived quality of nursing care?"

(1) Investigating the actual roles undertaken by nurses in type 2 diabetes care in the UK and Kuwait

Whilst nurses in the UK and Kuwait take on similar roles, the approaches they take to fulfilling these roles are different. The findings suggest that the role of nurses in diabetes care in the UK and in Kuwait are similar, which raises two important questions in the researcher's mind: i) how is it that the role of nurses is the same in the two countries, while the two healthcare systems are different? and so ii) how is it they are both providing quality nursing care, in particular for diabetes patients? In the UK, the DNs follow a nurse-led system, whereas in Kuwait the diabetes nurses follow a medical-led system. In both systems, nurses' professional roles cover different areas of diabetes care regarding health

education and health promotion, leading to encouraging patients to undertake self-management of their diabetes. Additionally, nurses in both case studies were acknowledged as being qualified and trained to identify and meet patients' educational needs, as well as assisting patients in resolving their problems and concerns. The nurses in both sets also worked collaboratively with other healthcare providers by communicating professionally, demonstrating knowledge about diabetes care, and leading others to trust their role as professional healthcare providers in diabetes clinics. As professional individuals, the nurses showed that they had the confidence to rely on their experience in planning and deciding on patient treatment and management plans.

The discussion in this section has been positioned within recent literature on this aim, and has expanded the discussion to look at other methods of diabetes care that can be coordinated by nurses working in the field. The discussion adds to the importance of expanding the role of nurses in diabetes care in Kuwait, as nurses were found to play similar roles as the UK nurses; however, these roles in Kuwait are not officially recognised and official accreditation is needed for that to happen. In addition, DNs in the UK case study were found to already perform an extended role, as well as having the authority to perform independently most of the duties in diabetes care.

(2) Investigating the extent to which the nurses' different roles in type 2 diabetes care influence the perceived quality of nursing care

The researchers investigated patients' in both countries perceptions about the care provided by nurses. Patients' overall comments were positive regarding nurses' competencies, autonomy, having good relationships with them and with other healthcare providers and have good communication skills with their patients. The majority of the patients in both case studies reported that the quality of care they received was 'good' and that they were satisfied with the care they received. However, a patient from Kuwait mentioned about the presence of power relations between nurses and other healthcare workers; essentially resulting from the top-down hierarchy embedded in the relevant health-care system. For instance, a senior nurse interrupt nurse-patient consultation and nurse felt embarrassed.

Patients felt nurses are working more than they supposed to do and they are working more than doctors. Patients wished if nurses can provide them with all what they need as one patient preferred the 'one stop shop' that is provided fully

by a nurse. Overall patients reported their satisfaction about nurses performances and appreciated what nurses provided to them.

(3) Investigating / reviewing the guidelines that are used to guide the practice in the provision of diabetes care in the UK and Kuwait

Nurses adopting guidelines is considered as a way to deliver performance evaluation for nurses in Kuwait, including nurses working in diabetes care. In the UK, there is a similar issue regarding the lack of a performance evaluation system for specialist nurses (Chang et al. 2002). This study has tried to understand how nurses perceive and react to the published guidelines that are internationally, nationally, and locally recognised. The nurses in the UK and Kuwait, to some extent, were found to be following similar core guidelines, but the way nurses in the UK and Kuwait use the guidelines differed, as the guidelines and the two health care systems are informed by different perspectives. In consideration of the international guidelines in Kuwait and the NICE guideline in the UK, the nurses viewed them as too general; they lacked specificity about which part is for the nurse to be guided by. For the national and local guidelines, the nurses in both sets viewed them as too specific and not including all that they do. Therefore, local guidelines were often more detailed in the information they provided about care delivery, but not in the other areas pertaining to the control of diabetes. This variation in focus resulted in the nurses in both countries performing multiple tasks that might be beyond their practice.

(4) Evaluating if nurses are delivering care based on the guidelines

The majority of nurses in both countries thought they were doing more in their roles than was required of them, according to the guidelines. However, they were found to follow the scope of their practice and considered patients' safety as a priority in their work and never to endanger a patient's life. Some of the nurses in both sets felt they were diverging from the guidelines because they found these guidelines too broad; including other healthcare professionals' roles, not only nurses' role. Nurses also found that some guidelines were too specific and failing to include all the duties they are actually performing because these guidelines were designed for small groups of nurses in the community. Nurses from both nations reported the need to have their own guidelines that are designated to those working in diabetes care and not other staff. Nurses are ready and confident to begin to develop their own guidelines; for example, in Kuwait nurses

want to update the guidelines, in particular to include information relating to the psychological component of diabetes management and care.

The next chapter contains a discussion of the original contribution to knowledge provided by this study; implications of the study's findings regarding practice and policy in T2D care; possible directions for further research and a dissemination plan for the study findings.

Chapter 9: CONCLUSIONS AND RECOMMENDATIONS

9.1 Summary of main findings

The key findings of this study were:

- There are core elements of care undertaken by nurses in diabetes care in the UK and Kuwait
- Whilst nurses in the UK and Kuwait take on similar roles, the approaches they take to fulfil these roles are different
- Nurses in the UK and Kuwait, to some extent, are following similar stem guidelines, but the way nurses in the UK and Kuwait use the guidelines are different, with that use being based on different perspectives.
- There are top-down organisational factors that impacted nurses' role performances related to power relations between nurses and other personnel working in the field of diabetes care.

These key findings were based on the two case studies, one located in the UK and one in Kuwait, in which the actual working roles of nurses were identified in order to be compared with what the guidelines-informed about the roles of nurses in diabetes care.

In this thesis, the researcher attempted to take up the recent global challenge to highlight empirically the different approaches of the actual roles, and the guideline-informed roles, undertaken by nurses in T2D care, and the extent to which these different roles affect perceived quality of nursing care in two different countries.

The study focused on exploring nurses' roles with regards to the different approaches they adopt in diabetes care practice and the impact these approaches have on patients' perceived quality of nursing care. The researcher considered it essential to gain insights into the role of nurses in different healthcare systems, as this would provide rigour to the research process and study findings. The decision to focus solely on nurses' roles was a key factor in order to provide depth, rather than breadth, to this research in the specific area of diabetes care. Nurses described their roles in diabetes care and, in addition, the researcher observed them performing these roles during nurse-patient consultations. The

functions that the nurses are actually performing under the scope of their practice were sometimes found to be beyond the nurses' practice, in order to play an effective nursing role. For example, nurses were not going home before finishing their care commitment to their patients. They are working more than their working hours, this is not by force but because of their caring nature.

The results of this study provided insights into the actual role of nurses in diabetes care through exploration of the different approaches they take to ensure the provision of quality care, which will impact on their patients' perceptions of the nursing care they receive. The research has identified nurses' intentions to provide health promotion in the framework of health education and also provided an exploration of nurses' actual practice and input to diabetes care for patients with T2D.

It is recognised that diabetes control is an increasingly challenging practice in healthcare systems, and for patients themselves, as a result of the management and self-management regimens patients need to follow. Equally important are the challenges stemming from the practices that are being initiated by healthcare professionals, in order to assist and guide patients to try to manage their own diabetes control. However, this treatment option has been shown to result in patients' non-adherence to the self-management requirements planned to control their own diabetes, due to the workload of responsibilities they are faced with. Whilst diabetes care is a shared practice, in which members from the healthcare team are included, in the literature nurses were shown to play a major role in providing health education and health promotion in this area. They assist in empowering patients to self-manage their own diabetes, an initiative that has been explored in the literature. The current study has added evidence to what is in the existing literature regarding nurses' roles in improving the quality of care for diabetes patients; the possibility that those patients will be able to manage, or self-manage, their own diabetes care more effectively in future received particular attention.

The current study suggested that the limited number of revised guidelines, designed by nurses, can explain why some nurses, in both case studies were not directly or slightly diverging from following the guidelines. Nurses are able to develop strategic guidelines that cover aspects of care that are relevant to their practice, especially guidelines that are for patients with diabetes and with no other conditions. This unique finding was previously reported by the California Healthcare Foundation (CHF) (2003); noting that guidelines established by nurses

are appropriate for those patients with diabetes but without significant functional disabilities, because those patients with more complex health problems will need other choices of treatment.

Interestingly, the role of nurses was considered more of a lead role in the UK, as diabetes nursing was positively perceived in the UK; particularly the cost-effectiveness and quality of care benefits. However, in Kuwait, no empirical research was documented which explored the multifaceted role undertaken by nurses in diabetes care, or in other areas than diabetes. There is little published research about the role of nurses in Kuwait. It has been suggested that a number of issues arisen from personal points of views of the nurses working in diabetes care related to their professional autonomy and lack of authority in their working environment and relationships with others which were impacted mostly by organisational factors resulted from top-bottom way of work. However, no evidence to support these factors and no reference has been identified in the literature regarding an exploration of the impact of these organisational factors combined in one study, which would provide more depth and rigour to the findings. In both the UK and Kuwait case studies nurses were complaining of top-down relationship problems, despite the professional autonomy nurses enjoyed in the UK. This was the first UK nation-wide study to explore this contradictory factor. In addition, it is the first Middle East focused study that has explored the importance of implementing diabetes nursing in Middle Eastern countries through a nurse-led system that would be cost-effective, as well as improving the quality of the nursing care and treatment provided.

Interestingly, the majority of patients in the study believed the presence of nurses in coordinating diabetes clinics was of benefit, as the nurses could improve their care. Furthermore the majority of nurse participants believed that this could improve their status especially in Kuwait in which the image of nurse's role was either undervalued and/or not recognised by the public. Some patients from the Kuwait case study reported that they did not know about the presence of 'dedicated nurse educators' in diabetes clinics; at least in part because those nurses are not awarded that, or any other, title.

The NREM obtained from Donabedian's quality of nursing care model incorporated nurse's personal characteristics and other characteristics pertained to nurses' role relationships, experiences relating to their role and about the

guidelines, and their qualifications. The exploration of these nurse-role characteristics was demonstrated in Chapters 5 and 6. The discrepancies of these characteristics were demonstrated in Chapter 7 and the relevance of these characteristics was shown in Chapters Two and Eight.

Overall, it is hoped that this thesis will offer evidence-based suggestions for incorporating a new advanced and/or elevated role for nurses in Kuwait, with a priority focus on diabetes care. Such an advancement could later be extended to other areas of special health care (such as in cardiac clinic and respiratory clinic).

Furthermore, guidelines can be established that are specifically designed for nurses in diabetes care, rather than other healthcare professionals, as such documents can act as permanent sources of information to enhance nurses' roles in the future. Such guidelines would then require no more than regular updates based on current evidence-based research. This initiate will lead nurses to have more authority and independence in the provision of diabetes care; an outcome enabling those nurses to deliver more effective types of diabetes care that will match patients' needs and expectations.

9.2 The study's strengths

It can be argued in the light of the focus of this study, that nurses' and patients' in both case studies perceptions about quality nursing in the area of diabetes care have not been explored or investigated in the literature. Such an approach has not previously been considered as a single research study. There has been no research identified in the literature that has used multiple methods in exploring this particular area. The only study found to use similar methods mirroring this current research was conducted in Hong Kong (Shiu et al. 2012) but its focus was on three specific areas: continence, diabetes and wound care; only one of which was relevant to this current study.

In the current research, the focus has been on T2D; in particular, to explore if there was a link between nurses' perceptions and practices and patients' perceptions. By comparing two healthcare systems, this study has identified the perceptions of the two main actors in diabetes health care.

Therefore, this study is the first to comprehensively explore:

- The role of nurses from different countries with different cultural, societal and of healthcare system infrastructures. The exploration of the

phenomena of the study would not show rigour if conducted in a single case study. However, there is a need to explore the phenomena of the study from different perspectives and from different data sources. Therefore, the aims of the study and objectives are accomplished through varieties of lenses (different contexts and different data sources) which allow for multiple aspects of a phenomenon to be understood (Baxter & Jack 2008). Further, the adopted multiple case study approach facilitated the integration of the plural sources of data collection in each case study, so as to come up with one set of data that is interpreted in the form of key findings extracted from each individual case. Each individual case study was later cross-analysed with the other individual case study to develop major key findings that answers the research question, as well as meeting the study's aims and objectives (see Chapter 8).

- The role of nurses' and patients' perceived quality of nursing care in a multiple case study approach, which enables me to compare the differences within each case and between cases. Yin (2013) asserts that conducting multiple case study research will ensure replication of the findings across cases.

- The roles of nurses in relation to the guidelines; the actual roles of nurses in the real working world and what the guidelines-informed about nurses' roles in diabetes care. This exploration of multiple factors related to the strategic plans followed in establishing the different revised guidelines has informed the gate-keepers about; i) rethinking the current guidelines and ii) if the next step might be the development of new frameworks for guidelines that are specifically designed for nurses in diabetes care provided in the UK and Kuwait.

- Nurses' and patients' perspectives about how the different approaches of nursing care for diabetes patients impact on the perceived quality of nursing care. Obtaining these perspectives from a multiple case study approach would allow for comparisons via the triangulation of data sources and between two different case study contexts.

The adoption of the multiple case study methodology, with multi methods, is considered one of the strengths of this study. The adoption of embedded units of analysis within each case study site was critical to the unanticipated exploration of the different approaches and structures of both healthcare systems in each trust, that led to a unified goal about patients' improved diabetes outcomes. The findings of the study were exposed to rigorous strategies brought to the data through within-case and cross-case analysis. These strategies allowed comparisons within the data of each case study and between the two case studies, which established transparency at each stage of data analysis (Spencer et al. 2003). Writing-up the findings in separate chapters (Chapter 5: UK and Chapter 6: Kuwait) allowed for within-case reports for each case study, which facilitated the management of the amount of data gathered (Stake 1995; Baxter & Jack 2008). Reports from the case study participants together, with the later formulation of themes identified via within-case analysis, were validated by the constant and close contact maintained between the researcher and her supervisors, which increased her confidence in moving on to interpretation of the research data and findings (Bazeley 2013). The preliminary findings from the cross-case analysis were subjected to revision by the supervisory team as feedback. This process added further credibility to the research process and reconciled any possible bias by the researcher (Lincoln & Guba 1985). The utilisation of different methods of data collection produced different perspectives that enabled a greater depth of understanding about the focus of the study. For instance, patients' and nurses' interviews were compared to allow for the truthfulness of the information provided by nurses about their actual roles. Therefore, what nurses expressed was compared with what patients expressed about their nurses' roles. In addition, within-case analysis was also adopted between interviews and other sources of information, such as observations and reviews of documents, which allowed for more robustness of the findings. For instance, what patients and nurses expressed was verified during observations and compared with what the guidelines-informed about the role of nurses in diabetes care. This indicated that adoption of a qualitative case study with multiple methods of data collection was appropriate for the conduct of this study. A total of 34 nurse and patient interviews from the UK and Kuwait, with 20 observations of nurse-patient consultation sessions, were conducted, in addition to reviewing eight guideline documents.

9.3 The study's limitations

The selection of only two case studies was considered a limitation of the research design but that choice was due to the pragmatic reason that the researcher had a limited access to the UK counties. This limited access made it impossible for the researcher to investigate other roles nurses might undertake in other NHS hospitals in English counties other than Nottingham. Regarding Kuwait, the chosen hospitals were the only hospitals that included nurses as significant contributors to diabetes care. Diabetes care with nurses' involvement is yet to start in the other hospitals in Kuwait.

Due to the time constraints in the overall study, an in-depth exploration of the participants was not attempted. As discussed in the methodology chapter, interviews and observations included some methodological issues that inhibited the researcher from grasping some details, as a result of these methods. In observations, nursing interventions were not fully observed as there were always time limitations to take into account. Firstly, in the UK there were two periods of patient consultations: morning and afternoon. In each period, there was an average of two patients coming to the clinic as others did not come. Secondly, the same nurse will have different consultation periods, so she might be available in the morning period but not in the afternoon of the same day as she had other obligations in wards or her office. Further, the focus of the study is about type 2 diabetes care at the clinic, so accompanying the nurse to the wards was not seen as beneficial to the study, as most patients admitted to the ward were cases of of type1diabetes.

As this study was undertaken simultaneously in the UK and Kuwait, frequent travelling was difficult. The researcher started her field study in the UK, then travelled to Kuwait, after which she continued her field work back in the UK.

Physicians' perspectives about diabetes nurses' roles were not explored in the current study. The following points are based on my personal experience about Kuwait and UK doctors. Firstly, in the UK doctors who were emailed about facilitating the study did not reply to any of the emails, and one doctor forwarded the email to the matron of the diabetes clinics in the two hospitals in the UK without replying. After receiving the approval of the R&I department, the R&I manager forwarded the researcher's emails to the doctors and they replied with their agreement for me to conduct the study in 'their' clinics and with 'their'

patients. Secondly, the researcher contacted a doctor to gain advice before deciding on the appropriate study participants; he showed his disapproval of the research aim in that he agreed about nurses' contributions to diabetes care but rejected any suggestion they should lead or take a bigger or extended role, as this was a doctor's territory, not a nurse's.

In Kuwait, the doctor assured the researcher that her proposal will not pass through ethics committee because of what the researcher is about to explore in the study. Furthermore, for this research doctors' involvement was not needed, as the patients were the opinion sources of interest. The researcher wished to learn of their perceptions about nurses' roles in diabetes care; with observations serving to confirm or challenge what patients and nurses express about nurses' roles in caring for people with diabetes.

As I reflected during the phase of data collection, doctors were not willing to support this project; because I was part of the hospital community they were therefore not free to share information.

9.4 The study's contributions to knowledge

Most nurses in the UK and Kuwait were playing the same role, despite the differences in qualifications, experience, and cultural differences. This finding has added a new perspective to the existing literature, as there is no research conducted between two different healthcare settings with social, environmental, and cultural differences.

This is the first research to establish a base for other research within contemporary nursing practice in two different healthcare systems in two different countries. As reported in this study, a number of inhibitors to the provision of quality nursing care were identified. Such information provides evidence and a basis for the design of strategies to overcome them. These strategies will help in reshaping the future role of diabetes nurses so there are significantly reduced obstacles that nurses will be obliged to deal with, as a result of these inhibitors and their causes being identified. This research can provide a base for future literature and research in the Middle East region.

The field of patients' perceptions is another focus of this study which adds novelty to this study, as patients showed a great deal of positive feedback about nurses' roles, both in the UK and Kuwait. As explored in this study, patients called for a nurse to lead a diabetes care system. Furthermore, nurse respondents

referred to their qualifications and experiences in running diabetes care. This information can provide useful strategies in organising for the preparation of nurse-led roles in diabetes care in the Middle East, including Kuwait. These strategies can be considered as a call for policy makers and gate keepers in the Middle East and Kuwait to organise and implement the nurse-led diabetes system.

There is a lack of research in Kuwait about the role of nurses in many areas of care, such as chronic conditions and specifically in diabetes care. This research study is the first of its kind, and it is hoped that it will stimulate other researchers to follow. The growing numbers of patients with T2D need more hands to support the management of diabetes treatments, including self-management and behavioural change. This management role could be undertaken, to some extent, by increasing the number of nurses working in the field of diabetes care. The literature suggests, and the study findings reinforced and supported the opinion that nurse's engagement in diabetes healthcare programmes is essential.

This study concentrated on two hospitals in each country. In each country, the two hospitals were situated in one trust, which highlighted the need to replicate the study to other hospitals with other management system, to refine the study's external validity. Therefore, there will be more similarities and differences within-cases and across-cases that will allow for deep explorations of nurses' roles.

Further research is needed to evaluate the patterns of relationships between nurses, other healthcare professionals and senior health team members and staff, to identify the aspects of the use of the top-down power wielding approach. This research will challenge the traditional image about top-down hierarchical relationships, which undervalues nurses' roles as a result of power relations between nurses and other personnel in the healthcare system.

A new approach to patients' self-management is needed, in which the care plan should fit each patient's goals, priorities and lifestyle as well as their diabetes. Nurses must have reasons to diverge from the international guidelines. In the current study, nurses mentioned some reasons for not strictly following the guidelines available to them. The DNs role has not yet been introduced into Kuwait's healthcare system. Similarly, no literature exists which describes the position nursing in the Middle Eastern countries holds in their health systems. One objective of this research was to explore the role of nurses in diabetes care. This role was explored in the UK via the interviews and observations; however,

this topic has not yet been explored in Kuwait. This research managed to explore the role of nurses in Kuwait; therefore, there is a recommendation about implementing the DNs role in Kuwait that was guided by the UK nurse-led model. In fact, these new findings from the study lead to recommendations for practice, when introducing new specialised nursing roles relevant to diabetes care in Kuwait. Findings from the current study suggest that major workforce management issues and concerns in diabetes clinics must be resolved, or at least adjusted, to safeguard a satisfactory level of quality care and a sufficient level of nurse workforce numbers, to sustain a quality diabetes care service in the future.

The establishment of nurse-led diabetes clinics in both case studies is essential in order to have better patient outcomes. Though such a programme has already been started in the UK, it is only being implemented in the community. Patients interviewed in the study registered their strong dislike of the community diabetes services. They complained about the lack of a patient-centred care model, in which diabetes nurses provide group teaching programmes and seminars, but not individually-based, face-to-face sessions. Patients' opinions about transferring diabetes services from secondary care to the community must be explored, in order to understand their views, which are mostly valid as they are the main receivers of care and as clients, need to be satisfied with what they are offered. This individual-focused will enhance patients' perceptions about quality of nursing care.

Nurses must be aware that they have a hand in establishing guidelines that are specifically designed for them and their roles, as they are the 'authorities' who know best about what suites them in their practice. They are the ones who are in direct contact with their patients at 'street-level'.

9.5 Recommendations for practice

1. Further research is needed, especially in Kuwait, informed by this current study, to explore the facilitators and inhibitors influencing the implementation of specialised roles for nurses in diabetes care. Also in the UK, further research is needed in a range of settings to explore different roles in different contexts, yielding information that can lead to more unified roles of nurses in diabetes care.

2. The literature emphasised and ranked the roles of nurses in diabetes care in the UK but these ranks were not spread around counties in the UK,

which lead to the differences of patients' outcomes. Aiken et al. (2014) emphasised the importance of nurse higher education to provide the best of quality care; therefore, to optimise nurses' accomplishments they must be offered the chance of professional development in the form of access to higher education in both countries.

3. Further, there is a need to include more types of participants in future research, such as doctors, nursing directors and managers of the hospitals and/or clinics to study their viewpoints and perceptions about nurses' roles, as this information will confirm the theoretical generalisations about the study of extending, advancing or establishing new roles for nurses. A next step could be exploring how to make the new advanced roles of nurses who will lead diabetes care acceptable to the medical establishment. How can such 'threatening' novel roles be implemented, disseminated and embedded within daily practices? This question will be explored through mixed methods research in which larger populations could be included, yielding data to be confirmed by statistical analysis.

4. Nurses are active participants both in the community and in diabetes care, as shown in this study. Therefore, nurse empowerment is needed, especially in participating in the establishment of the guidelines. This proviso is important because the nurses are the 'doers' of diabetes care and they are aware about the different aspects of care their patients need. Nurse empowerment is needed such as allowing them to prescribe medication for patients; this could be achieved through training, or workshops on T2D prescriptions. However, it may be challenging to train all the nurses, therefore improving the knowledge about medicines for T2D might help. As regards to patients changes to guidelines might empower them to perform self-management skills independently and also empower them to become more autonomous in taking control of their health. Nurses participate in the process of evaluating, planning and managing the resources required in their practice. Nurses can participate in the development of a good service delivery model that satisfies patients, community, and healthcare providers, including themselves.

5. The study highlighted the benefits of establishing a nurse-led model for diabetes. It might be judicious to evaluate the applicability of this model, in further research, to other long-term conditions such as cardiac clinics or respiratory clinics in Kuwait, as well as some counties in the UK that are yet to establish the nurse-led model.

6. If the nurse-led model has shown itself to be applicable in Kuwait, consideration should be given to test the model in other countries sharing similar culture and value systems.

Appendices

Appendix A Search terms results database

Search terms	Database
Nursing care OR nurse's practice AND Diabetes mellitus OR diabetes type 2 OR non-insulin dependent diabetes Quality of nursing care OR standard of care OR quality of health care Percept* Perceived Perspective*	OVID-MEDLINE OVID-EMBASE EBSCO-Cumulative Index to Nursing and Allied Health Literature (CINAHL)
'actual' AND 'expected' AND 'nurse role' AND 'type 2 diabetes' 'Nurse's role' OR 'nursing care' OR 'nurse's practice' AND 'Type 2 diabetes' OR 'diabetes mellitus' OR 'diabetes type 2' OR 'non-insulin dependent diabetes' AND 'Quality of nursing care' OR 'standard of care' OR 'quality of health care' nurs* role OR practice* AND Diabetes OR Type 2 Diabetes AND Guideline* OR protocol*	OVID-MEDLINE OVID-EMBASE EBSCO-Cumulative Index to Nursing and Allied Health Literature (CINAHL) Web of Science Web of Knowledge ASSCIA OVID-MEDLINE OVID-EMBASE EBSCO-Cumulative Index to Nursing and Allied Health Literature (CINAHL) Web of Science Web of Knowledge ASSCIA

Appendix B Summary of included studies

Author (s)	Type of study	Aim (s)	Study sample/ Data collection	Key findings	Quality assessment/ comments
Booth et al. (2013) UK	Qualitative Narrative	To explore views of individuals recently diagnosed with type 2 diabetes in relation to self-management of dietary intake and physical activity, and to compare these with views of health professionals.	Purposive sample of 16 patients newly diagnosed with T2D Focus group interviews	New diagnosed patients with T2D reported that changing well established habits and life style, negative perception of recommended diabetes regimen in addition to the lack of knowledge about living with diabetes are considerable obstacles to physical activity	Focus group was the most appropriate method to this study. Diabetes education has become a priority area in primary and secondary care, and many education programmes are now embedded within a patient's care package.
Daly et al. (2013) New Zealand	Mixed Methods	To describe and compare demographic details, education and diabetes experience, practice setting and facilities available for the three main groups of primary health care nurses working in the largest urban area in New Zealand	practice nurses, district nurses and specialist nurses working in Auckland (n=1091) self-administered questionnaire and telephone interview	DSN traditionally work within a hospital-based multi-disciplinary team and provide specialist diabetes care, while chronic case management nurses who represent a more recently developed specialist nursing group, work in general practices and for independent community providers	Education especially post-registration to become specialised in areas like diabetes is important for nurses

Elliott et al. (2013) Oman	A questionnaire Survey	To assess patients' self-management and educational ability	Primary healthcare centres 309 patients	Patients have lack of knowledge regarding the management of hypo and or hyperglycaemia which could put their lives in danger as a result.	There is a need to improve patients' knowledge in order to understand and able to live with diabetes
Macdonald et al. (2013) New Zealand	Video recorded consultations and interviews	To describe nurse patient communication in diabetes management	Primary healthcare in New Zealand 18 patients and 10 nurses Health care consultations involving video recorded (n=35) and interviews	Both patients and nurses felt overwhelmed. Patients sensed overwhelmed by the amount of information they received, and this feeling was aggravated by unmet patient expectations Nurse consultations period were found to be typically longer than consultations with other health care professionals	'the use of checklists by practice nurses in consultations with type 2 diabetes patients tended to decrease the flow of effectiveness of the consultation, particularly when nurses were less experienced and skilled'
Al-Khawaldeh et al. (2012) Jordan	Cross sectional	To evaluate relationships between diabetes management self-efficacy and diabetes self-management behaviour and glycaemic control.	Consecutive-convenience sampling technique of 223 subjects with T2D in Amman, Jordan Face to face structured interviews and medical records provided the data.	An interesting finding in the study that educational programs are not sufficient to assist patients with diabetes to control the glycaemic level. Individuals who are having high level of diet self-efficacy and diet self-management behaviour seem to better control their HbA1C than individuals who are taking insulin. This may relate to the reason that these later individuals are depending on insulin to regulate or lower their HbA1C level.	The findings indicate the need for more steps to enhance improvement in care.
Boström et al. (2012) Sweden	Qualitative observational study	To explore the interaction between diabetes specialist nurses and patients with type 2 diabetes during group sessions	Nine primary health care centres in Sweden 10 diabetes nurses and 44 patients Participants were	Group interactions characterised by: becoming empowered, approaching each other from different perspectives, and struggling for authority	It could be said that the diabetes nurse is the main care provider as she educates and maintain what she has educated as could be noted in this study she provides self-

		about self-management	observed during group sessions about self-management		management support by assisting in modifying life style or behavioural change The patients support group proved its effectivity with patients with type 2 diabetes However, the study proved the need to establish patient-centred diabetes care and this can be achieved by empowerment of both patients and nurses
Juul et al. (2012) Denmark	Observational study	To assess whether involvement of general practice nurses in type 2 diabetes care in Danish general practice is associated with improved adherence to national guidelines on regular type 2 diabetes monitoring, and with lower HbA1c and cholesterol levels in the type 2 diabetes population	193 Danish general practices and register data on 12,960 patients with T2D Questionnaire	Small non-significant differences were found in the cholesterol analyses. Compared with practices with no nurse(s) employed, the quality of diabetes management was generally higher in terms of that HbA1c was measured according to the guidelines in a larger proportion of the diabetes population and the proportion of patients with an HbA1c level ≥ 8% was lower in practices with well-implemented nurse-led type 2 diabetes consultations	
Peytremann-Bridevaux et al. (2012) Switzerland	Qualitative	To explore patients and healthcare professionals' views of the current diabetes care in Canton of Vaud,	Eight focus groups Focus groups	Patients perceptions about the quality of diabetes care is varied. Both patients and healthcare professionals have financial concerns	Patients and healthcare professionals have similar problems but the way they expressed them was different. Healthcare professionals are

		Switzerland			suggested to provide focused comprehensive and coordinated care and to adopt proper communication and teamwork approach in patient care.
Reutens et al. (2012) Australia	Giant Cluster randomised control trial	To determine if commonly used educational methods about guidelines would translate into improvement for patient consequent on therapy changes initiated by GPs.	99 Asia-pacific GPs. A structured GP education programme did not improve HbA1c in patients with type 2 diabetes.	The groups did not differ in control of other glycaemic indices, blood pressure or lipids after 6 or 12 months	GPs interventions do not necessarily improve the HbA1C level.
Shiu et al. (2012) Hong Kong	Multiple Case study	to explore the development of expanding advanced nursing practice in nurse-led clinics in Hong Kong	Six nurse-led clinics Six nurses Six doctors 12 patients Non-participatory observations interviews	cross-case analysis demonstrated six elements of good advanced nursing practice in nurse-led clinics, and showed a great potential to expand the practice by reshaping four categories of current boundaries, including community-hospital, wellness-illness, public-private and professional-practice boundaries	suggest a model to advance the scope of advanced nursing practice in nurse-led clinics the proposed model provides directions for expanding such practice in Hong Kong and beyond
Awad et al. (2011) Kuwait	Cross sectional survey	To analyse patients' knowledge about diabetes therapeutic goals	247 patients from randomly selected from six diabetes clinics Questionnaires	Patients knew the target goals for their glycaemic in terms of fasting and non fasting blood glucose levels and the HbA1C level but not the accurate ranges.	There is a lack of knowledge about the accurate targets for biomedical lab works and patients need to be educated about these significant targets. There is a need to establish a multidisciplinary team to encourage patients' education and self-care

Bloomer and Cross (2011) Australia	Qualitative	to explore the role of the Clinical Nurse Consultant as it is perceived by them, in the context of this health service	Focus group	Each nurse participant express and perceive own role differently. Therefore, four themes derived from the study; 'Diversity and conflict', 'Leaders but powerless', 'Support systems' and 'The portfolio holder role'	The role of the Clinical nurse consultant is complex and diverse. The variability in the role suggests that organisational consensus of the role, scope and purpose of the CNC position has not been actualised, resulting in a lack of support systems, and an underutilisation of the Clinical nurse consultants as leaders, where they can challenge existing practice and guide future directions in care delivery
Houweling et al. (2011) Netherlands	RCT	To examine the outcomes of assigning diabetes care from GPs to nurses in primary care	Primary care in Netherlands 206 patients Patients assigned in two groups: Intervention group were cared for by practice nurses who trained according to specific protocol The control group received conventional care from general practitioner	The majority of the patients' blood pressure, glucose, and lipid levels were regulated. Patients in the nurse group were found to be more pleased about the method of care they received compared to patients in the GPs group. A key finding in the study was that patients who were allocated to the nurse group became more aware about the long-term complications of T2D	Diabetes nurses who follow particular standards of care achieved comparable outcomes to those achieved by GPs

Llahana and Hamric (2011) UK	Mixed Methods	A report of a study to explore the experiences engendered during diabetes specialist nurses (DSNs) role development and factors influencing this process	653 DSNs in the UK Postal questionnaire combining qualitative and quantitative approaches	The role of nurses was described as advanced, flexible and multifaceted. DSNs reported positive and negative experiences happened during their role development.	Role implantation for the DSNs is required to meet the workface needs in the area of diabetes
Partiprajak et al. (2011) Thailand	Mixed method	1)To compare differences in outcomes of diabetes care between patients with type 2 diabetes attending nurse-led support group and patients who did not attend 2) Examine the process of advanced practice nurse care services and care management of the support group patients	Outpatient clinic in hospital base in Thailand 100 patients with type 2 diabetes assigned into two groups: 1) traditional group (n=44) and 2) nurse-led support group (n=56) Quantitative data: Personal and Medical Information Questionnaire; Diabetes Self-care Abilities Assessment; Diabetes Quality of Life Questionnaire; and Satisfaction with Nursing Care Questionnaire	Patients who received care from nurse-led support group had higher self-care management and higher level of satisfaction with care than the other group in the traditional group. There were improved healthcare outcomes for patients Roles of practice nurse include: monitoring and managing health problems, facilitating group exercises, providing self-management education, collaborating with multidisciplinary team members, establishing continuity of care and holistic care services, and consulting with patients and healthcare providers	No identification of age. Nurses are on position to coordinate and or lead care of patients with type 2 diabetes and support them by the meaning of continuity of care

Stenner et al. (2011) UK	Qualitative study	To explore the views patients with diabetes have about their consultations with nurse prescribers and any impact this may have on their medications management	Six primary care sites 41 patients interviews Semi-structured interviews with patients	Key aspects of the nurse consultation style were a non-hurried approach, care and rapport, approachability, continuity, and providing clear information based on specialist knowledge. Many benefits were described, including improved access to appropriate advice and medication, greater understanding and ability to self-manage, ability to address problems and improved confidence, trust and wellbeing	The study provides new knowledge about what patients with diabetes value and benefit from in respect to care provided by nurse prescribers. Continuity of relationship, flexibility over consultation length, nurses' interpersonal skills and specialist diabetes knowledge were identified as crucial to good quality care. Patients require that nurse prescribers are skilled in providing a person-centred approach and have access to specialist training. The level of information and involvement offered to patients should reflect patients' requirements
Onishi and Kanda (2010) Japan	Qualitative	To explore 1) expected roles for specialist nurse in japan and 2) nurse administrators' experience-based management strategies for effective implementation of these roles	Nine nurse administrators Focus groups	The expected roles for specialist nurses were: facilitating general nurses' learning, monitoring and improving the patient care standard, and developing new roles for nurses beside two management roles: enhancing specialist nurses' influence and enhancing specialist nurses' motivation	Effective strategies are need to be adopted to enhance specialist nurses' motivation in terms of developing their management and communication skills, and coordinating their workload and relationships with other healthcare professionals.

(Al-Adsani et al. 2009) Kuwait	Cross-sectional survey	To investigate the level of diabetes knowledge in a population with type 2 diabetes (T2D) and a high prevalence of illiteracy, to identify the main gaps in the knowledge and to study the determinants of the knowledge score	24 diabetes clinics in Kuwait and 5114 patients with T2D Survey	There was a high levels of HbA1C resulted from patients do not know about the rationale for this test	Knowledge about diabetes is important to be overcomes especially with illiterate population in Kuwait.
den Engelsen et al. (2009) Netherlands	Retrospective cohort study	To examine the effect of the introduction of a practice nurse on the quality of type 2 diabetes care	Five general practices in Netherlands 397 patients Measurements were performed in 2003, 2005, and 2007 to estimate effects before 2003 and after the introduction of practice nurse at 2005 and the change of diabetes guidelines at 2007	Clinical outcomes improved significantly	The practice nurse is considered as the main care provider providing self-management support and health behaviour change support to patients with type 2 diabetes though the practice nurse is working in collaboration with the GP Diabetes care can be transferred safely and led by practice nurse as evidenced by the significant improvements in diabetes care GPs should consider work in collaboration with practice nurses to delegate diabetes care tasks
Houweling et al. (2009) Netherlands	RCT	To determine whether management of T2D can be transferred from doctor to NSD	84 patients distributed in two groups Control group led by	Both groups HbA1C, cholesterol, LDL and HDL levels were significantly improved though they were significantly better in nurse group	NSDs are able to provide effective care for patients with T2D which is comparable with the doctor role

			doctors and intervention group led by nurses		
James et al. (2009) UK	A questionnaire survey	To review the working practices of Diabetes Specialist Nurses in the UK and the evolving of the role since 2000.	Diabetes centres 361 diabetes centres 159 lead Diabetes Specialised Nurses Postal questionnaires were sent to lead Diabetes Specialist Nurses	75% of nurses reported that a component of their role involved planning and delivering patient education; about 60% reported that they were involved in dose adjustment of medicines; about 50% reported that they were involved in prescribing medicines	The role of nurses is significantly developed in recent years. It includes more advanced activities and complex services such as counselling and prescribing.
McDowell et al. (2009a) UK	Explorative; qualitative	Explore perceptions of adults with T2DM towards the service redesign. The perceptions of the major changes in delivery of diabetes management for adults with T2DM. the personal experiences of adults with T2DM of living with diabetes.	Purposive and random sampling a to ensure recruitment of a range of participants representing different ages, genders, and ethnic backgrounds and thereby enable exploration of different perspectives. Focus groups	Response rate was 48% which indicates the weakness of the study that results cannot be generalized.	There is a frequent need to service redesign in managing T2DM.
Stuckey et al. (2009) USA	RCT	To evaluate a model of managing T2D which includes nurse case management and motivational interviewing to foster	549 patients outcomes	Patients had high HbA1C and LDL. Overall patients were depressed	Enhanced nurse case management model will improve patients self-care and reduce patients emotional distress.

		behaviour change. The primary care intervention is designed to improve patients' self-care and to reduce clinical inertia though provider use of standardised clinical guidelines to achieve better diabetes outcomes			
Al-Adsani et al. (2008) Kuwait	Audit study	To evaluate the impact of Kuwaiti diabetes care program on the quality of care provided for diabetes patients in primary care setting	Five diabetes clinics Three audit stages of introducing diabetes guidelines	Overall conditions of patients improved after the introduction of the program	The introduction of the national diabetes program improved the process of diabetes care. Continuation of the same process will lead to improved quality of diabetes care
Edwall et al. (2008) Sweden	Qualitative	To describe the lived experience of diabetes nurse specialist check-ups among patients with type 2 diabetes	Two diabetes nurse-led clinics 10 women and 10 men with type 2 diabetes Narrative interviews	The overall finding was patients positive attitudes toward diabetes nurse specialist; Patients were more likely to take responsibility for their condition and self-manage their condition without exposing their health to risk.	Consultation is an important for patients with type 2 diabetes in terms of being involved in care as to develop his/her self-management skills. I think this nurse patient continuity of care, gave the patient some control over own health 'autonomy' and also understanding when to access the nurse as needed.
Lu et al. (2008)	Cross-sectional survey	To explore nurses views and experiences regarding their working	512 hospitals Postal questionnaires	There were reports about nurses to undertake most of the roles such as patients' physical care, psychosocial	There was an agreement regarding nurses' role perceptions however, there

China	design	roles		and communication and professional aspects of patient care and patient management	was a lack of clarity regarding role boundary between nursing and non-nursing work
Moser et al. (2008) Netherland	Qualitative descriptive and exploratory	To report an empirically grounded conceptualisation of self-management in the context of autonomy of people with type 2 diabetes	Shared care unit 15 interviews with patients with type 2 diabetes In-depth interviews	Patients were allocated three pathways; physician to meet patients with complicated health conditions, nurses provide basic daily care of diabetes, and special diabetes nurses who play an intermediate role between medical specialist and GPs.	Nurses were the main healthcare providers. The nurse undertaking both medical and nursing roles was not appropriately highlighted. Nurses were expected to follow guidelines and protocols. The main tasks nurses were expected to organise and coordinate were physicians' roles. This also was not addressed.
Mutea and Baker (2008) Kenya	Descriptive qualitative exploratory study	To examine nurses' involvement in the management of diabetes patients	Western Hospital 15 registered nurses Structured interviews using an investigator-designed instrument	Nurses reported a number of barriers to nurses providing adequate diabetes care. These barriers are: shortages of staff, staff low morale, poverty and overcrowded spaces with patients	
Alquraini et al. (2007) Kuwait	Structured questionnaires	To measure nurses' attitudes toward the use of health information systems in Kuwait.	Random sample of 530 nurses Questionnaires	Nurses' showed positive attitudes towards the encoding of patients' information through computerised information systems.	The use of information system increased nurses' responsibilities, however, they were capable of handling new technologies as part of their role

Siminerio et al. (2007) USA	Cross National	To examine nurse and physician perceptions of nurse involvement and roles in diabetes care	13 countries from USA sample 51 general nurses, 50 diabetes nurses, 166 general physicians and 50 specialist physicians included Face to face or telephone interviews	Both nurses and physicians agreed that nurses should undertake major roles in managing diabetes Nurses were found to provide better education, spend more time with patients, better listeners, and knew their patients better	
Chan et al. (2006) Hong Kong	Quasi-experimental design	To determine the effectiveness of a diabetes nurse clinic intervention in controlling the poor glycaemia of older patients with type 2 diabetes	150 patients (75 controls, 75 cases) Pre- and follow- up tests The 150 patients were randomised to either a control or intervention group Patients in control group received routine care while patients in intervention group received three 30 minutes appointments and two weekly telephone calls from a diabetes nurse over 12 weeks duration	Patients in intervention group HbA1c and systolic BP were improved significantly after 12 weeks as a result of having appointments and telephone calls of a nurse providing advice about blood glucose monitoring, diet, exercise and medication adjustment.	Nurse proved her effective role in consultation by providing patients education about own condition as indicated by the improved patients' clinical outcomes.
Gabbay et al. (2006)	RCT	To study the impact of nurse case management on BP, HbA1C and diabetes	182 patients with diabetes who received care from primary care providers and	BP significantly decreased in the intervention group besides diabetes related emotional stress. However, HbA1C and lipid remained unchanged	

USA		complication screening	intervention group of 150 patients received care from nurse case management		
Dijkstra et al. (2006) Netherlands	Clustered RCT	To reports empirical findings on the cost-effectiveness of two of two implementation strategies	13 Dutch general hospitals	HbA1C decreased in the professional group Cost improved in average lifetime costs	The implementation of both guidelines were cost-effective compared with the current care
Moser et al. (2006) Netherlands	Qualitative	to portray how people with T2D who are being cared for by diabetes specialist nurses in a shared-care unit view autonomy	15 patients attending the nurse-led shared clinic In-depth interviews	Seven dimensions emerged to identify autonomy: identification, self-management, welcome paternalism, self-determination, shared decision-making, planned surveillance and responsive relationship	Autonomy is a dynamic and complex construct that is not easily identified but dimensions can give it meanings.
Mrayyan (2006) Jordan	Cross sectional comparative	To study nurses' job satisfaction, patients' satisfaction, and quality of nursing care in a Jordanian educational hospital	200 nurses 510 patients 26 head nurses	Nurses were in between satisfied and not satisfied in their work. Nurses in wards are slightly satisfied than nurses working in critical care Patients reported they were moderately satisfied Head nurses reported that nurses usually provided high quality care to patients	Job satisfaction for nurses in Jordan is on the borderline, which requires some actions. Patients satisfaction and quality of nursing care have to be encouraged and supported to make patient highly satisfied.
Chan & Zang (2007) Hong Kong	A descriptive correlational survey	To explore nurses perceived and actual diabetes knowledge and the relationships between nurses' perceived and actual	Two local hospitals 245 nurses Structured questionnaire	There were varieties of nurses levels in the different groups of the study in terms of competency and diabetes knowledge Overall nurses perceived diabetes knowledge was statistically significant	Nurses have responsibilities to educate patients with updated information thus nurses knowledge should be reached a certain standard

		diabetes knowledge		correlated with actual knowledge	
Harris and Cracknell (2005) UK	Cohort study	To see if re-organising diabetes care and introducing a nurse-led clinic would improve parameters of care for patients with diabetes	A cohort study of 170 patients Patients with type 2 diabetes were followed for a 30-month period then comparison was drawn between care provided during a 15-month period using a twice-yearly GP-led clinic with a subsequent 15-month period where care was provided using a nurse-led GP supported clinic	Patients HbA1c improved in the nurse-led clinic as well as other clinical outcomes. Medication adherence rates were significantly improved with patients in the nurse-led clinic when compared with their results from the GP clinics.	The nurse used individual patient management plans and protocols to improve diabetes. The use of an appropriately supported nurse-led clinic in a general practice can improve the standard of care for patients with type 2 diabetes Nurse-led care of diabetes can be safely performed as evidenced by improved patients with type 2 diabetes outcomes
Vijan et al. (2005) USA	Survey questionnaire	To evaluate patients views of the burdens of therapy and its impact on self-management	1,653 patients Mailed survey	Patients perceived non-injectable therapies as the least burdensome and injectable therapies as the most burdensome Patients adherence was varied as they choose to follow some advices but not all regarding diabetes self-management	Injectable therapies such as insulin as perceived highly burdensome by patients which have a great impact on patients adherence
Wong et al. (2005) Hong Kong	RCT	To compare the outcomes of diabetes patients undergoing early discharge or routine care	Medical ward 101 patients needed glycaemic monitoring Patients were assigned in two groups: 1) the control group continued to receive	The study group had a greater decrease in HbA1c at six months, higher blood monitoring adherence score at three months interval and six months, and a higher exercise adherence score at three months. Also, this group had shorter hospital stay	Diabetes care can be safely transferred to diabetes nurses as this study showed the effectiveness of nurse follow-up role in maintaining optimal glycaemic control.

			routine hospital care. 2) the study group includes patients who discharged early and received follow-up programme from a nurse		
McCabe (2004) Ireland	Qualitative hermeneutic phenomenology	To explore and produce statements relating to patients' experiences of how nurses communicate	Eight patients Unstructured interviews	Four factors emerged regarding how patients perceived nurses; lack of communication, attending, empathy and friendly nurses	Patient centred approach enhance and encourage nurses communication methods However, the healthcare organisation do not value nor recognise the importance of nurses adopting patient centred approach which ensure the provision of high quality patient care
Vrijhoef et al. (2002) Netherland	Quantitative comparative study	To assess the outcome of care for patients, referred by GPs, to diabetes nurses.	Five general practices 11 GPs transfer eligible patients with type 2 diabetes to the five practices A quasi-experimental pretest-posttest design was used	Patients' clinical outcomes improved.	Although, there was no change in quality of life, the study proved the effective role of a nurse in diabetes care as indicated by high levels of patient satisfaction though authors did not describe the elements of this outcome. There were no specification in the study about tasks performed by the nurse towards the patients or reasons that physicians transferring patients to nurses.

					The study however, suggested the safe transfer of care for diabetes patients to specialist nurses.
Peters et al. (2001) UK	Two-round Delphi study		160 nurses with a substantial role in managing diabetes and randomly selected 255 nurses	Nurses were able to provide patients support by patient education and providing information about diabetes, self-management, being accessible, communication skills and lifestyle changes.	Though study results showed not to support nurse prescribing role, nurses believed in their capability to prescribe and this would have a positive implication on patient with type 2 diabetes outcomes. Nurses proved to have good contributions to be involved in medication management.
Vrijhoef et al. (2001a) Netherland	Non-equivalent control group	Assessing the effects on quality of care in terms of patient outcomes, when care for patients with type 2 diabetes transferred to nurse specialist	Outpatient hospital setting 82 GPs 237 patients A 12-month non-equivalent group was used. Number of 82 GPs were asked to transfer patients (n=237) to either traditional physician model or nurse specialist model	Both groups achieved equal outcomes, though glycamic control of patients in nurse group model improved. Three tasks of the diabetes nurse have been highlighted: provision of individualised patient care, organising and coordinating care plus medical care, and provision of guidance and health teaching to patients and other health carers.	Care of patients with type 2 diabetes can safely be transferred to diabetes nurse.
Al-Kandari and Ajao (1998)	Qualitative	To describe the problems of recruiting and retaining student	25 high school students 20 adults from the	There were two barriers to recruitment which are lack of social support and lack of information about nursing	Nursing in Kuwait holds a low status and under valued image related to the public old image

Kuwait		nurses in Kuwait	community 9 nursing students Interviews		about the career
Williams (1998) USA	Qualitative	To explore nurse leaders' perceptions of barriers and facilitators to the quality nursing and offer suggestions to colleges and universities that are preparing future nurses to participate quality nursing	13 nurse executives seven nurse educators and clinical four nurse consultants three nurses in quality management Interviews	Nurses willingness to attain and maintain quality of nursing care Professionalism is one aspect of quality of nursing care in addition to demonstration of caring and communication exhibited	

Appendix C Nurses job descriptions in Kuwait by the MoH

MINISTRY OF PUBLIC HEALTH KUWAIT

JOB TITLE- STAFF NURSE

A graduate nurse is who whose major responsibility is Planning, giving and directing the nursing care of patient. The nature of this position is changing and through a staff development program, the staff nurse will increasingly assume the role here described .it is also their responsibility to become acquainted with literature and comprehensive nursing care and use this method in planning and giving care to patients. The work of the Staff nurse includes carrying the medical program prescribed, health teaching of patients and their families.

She (He) has the responsibility to delegate and supervise so the needs of patients are met. In all health facilities, the teaching component of nursing based on the medical plan can be developed in to a program of individual and group instruction

MAJOR RESPONSIBILITIES OF STAFF NURSES ARE

Organization and planning

Assessing nursing needs of patient and making decisions regarding whether he (She) must give the care or can delegate to other nursing personnel qualified to give the care.

Using the system of time schedules and assignments to utilize the time of all nursing personnel effectively.

Maintaining a bacteriologic and physical safety environment.

Developing standards for patient care and services organizing people, facilities and resources to meet them

Administration and Coordination

Utilizing the supplies and equipment to the benefits of patients.

Developing a plan of care for the patients and assigning personnel to give the care in terms of patient's needs and abilities of nursing personnel.

Appendix C

Teaching assistant nurses when new procedures are used and supervising the care of patients.

Providing continuity in patient care and services through a system of records and reports.

Maintaining written evaluations of the work of all nursing personnel and giving guidance as needed.

Assessing need for further instruction of nursing personnel and making recommendations to strengthen the nursing service.

Contributing to the coordination of the work of nursing with medical and allied disciplines and with the administration policies in the specific facility.

Education and Guidance

Maintaining an attitude of teaching and learning and guiding nursing personnel in their work with patience visitors and families.

Developing a core of instruction around nursing measures in categories of diseases or conditions. So patients in health facilities may have information, which will contribute to health restoration and health maintenance.

Identifying needs of nursing personnel for further instruction and making proposals for content of Staff Development Program.

Taking steps to advance her/his general and professional knowledge and encouraging staff to seek learning opportunities for continuing education.

Working within the framework of supervision and guidance that encourages nursing personnel to contribute effectively to the nursing care and nursing services programs for patients and contributes to the morale of the total group.

Qualifications

Graduation from a school of nursing offering a basic general nursing education in the care of patients with medical and surgical diseases and conditions, the care of sick and well children, maternal and child care and mental illness.

Study and experience in community health nursing

Prior work in a community health facility (clinics, outpatient services.)

Completion of midwifery course, required for maternal and child health centre.

For out of country recruitment, preferably two years' experience as a staff nurse since graduation.

Preference will be given to nurses who have had experience in health teaching as part of patient care.

Good knowledge of Arabic and English languages, spoken and written.

Medical evidence of good medical and physical health

Appendix D Ethical approvals

Ethical approval- UK

NHS
Health Research Authority
NRES Committee East Midlands - Nottingham 1
Royal Standard Place
Nottingham
NG1 6FS

Telephone: 0115 8839697

01 June 2015

Dr Gary Adams
Derby Road
Univesrity of Nottingham
Queen's Medical Centre
NG7 2UH

Dear Dr Adams,

Study title:	**How the different elements of the nursing role impact on the perceieved quality of nursing care by patients with typ2 2 diabetes**
REC reference:	**15/EM/0189**
Protocol number:	**14096**
IRAS project ID:	**160845**

Thank you for your letter of 28th May 2015, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this favourable opinion letter. The expectation is that this information will be published for all studies that receive an ethical opinion but should you wish to provide a substitute contact point, wish to make a request to defer, or require further information, please contact the REC Manager, Ms Rachel Nelson, NRESCommittee.EastMidlands-Nottingham1@nhs.net. Under very limited circumstances (e.g. for student research which has received an unfavourable opinion), it may be possible to grant an exemption to the publication of the study.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database. This should be before the first participant is recruited but no later than 6 weeks after recruitment of the first participant.

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to request a deferral for study registration within the required timeframe, they should contact hra.studyregistration@nhs.net. The expectation is that all clinical trials will be registered, however, in exceptional circumstances non registration may be permissible with prior agreement from NRES. Guidance on where to register is provided on the HRA website.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Covering letter on headed paper [cover letter]		
Evidence of Sponsor Insurance or Indemnity (non NHS Sponsors only) [Insurance]	1.0	15 April 2015
Interview schedules or topic guides for participants [How the different elements of the nursing role impact on the perceieved quality of nursing care by patients with type 2 diabetes]	2.0	15 April 2015
Interview schedules or topic guides for participants [Interview guide]	2.0	01 April 2015
Letters of invitation to participant [How the different elements of the nursing role impact on the perceieved quality of nursing care by patients with type 2 diabetes]	2.0	15 April 2015
Letters of invitation to participant [nures letter of invitation]	3.0	29 May 2015
Other [letter of response to REC comments]	1.0	15 April 2015
Other [NRES meeting]	1.0	15 April 2015
Other [Insurance certificate]	1.0	30 July 2014
Other [Sponsor letter]	1.0	23 October 2014
Other [Letter of response]	1.0	26 May 2015
Other [Clinic agreement for the study]	1.0	26 May 2015
Other [Nurse PIS]	3.0	29 May 2015
Other [Nurse consent form]	3.0	29 May 2015
Other [Patient poster]	1.0	29 May 2015
Participant consent form [patient consent form]	3.0	29 May 2015
Participant information sheet (PIS) [patient PIS]	3.0	29 May 2015
REC Application Form [REC_Form_23042015]		23 April 2015
Research protocol or project proposal [Study Protocol]	3.0	29 May 2015
Summary CV for Chief Investigator (CI) [CI CV]	1.0	22 October 2014
Summary CV for student [Student CV]	1.0	01 October 2014

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website:
http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

15/EM/0189	Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely,

pp

Dr Carl Edwards
Chair

Email: NRESCommittee.EastMidlands-Nottingham1@nhs.net

Enclosures: "After ethical review – guidance for researchers"

Copy to: *Ms Angela Shone*

Ms Charlotte Davies

Ethical approval- Kuwait (Arabic version)



State Of Kuwait
Ministry Of Health
Asst. Undersecretary for Assistance Medical Services Affairs

دولة الكويت
وزارة الصحة
وكيل الوزارة المساعد لشئون الخدمات الطبية المساندة

التاريخ: ٢٠١٥/٣/٣١
الرقم: ٣٥٥٧٠

السيد الفاضل / د. وكيل الوزارة المحترم

تحية طيبة وبعد ،،،

الموضوع / تسهيل مهمة الباحثة / مني عبد المحسن الشمري
طالبة الدكتوراه بجامعة نوتنجهام / المملكة المتحدة
رقم البحث (٢١٩ / ٢٠١٥) تحت عنوان :

The role of nurses in T2D care and the impact on perceived quality of nursing care

يرجى التفضل بالإحاطة بأنه وفقاً لتوصية اللجنة الدائمة لتنسيق البحوث الطبية والصحية المشكلة بموجب القرار الوزاري رقم ٢٠٧ لسنة ٢٠١٢ باجتماعها الخامس المنعقد يوم الثلاثاء ٢٥ / ٦ / ٢٠١٣ بشأن آلية البت في طلبات البحوث التي لا تتضمن إجراء فحوصات أو تداخلات أو إعطاء أدوية للمرضى وبدراسة طلب وبروتوكول البحث والاقرار المستنير المقدم من الباحثة /مني عبد المحسن الشمري بتاريخ ٢٠١٥/٣/٣ تحت عنوان :

The role of nurses in T2D care and the impact on perceived quality of nursing care

والذي يتم من خلال إجراء المقابلات الشخصية والملاحظة لجمع المعلومات من أفراد الهيئة التمريضية ومن المرضى بالمستشفيات ومراكز الرعاية الصحية الاولية التابعة لوزارة الصحة واستخلاص بعض المؤشرات ذات الصلة بالرعاية التمريضية المقدمة لمرضى السكر .

ولا يتضمن البحث أي تجارب طبية أو إعطاء أدوية للمرضى أو إجراء فحوصات لهم ويستغرق إجراء البحث سنة كاملة .

1

Appendix D

State Of Kuwait
Ministry Of Health
Asst. Undersecretary for Assistance Medical Services Affairs

دولة الكويت
وزارة الصحة
وكيل الوزارة المساعد للشئون الخدمات الطبية المساندة

التاريخ : .....

الرقم : .....

فاننا نوصي بالموافقة على إجراء البحث مع التزام الباحثة بالمحافظة على حقوق المشاركين بالبحث بالخصوصية وسرية المعلومات وعدم تداولها خارج إطار البحث والحصول على الموافقة المستنيرة المسبقة من المشاركين (Informed Consent) باستخدام النموذج المعتمد لذلك .

يرجاء التفضل بالاطلاع والتوجيه بما ترونه مناسباً نحو مخاطبة الجهات ذات الصلة بموضوع البحث (السادة / مدراء المناطق الصحية ومدراء المستشفيات والسيدة / د. مديرة ادارة الرعاية الصحية الاولية والسيدة / مدير إدارة الخدمات التمريضية) بهذا الشأن للعمل على تسهيل مهمة الباحثة لإجراء الدراسة وفقاً للضوابط المنظمة لذلك .

وتفضلوا بقبول فائق الاحترام،،،

الدكتور/ جمال منصور الحربي
الوكيل المساعد للشئون الفنية
رئيس اللجنة الدائمة لتنسيق البحوث الطبية والصحية

- مرفقات : بروتوكول البحث المشار إليه والإقرار .

د. جمال منصور الحربي
وكيل وزارة الصحة
الشئون الطبية المساندة

موافقه
ويعمل بالاذن
لتسهيل المهمة

Assign

2

د. جمال منصور الحربي
وكيل وزارة الصحة بالانابة

Ethical approval- Kuwait (English version)

State Of Kuwait
Ministry Of Health
Asst. Undersecretary for Planning & Quality

دولة الكويت
وزارة الصحة
وكيل الوزارة المساعد لشئون التخطيط والجودة

التاريخ : ١٤-٦-٢٠١٧
الرقم : ١٥٧٣

To Whom it May Concern

From: Ministry of Health – Kuwait

The Standing Committee for Coordination of Medical Research

To : Muna Alshamamri

The role of nurses in T2D care and the impact on perceived quality of nursing care

(#219/2015)

University of Nottingham - UK

The above mentioned Proposal was given an ethical approval by the Committee on its meeting held June 25, 2013

Asst. Undersecretary for Planning & Quality

Head, Standing Committee for Coordination of Medical Research

Ministry of Health – State Of Kuwait

Dr. Mohammad Jassem Al Khashti
Asst. Undersecretary for Planning & Quality

Hassan

Appendix E Interview guides for the study

Interview Guide: Nurses

1. What do you do as a nurse in this clinic?
2. Could you tell me about your role in providing health promotion?
3. What is your involvement in medication?
4. What guidelines and protocols guide your work?
5. How independent do you work?

Interview Guide: Patients

1. What has been your experience when you decided to come to this clinic?
2. What do the nurses do for you?
3. Describe the type of information you receive from nurses.
4. Describe the extent to which a nurse in involved in your medication?
5. How does the advice and care that the nurse gives you compare with that stated in brochures and leaflets that you have been given or have seen in the clinic?
6. What could the nurse have done differently that could have made your condition better?
7. What is the thing that encouraging you to come every time.

Appendix F Observational protocol

Day: **Date:** **Time:** **Venue:** **QMC** **City Hospital**

During observation, I am not writing what patients are saying but just to have general themes and tick them.

Themes	**Indicators**	+ * – 0	**Comments**
1. Demographical data			
1.1 Gender	Male Female		
1.2 Age group	Young adult Middle adult late adult		
1.3 Disability			
1.4 Who accompanied the Patient?	Wife Husband Daughter Son Others		
2. Investigation			
2.1 Patient file	Available not available N/A		
2.2 Blood sugar monitor	RBS FBS Bd Glucose others		
2.3 Blood Pressure monitor	Yes No B/P:		
2.4 Health assessment	Head to Toe Others		
2.5 In case of wound	Foot Others		
2.6 Nurse performs dressing	Yes No Describe		
3. Consultation			
3.1 Referred by	Yes No Place:		
3.2 Length of time spent	10-20 m 20-30 m 30-40 m 40-50 m		
3.3 Was the patient given opportunity to ask a question?	Yes No		
3.4 Was the patient given time to ask	Yes No		
3.5 Was the patient question answered	Yes No		
3.6 Referred to	Yes No Place:		

Appendix F

Themes	Indicators	+ * – 0	Comments
	Reason:		
3.7 Overall the consultation was:	Patient led Nurse led		
4. Health Education			
4.1 Patient asked questions about	Exercise Diet self-management Medication		
4.2 Nurse answer questions	Briefly Detailed		
4.3 Use of educational resources	Brochures Leaflets demonstrating drawing		
4.4 Patient talked about other conditions related to diabetes	Retinopathy Neuropath Renal foot Others,		
5. Prescribing			
5.1 Who prescribe medication?	Nurse Physician Others,		
5.2 Insulin 5.2.1 Who made these changes?	Time - change dose - add new - adjusted Nurse Physician Others,		
5.3 Were any other medications prescribed?	Oral medication Others,		
6. Nurse			
6.1 Knowledge about patient condition			
6.2 Autonomy	Yes No Describe:		
6.3 Did the nurse use medical terminology/ jargon without explaining?	Yes No Describe:		
6.4 Liaison with other health professionals	Yes No Describe:		
7. Summarising			
7.1 Did the nurse summarise the main information?	Yes No		
7.2 Was the patient asked to repeat any of the information given?	Yes No		
7.3	Yes No		
7.4 Did the nurse provide patients with follow up appointment?	Yes No		

*+= Observed -= Not observed 0=N

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