The Role of Healthcare Accreditation In Influencing Burnout And Work Engagement Levels Among Healthcare Professionals In The United Arab Emirates.

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Abstract

Healthcare accreditation is a process that evaluates the quality of services in healthcare organisations based on a set of standards. While few studies have investigated the impact of hospital accreditation on the working environment, very little attention has been paid to the impact of accreditation on the psychological health of healthcare professionals (HCPs). Given the importance of the health and wellbeing of HCPs, this thesis aims to contribute to this growing area of research through its novel examination of the role of psychosocial hazards in predicting burnout and work engagement amongst HCPs working in the United Arab Emirate (UAE).

Three studies were conducted to bridge the gap between the field of occupational health psychology (OHP) and hospital accreditation using a sequential exploratory mixed-methods design. These studies were informed by a widely used model in OHP, known as the Job Demands-Resources model (JD-R). The first study explored the effect of accreditation processes on the working environment using semi-structured interviews (n = 28) and focus group discussions (n = 4). Two main themes emerged, namely: the Challenging factors in the process of accreditation; and the Enablers to achieve accreditation.

Findings from the first study informed the selection of questionnaire items used in the quantitative phase of this research. Thus, the second study developed a measure specific to the workload perceived by HCPs (i.e., accreditation demands) during accreditation. Further, the study aimed to build, translate, and validate the psychometric properties of tools, often used in

Western countries, and apply them in a Middle Eastern country (i.e., the UAE). The analysis revealed five main constructs including accreditation demands, social support, psychosocial safety climate, personal burnout, and work engagement.

Using a longitudinal design, the third study built a model to test the lagged effect of specific job demands (i.e., Accreditation Demands) on personal burnout, and the lagged effect of job resources (i.e., Social Support) on work engagement. Further, the study integrated the psychosocial safety climate (PSC) construct, as an organisational resource, with the JD-R model to test its potential moderating effect on burnout and work engagement using structural equation modelling (SEM). Results on 121 HCPs showed significant positive effects of accreditation demands and social support before accreditation on personal burnout and work engagement after accreditation, respectively. In addition, the PSC was able to interact with accreditation demands and social support to moderate personal burnout and work engagement after accreditation.

Findings in this thesis have bridged the gap between hospital accreditation and theoretical frameworks of OHP, i.e., the JD-R and PSC models. Results of this research indicate that psychosocial hazards associated with accreditation influences HCPs' health and well-being. Given that burnout among HCPs can reduce the quality of care, it is essential to acknowledge such impact by developing robust regulations and guidelines intended to promote a healthy working environment for HCPs during accreditation.

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Abbreviations and Symbols

α	Cronbach's alpha
ACS	American College of Surgeons
AIC	Akaike Information Criterion
ANOVA	Analysis Of Variance
β	Unstandardized Path Coefficients
b	Standardized Path Coefficients
CBI	Copenhagen Burnout Inventory
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
COPSOQ	Copenhagen Psychosocial Questionnaire
CQI	Continuous Quality Improvement
df	Degree Of Freedom
EFA	Exploratory Factor Analysis
ERI	Effort-Reward Imbalance
HCPs	Healthcare Professionals
HRO	Highly Reliable Organisations
ICC	Intraclass Correlation Coefficient
ILO	International Labor Organization
IoM	Institute Of Medicine
ISO	International Organization for Standardisation
ISQua	International Society for Quality in Healthcare
JC	Joint Commission
JCAHO	Joint Commission for The Accreditation of Health Organisations
JCI	Joint Commission International
JCM	Job Characteristics Model
JDC	Job Demand-Control
JD-R	Job Demands-Resources
KMO	Kaiser-Meyer-Olkin
MBI	Maslach Burnout Inventory
ML	Maximum Likelihood

MLM	Multi-Level Modelling
MOHAP	Ministry of Health and Prevention
OHP	Occupational Health Psychology
PAF	Principal Axis Factoring
PCA	Principal Component Analysis
PHC	Primary Healthcare Center
PSC	Psychosocial Safety Climate
RMSEA	Root Mean Square Error of Approximation
SD	Standard Deviation
SEM	Structural Equation Modelling
SRMR	Standardised Root Mean Square Residual
T1	Time 1
T2	Time 2
TA	Thematic Analysis
TFI	Tucker-Lewis Index
TQM	Total Quality Management
UAE	United Arab Emirate
UK	United Kingdom
US	United State
UWES	Utrecht Work Engagement Scale
WHO	World Health Organisation
X^2	Chi-Square

Chapter 1 Introduction

"Passion is the fire that brought us here, and it must burn within us at every level of healthcare, helping us through the stress we inevitably face."
(Mayer, 2021, p. 1)

1.1 Background

Excessive workload, persistent anxiety, and extreme exhaustion take a toll on healthcare professions. Considering the health and wellbeing of healthcare professionals (HCPs) has never been more important because of the current global pandemic (i.e., Covid-19) and the work demands placed on HCPs. Indeed, evidence from multiple studies demonstrates that HCPs, across professions, report varying levels of burnout or fatigue triggered by different aspects of work (Cavanagh et al., 2020). Furthermore, HCPs experience continuous pressure from the escalating demands for change in healthcare settings, which are triggered by the change in the demographic and health profile of the population. Such pressure was found to influence not only the health and wellbeing of HCPs, but also the quality of care given to patients (Teoh et al., 2019). A key argument is that HCPs' mental health is directly related to the quality of care given to patients (Angerer & Weigl, 2015). Therefore, the cost of HCPs' health can directly affect the quality, safety, and productivity of healthcare organisations.

In addition, many countries have designed new measures to improve the quality of healthcare services and to promote concepts that ensure the safety of patients. With the help of accreditation, healthcare facilities (i.e., hospitals and primary care centres) evaluate their services based on predefined accreditation standards that support the quality of care (Myers, 2012). Accreditation is an external

process that evaluates healthcare organisations based on a set of standards recognised by healthcare professionals (WHO, 2003). However, many countries have mandated accreditation programmes based on the expectations such programmes would bring to healthcare organisations. Given the sharp increase in demands to accredit healthcare facilities, HCPs are expected to adapt to the trending requirements related to quality improvement, advanced technology, patients' demands and expectations, and evidenced-based practices (Groenewegen & Hutten, 1991; Shortell et al., 1998; Greenfield & Braithwaite, 2009). These demands, nevertheless, offer an ideal environment for HCPs to develop work-related stress and burnout (Elkins et al., 2010).

1.1.1 HCPs and stress

Stress is a widely used term that describes a feeling of discomfort (Kister, 1997). The concept of stress was introduced in the fourteenth century referring to the hardship and suffering individuals. Later, in the seventeenth century, the concept of stress was presented in the scientific fields, such as physics and mechanical engineering, to describe the adaptation of materials triggered by external forces (loads) (Lazarus & Folkman, 1984). By the nineteenth century, the field of medicine considered the concept of stress as the starting point for illnesses (Lazarus & Folkman, 1984). The concept of work stress, however, has emerged in response to the growing concern over workers' physical and mental health caused by economic growth and the First and Second World Wars (Schonfeld, 2017). Given the increase in interest in understanding stress in the context of occupational health psychology (OHP), different theories have been developed to explain the process by which stress comes to manifest itself and its impact on workers. These theories are discussed in Chapter 3.

Several approaches have been taken to define stress caused by work, known as work-related stress. However, most researchers agree that stress can occur when there is a negative interaction between employees and their work environment leading to emotional, physical or cognitive reactions (see, for example, Cox, 2000; Dewe, 2001). Indeed, work related stress has influenced workers, organisations, and countries. In a recent report, absenteeism, presenteeism, and staff turnover were shown to have cost the UK a total of £33 to £42 billon (Deloitte, 2020). Stevenson and Farmer (2017) suggest that such costs are mainly related to poor mental health.

Similar costs were estimated in other European Countries. For example, the Executive Agency for Health and Consumers (2013) estimated the cost of work-related depression among employees, from 27 European countries, to be approximately €620 billion per year. Such enormous costs in effect represent the fees of medication, hospitalisation, and outpatients care (Hassard et al., 2014). While stress can seriously cost organisations, it can also influence workers' health and commitment to work.

1.1.2 HCPs and burnout

Considering the recent COVID-19 pandemic, it has become extremely difficult to ignore the pressure exerted on HCPs and the presence of burnout among them. It is worth noting that the global pandemic did not create burnout among workers but rather accentuated it (Mayer, 2021). A recent review showed that HCPs experienced burnout and work-related stress as a result of increasing demands and inadequate resources at work even before the onset of the crisis (i.e., COVID-19) (Kinman et al., 2020). Even before the pandemic, burnout, a syndrome of feeling emotionally exhausted and depersonalised (Maslach & Jackson, 1981), was found to affect 46%

of doctors in the United States (US), 38% of staff working in the NHS in the UK (Williams & Kemp, 2020), and 12% of HCPs in Europe (Kumar, 2016). Arab countries have shown comparable results for burnout among doctors. Abdulla et al. (2011) conducted a cross-sectional study to estimate the prevalence of burnout among HCPs working in Qatar's healthcare facilities and found that 12.6% of doctors experienced burnout.

Burnout is a growing problem in healthcare settings with increasing prevalence among physicians and nurses. The concept of burnout among HCPs has been discussed since as early as 1974 (Freudenberger, 1974). Freudenberger explained how individuals experienced exhaustion when work demands exceeded their energy, strength, and resources. He added that the prevalence of burnout had increased among individuals who are committed and dedicated at work compared to those who are not. It is worth mentioning that Freudenberger devoted his time to helping people who were suffering from addiction by opening a free clinic and hiring volunteers to help him. However, he noticed that workers, including himself, felt emotionally affected and exhausted by work, which led directly to his description of the process of burnout. He suggested that burnout occurs when individuals are committed to their work and feel constant pressure, from within, coercing them to work and help others beyond the bounds of their available resources. Such feeling is opposed by the external pressure from organisations, which expect their employees to give beyond their limits. These opposing pressures, from individuals and organisations, were found to cause exhaustion and burnout.

The concept of burnout was further extended by Maslach and Jackson (1981) who designed a famous and a widely used scale to test burnout (i.e., the Maslach Burnout Inventory (MBI)). They defined burnout as a syndrome that affects workers,

serving other people, and increases their feelings of emotional exhaustion, cynicism, and lack of effectiveness. Maslach and Jackson (1981) assessed burnout in three dimensions that include exhaustion, cynicism, and lack of personal accomplishment. Exhaustion occurs when individuals lack enough energy including mental, physical, or psychological energy, to combat external stressors. Cynicism is the negative attitude individuals show toward their clients, as workers become sarcastic and do not take work seriously (Maslach et al., 2001). Lack of personal accomplishment, however, appears when individuals feel less competent and they cannot achieve or perform well; hence, they become more critical of their own work (Maslach et al., 2001).

In healthcare, HCPs are constantly challenged to engage with patients and high technical functions that demand that they make lifesaving decisions (Shanafelt et al., 2015). As Mayer (2021) describes, HCPs who suffer from burnout are passionate workers who have become wounded by the magnitude of demands placed on them, causing them to lose their passion. According to Maslach et al. (2001), research in burnout was focused initially on healthcare and occupations that provide services to clients. Burnout was then expanded to include other occupations (Demerouti et al., 2001). In general, systematic reviews estimated prevalence of burnout among doctors is 67% (Rotenstein et al., 2018) and among nurses 11.23% (Woo et al., 2020). These estimates are expected to further increase leading to significant consequences on HCPs, patients, and healthcare organisations.

Workers can develop burnout symptoms when they experience risks at their workplaces, such as work overload, lack of control, lack of appropriate rewording system, conflicting work values, a perceived lack of fairness, and inadequate teamwork (Maslach, 1982; Maslach & Leiter, 1997; Mayer, 2021). In healthcare

settings, HCPs might experience work overload influencing their mental health that could lead to depletion of energy and eventually develop burnout (Houkes et al., 2011; Gauche et al., 2017; Dall'Ora et al., 2020). Burnout compromises HCPs' performances by reducing their concentration and making them more vulnerable to distractions and errors (Salyers et al., 2016). Therefore, considering the mental health of HCPs is an important factor in patient care as Loerbroks et al. (2017) found a relationship between physicians' burnout and perceived poor patient care.

The opposite side of burnout is engagement, which is the positive and fulfilling behaviour toward one's work (Schaufeli et al., 2002). Engagement at work was defined by Kahn (1990) as the utilisation of oneself to meet one's organisational roles. Engaged employees are more energetic and positive when compared to workers suffering from burnout. Maslach and Leiter (1997) suggested that organisations should focus on providing support to productive and engaged employees by involving and empowering them to build effective organisations. They assumed that work engagement is manifested through energy, involvement, and efficacy, which are believed to be the opposite of burnout constructs. Further, Schaufeli et al. (2002) developed a scale to test work engagement dimensions and named the subconstructs as vigour, dedication, and absorption. The scale is called the Utrecht Work Engagement Scale (UWES) and has received a wide acceptance from the research community. The concept of work engagement in healthcare accreditation is necessary to connect HCPs with organisational values and goals, especially when improving the quality of care, to ensure successful and sustainable accreditation outcomes.

To understand burnout and work engagement from a contemporary perspective, Demerouti et al. (2001) developed a parsimonious model to explain the

antecedent factors of burnout, which manifested in two categories: job demands and job resources. The Job Demands-Resources (JD-R) model suggests that workers experiencing higher demands and inadequate resources are more susceptible to burnout. Demerouti et al. (2001) found that job demands are positively related to exhaustion. These findings have received wide acceptance from researchers and have been supported in different fields (Bakker et al., 2005; Xanthopoulou et al., 2007; Crawford et al., 2010; Taris et al., 2010; Orgambídez-Ramos & de Almeida, 2017). Job resources, on the other hand, were found to negate the effect of demands on burnout. (Bakker et al., 2005; Brough et al., 2013; Dicke, Stebner, et al., 2018).

To elaborate on the JD-R model, Dollard and Bakker (2010) introduced the concept of psychosocial safety climate (PSC) as an additional organisational resource to further understand the influence of work contexts on employees' health. PSC is an organisational construct that promotes workers' psychological health and well-being through the presence of policies, procedures, and practices (Dollard & Bakker, 2010). Therefore, this thesis examines the fit the JD-R and PSC concepts into accreditation requirements and the way these concepts explain HCPs health and well-being. Although many studies have provided evidence on some of the causes of burnout among HCPs, the role of regulatory mechanisms and accreditation programmes on HCPs health and well-being have rarely been studied. Accordingly, the current thesis is an attempt to fill this gap in the research and to highlight the unique demands and resources experienced by HCPs during the period of external hospital accreditation. Discussion on the JD-R and the PSC are further elaborated in Chapter 3.

The JD-R model has gained a great deal of professional support within the healthcare filed and has been examined in different occupations by customising the type of job demands and resources to match different occupations under investigation (Hu et al., 2013). While there is now a solid evidence base to support the JD-R model, greater attention needs to be paid to its relevance to countries in the middle east region as they are highly influenced by changes in organisations and services associated with globalisation. Further, at the time of writing this thesis, there is a perceived gap in the literature which assesses the effect of temporary demands related to healthcare accreditation on HCPs' burnout and engagement levels. Therefore, this thesis tests the applicability of OHP models and methods to the UAE's health context.

1.1.3 HCPs and globalisation

Work has changed significantly due to the rapid growth of economic globalisation. Globalisation is the process of progressive and incremental change which link distant authorities in such a away with local ones derived by economic forces (Rosenberg, 2005). Bartelson (2000), on the other hand, regards globalisation as the process of change that cannot be avoided in a modern-day world. As the first definition of globalisation refers to the economic movement around the world, the second definition refers to the spread of people, information, and places. The relationship between globalisation and healthcare presents a significant challenges and areas of uncertainty.

Globalisation has influenced the growth and development of the global economy, yet it has led to unavoidable negative consequences, such as occupational stress and burnout. Siegrist (2014) identified three categories of work-

based hazards related to the process of globalisation. These categories include occupational injuries related to physical, chemical, and biological hazards, work-time hazards that influence workers health (i.e., long working hours and shift work), and harmful working environments which affects the health and wellbeing of workers. Indeed, globalisation has a clear effect on reforming healthcare systems (Khan & Alam, 2014) and the growing phenomenon of 'Medical Tourism' (Carrera & Bridges, 2006), which are discussed in section 1.2.2. Like all countries, the UAE is influenced by globalisation. Furthermore, the UAE has invested in enhancing and changing its infrastructure, including its healthcare system, to attract and keep investors and tourists.

The next section discusses the context of the studies in this thesis, which took place in the public healthcare sector of the UAE. Previous research studies have attempted to understand the effect of international accreditation on some of the UAE's healthcare organisations (Al Attal, 2009; Devkaran, 2014); however, this research lacked a clear emphasis on the effect of accreditation on HCPs burnout and work engagement levels. This thesis aims to address the issue by focusing clearly on the impact of international accreditation on such aspects.

1.2 The United Arab Emirates

In 1971, seven states located along the southeast cost of the Arabian Peninsula joined together to establish a country called the United Arab Emirates (UAE). UAE is a young yet rapidly growing country consisting of seven emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Ras Al Khaimah, Umm Al Quwain, and Fujairah (Figure 1-1). The country is located between Asia and Europe, which gives it a strategic location to connect the world from east and west to boost its economy. The

rapid growth of the country was initially triggered by the discovery of oil. The country, however, and particularly the emirate of Dubai, has focused on other revenue streams to enhance its economy, such as trading and tourism (Melodena, 2008).

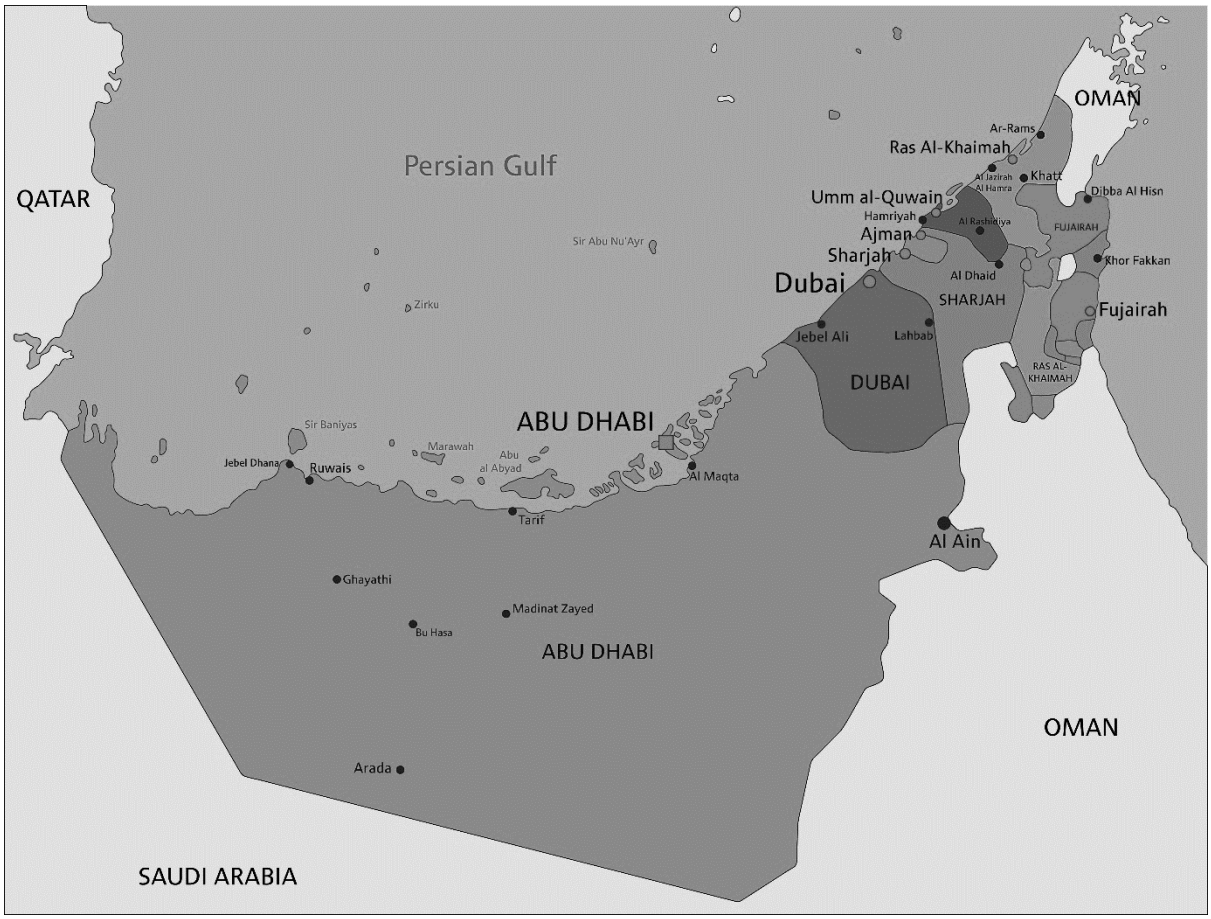


Figure 1-1 A map of the UAE.

UAE has a unique demographic structure, as most of its population is made of expatriates who have moved to the country to take up work in the service sector. The growth of the service sector has increased the number of people moving to the UAE. For instance, Melodena (2008) showed that 82% of Dubai's population are expatriates. In 2016, the total estimated population of UAE was 9.3 million which increased to 10.1 million in January 2022 (UN, 2022). The rapid growth of the UAE's population and its economic condition has positively influenced the healthcare system. The number of healthcare facilities and healthcare workers has increased to

meet the growing demand of the population as a result (Koornneef et al., 2017). In 2014, a set of strategic visions were launched by the UAE government to achieve a global leading country focussing on services as a key contributor to growth of the country and improving the healthcare system is one of these objectives.

1.2.1 The healthcare system in the UAE

The UAE has a relatively robust public healthcare system, which includes four government-funded health authorities and a developing private sector. Public healthcare services are regulated by the Ministry of Health and Prevention (MOHAP), the Health Authority of Abu Dhabi (HAAD), Dubai Health Authority (DHA), and the Emirates Health Authority (EHA). While Abu Dhabi and Dubai have their own authorities, MOHAP operates for the remaining five emirates as a regulating and licensing authority. MOHAP is a centralised management organisation that oversees healthcare facilities across the country; however, each emirate regulates its local facilities to manage and allocate resources.

Despite the advancement of UAE's health system, there is a growing need for HCPs to ensure adequate staffing and overcome the constant demand which arises with the provision of high-quality healthcare services. Since 2009, the number of hospitals has increased by 25% with a total of 36 government and 79 private hospitals (Koornneef et al., 2017). Government facilities provide free care for UAE nationals and a low-cost option for non-nationals. Given the high cost of private facilities, new amendments were made to include health insurance allowing residents to access healthcare facilities at a low cost and minimise the pressure on public hospitals (Arnold, 2021). As a result, such amendments have attracted tourists and medical staff to specialised hospitals in the country.

While the UAE has managed to develop a robust healthcare system, there are some inherent disadvantages the country must work on. As mentioned earlier, most healthcare workers are expatriates risking the availability of HCPs in the future. It is claimed that there are 181 doctors per 100,000 residents (Arnold, 2021), and the vision of the UAE is to attract international qualified practitioners and increase the number of HCPs (i.e., doctors and nurses). Due to its dependence on expatriate HCPs, retaining qualified workers is a key challenge for the country. Based on the WHO's World Statistics (2015), the UAE was reported to have a shortage in nurses and midwives. For instance, an estimate of only 31 nurses and midwives were assigned for every 100,000 residents in the UAE compared to the UK with an estimate of 88 nurses and midwives were assigned for every 100,000 residents.

The possible shortage in HCPs could lead to undesirable consequences in sustaining the UAE's vision. Further, the psychological health and well-being of HCPs could possibly be affected due to the increase in work demands. Similar challenges were found in other countries; for example, the continuous growth of population and chronic diseases had led to an insufficient number of HCPs, which was proved to be a major concern in the United States health system (WHO, 2015).

Healthcare has a significant impact on boosting the growth of the economy in the UAE. The national vision embraced the expansion of the medical tourism sector and attracting healthcare professionals as well as patients. Attracting patients and boosting medical tourism as a sector requires improving the quality of healthcare services and promoting patient safety. Hence, the country has witnessed a substantial growth in the number of the accredited facilities. The following section discusses the phenomenon of medical tourism and its impact on the UAE. Healthcare inspections and accreditation are further discussed in Chapter 2.

1.2.2 Medical tourism in the UAE

'Medical Tourism' refers to the movement of patients who travel for medical services to gain a rapid access to healthcare services with reduced costs or a higher quality of care (Connell, 2013). Medical tourism has long been a factor in the growth of the economies of many developed countries. The relationship between travelling and health is not new as people used to travel for wellness spas and resorts. Indeed, patients are motivated to travel to different countries to seek treatment because of the availability of a desired care, the cost of such care, and/or the expertise of medical staff providing the care (Lunt et al., 2014).

Profits related to medical tourism are rapidly increasing, with an estimated annual revenue of $50 to $65 billion, and this is expected to continue to grow by 15% to 20% annually (Verma, 2020). Undoubtedly, this growth can be explained by the additional services patients receive besides their medical treatment, including accommodation, transportation, and post-treatment vacations (Bookman & Bookman, 2007). As a result, developing countries, such as the UAE, aspiring to become regional centres for health tourism (Devkaran & Farrell, 2014), have been competing intensely with each other to attract patients and secure their place in the industry. Despite the possible risks of malpractice and life-threatening complications, governments and policy makers continue to invite patients for state-of-the-art health services including one-day surgeries.

Asian countries, such as Thailand, have attracted patients from the US for low-cost healthcare. Middle Eastern patients, nevertheless, have travelled for services that are not available in their countries, for instance advanced or complicated treatments, such as cancer treatment (Bookman & Bookman, 2007). The concept of medical tourism is not new, however; it has been redefined by

globalisation. From the UAE, patients traditionally travelled to India, Thailand, or Singapore for medical care. Woodman (2020), published a guide for patients (Patients Beyond Borders) on how to choose appropriate countries for care. The author reassured patients that they would be pleased by the quality of care provided in these countries because they offer “affordable, high-quality and American-accredited medical options” (Woodman, 2020, p. 17). Medical tourism is therefore a major contributing factor in the growth of international accreditation programmes to assess the quality of healthcare services in the UAE.

Seeking treatment in an accredited facility has become a criterion for patients to travel abroad. Accordingly, countries such as Turkey, Saudi Arabia, and the UAE have raced to accredit their facilities with international accrediting bodies, to maintain their place in the market of medical tourism (Woodhead, 2013; Khan & Alam, 2014). And this development has led to a growing research interest in the phenomena. One of the largest accrediting organisations is the Joint Commission (JC), which extended its services to survey primarily hospitals and primary care centres in the US (Campbell et al., 2021), with an estimate of 1000 healthcare organisations being accredited worldwide (Al Shawan, 2021). Although JC received recognition from the Centre of Medicare Services in the US in 1966, the first international accrediting manual was released in 2000. Further, the JC extended its services since 2000 to accredit international healthcare organisation using the Joint Commission International (JCI) standards.

In 2014, Khan and Alam (2014) published a paper showing which countries had healthcare facilities accredited by the JCI and comparing the totals. The Kingdom of Saudi Arabia had the highest number of accredited hospitals at that time, followed by Turkey and the UAE. For this thesis, a comparison was made to view the

number of accredited facilities between countries from 2013 to 2021. Data was taken from the JCI official website (www.jointcommissioninternational.org). Table 1-1 lists countries alongside the number of JCI accredited facilities in each; these countries were selected to match the ones presented in the paper by Khan and Alam (2014). The table shows a substantial increase in the number of facilities accredited by the JCI since 2013, with the UAE taking the lead, followed by Saudi Arabia, Thailand, China, and Turkey.

Table 1-1 A comparison of countries with accredited facilities by the JCI.

Countries	Number of accredited facilities in 2013	Number of accredited facilities in 2021
United Arab Emirates	39	201
Saudi Arabia	42	101
Thailand	18	61
China	16	50
Turkey	39	32
Indonesia	5	28
Qatar	5	23
Malaysia	6	17
Egypt	3	11
Israel	7	10
South Korea	13	9
Jordan	9	8
Taiwan	12	8
Lebanon	2	5
Pakistan	1	5
Singapore	14	5
Bahrain	1	4
Kuwait	2	3
Bangladesh	1	1

Further, figure 1-2 illustrates countries with the numbers of facilities accredited with JCI accreditation in 2021. It shows that the UAE, followed by Saudi Araba, China, Thailand, and Brazil have the highest number of accredited facilities, which

supports the visons of developing countries aspiring to boost their medical tourism (Connell, 2011; Woodhead, 2013). It is worth mentioning that, in the UAE, accreditation is mandatory for healthcare facilities including hospitals, primary healthcare centres, laboratories, and dental centres. Hence, the UAE has the highest number of accredited facilities.

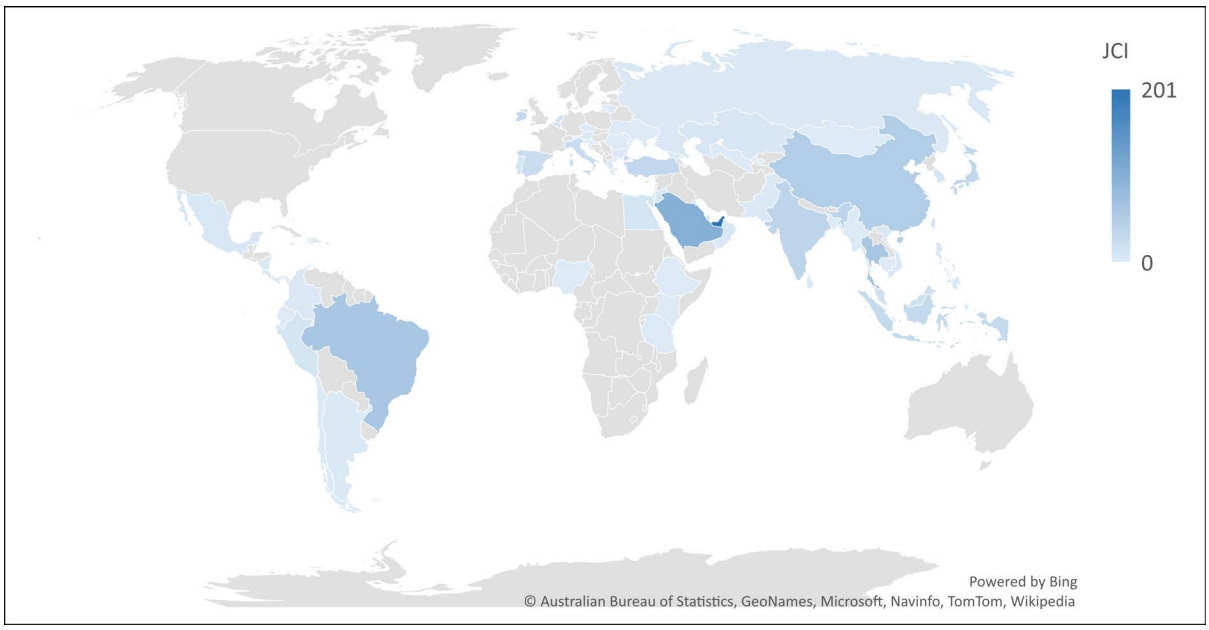


Figure 1-2 Map of the countries with JCI accredited facilities in 2021.

1.3 Defining the research problem

The main purpose of this thesis is presented in three points. First, this thesis seeks to contribute to the literature on the psychosocial impact of hospital accreditation by studying the psychological hazards and well-being of HCPs. Studies in this thesis attempt to fill the gap between theories in OHP and healthcare accreditation through testing the effect of such assessments on HCPs' burnout and work engagement related to these assessments. This thesis builds on the idea that the process of accreditation can increase the level of stress among HCPs (Elkins et

al., 2010; Al-Faouri et al., 2019). Moreover, this thesis seeks to understand the relationship between healthcare organisations' management and the levels of work engagement experienced by practitioners, with a view to understand how to sustain the improvement brought about by accreditation standards. Therefore, the first research question attempts to explore the types of psychosocial hazards arise during the process of accreditation.

Second, this thesis aims to strengthen the theoretical models in the field of OHP by linking two widely used contemporary models, the Job Demands-Resources model (JD-R) (Demerouti et al., 2001) and the Psychosocial Safety Climate (PSC) (Dollard & Bakker, 2010). Recently, there is a growing awareness of the work environment of healthcare organisations and its impact on HCPs. This thesis therefore attempts to answer the second question of how to incorporate the two models of OHP to answer the first research question related to hospital accreditation. Previous research investigated the antecedent role of PSC in predicting conditions at in workplaces including workload. However, very few studies have investigated the moderating effect of PSC to the JD-R model. Therefore, this research attempts to study PSC as an organisational resource in moderating direct paths of the JD-R model.

Third, both models had scarcely been investigated in Middle Eastern countries at the time of writing this thesis. This work is representative of the inevitably growing demands of healthcare accreditation to boost medical tourism. The impact of accreditation has been shown to be inconsistent, yet the majority of literature agrees on the work-related stress associated with it. Thus, the aspects of the JD-R model, such as increased job demands and inadequate job resources, are investigated during the process on accreditation in hospitals in the UAE. Until now,

most of the published research of accreditation has focused on either accreditation or OHP models in Western countries. In order to test these aspects and, indeed, to develop new insights into the impact of accreditation, this thesis attempts to investigate such topics using pragmatic and practical approaches.

1.3.1 Overview of this research

This thesis develops a model that integrates the PSC construct with the JD-R model to better understand and explain outcomes related to healthcare accreditation. To explain this framework, two assumptions are made. The first assumption is related to the understanding that accreditation in the UAE is a mandatory requirement for healthcare organisations. Such a requirement is perceived as a bureaucratic approach imposing administrative requirements that could increase the job demands and influence the delivery of patients' care (Pomey et al., 2004; Engel & Andersen, 2016).

The second assumption is related to the outcomes of this mandatory accreditation that could increase the level of stress among HCPs. It is therefore assumed that mandatory accreditation influences the level of burnout and engagement through unique demands, associated with accreditation and resources. Further, one of the organisational resources, namely PSC, acts as a safety signal to reduce burnout and increase engagement.

1.3.2 The structure of this thesis

This thesis has seven further chapters in which I present how I integrated concepts of healthcare quality and accreditation and theories in OHP to bridge the gap in the literature on accreditation. The content of each chapter is summarised below (Figure 1-3):

- Chapter 2 gives an overview of the literature and the main drivers behind healthcare accreditation. Key concepts of quality in healthcare are discussed as well as the type of assessments applied to ensure that healthcare services follow international quality and safety standards.
- Chapter 3 presents an overview of the theoretical frameworks and the literature review of the main models applied in this thesis, which include the JD-R and the PSC frameworks
- Chapter 4 gives a short outline of the philosophy and the methodological decisions influencing this research and supporting the selected research design to conduct empirical studies.
- Chapter 5 presents the findings of the first study, which explores the perceptions of HCPs on the process of accreditation and work-related risks that arise during such process.
- Chapter 6 presents findings from the second study, which translates and validates constructs tested in this research. These constructs reflect aspects of the JD-R and PSC models.
- Chapter 7 presents findings from the third study, which tests the validated constructs using two-wave longitudinal design with a six-month time lag.
- Chapter 8 presents an integration and a discussion of the findings of the studies. The discussion links those findings to previous findings that support the proposed model. General conclusions and implications are identified with suggestions for future research.

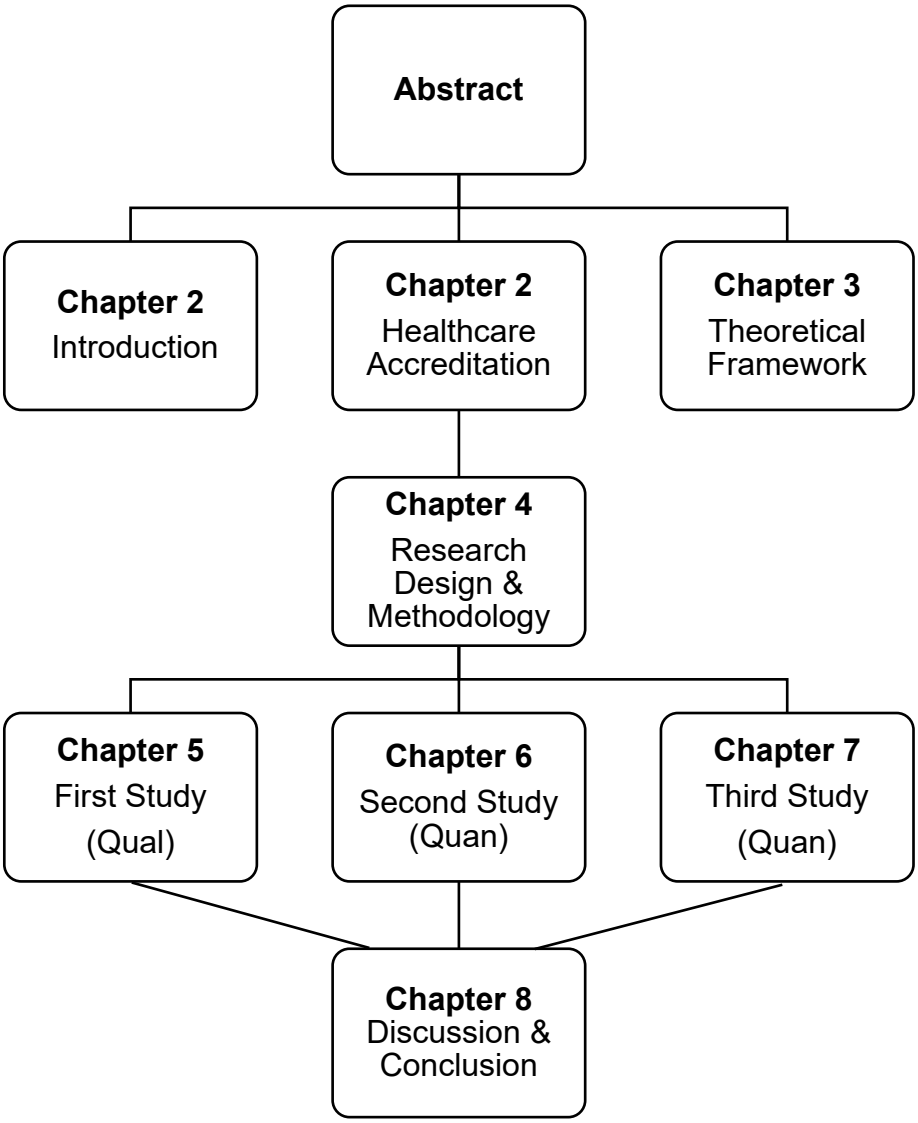


Figure 1-3 Structure of the thesis.

Chapter 2 Healthcare Accreditation

"The transformation can only be accomplished by man, not by hardware." (Deming, 2000, p. 18)

A global interest in improving the quality of healthcare services has been observed over the past two decades. Such improvement was accelerated by the call from the Institute of Medicine's report, '*To Err is Human'*, which highlighted the errors healthcare professionals (HCPs) often made at work (IoM, 2000). The report also suggested policies and procedures to prevent errors and to protect patients form accidents and injuries. As a result, healthcare systems, including hospitals, adopted a set of agreed global measures to improve the quality and safety of services provided to patients (WHO, 2003).

Healthcare organisations began to improve their services by educating and training HCPs to improve their working knowledge of quality and safety measures (Godambe & Shah, 2021). Indeed, some initial success was observed due to such education in this way. However, it was argued that such success could be influenced by the Hawthorne effect, which suggests that individuals change their behaviours when they are being observed and fear investigation processes (Wickstrom & Bendix, 2000). Further, and not surprisingly, the success achieved from improving the quality of services through training and education was not maintained, as HCPs returned to their previous working norms (Godambe & Shah, 2021).

2.1 Background

To understand how healthcare evolved via the concept of quality improvement, this section of covers the common methods that was adopted by healthcare organisations to enhance their services. As mentioned earlier, healthcare

organisations trained HCPs, which sufficed only to make slight improvements in the quality services using limited resources to minimise errors. However, with the advancement and complexity of healthcare systems, different strategies became necessary. Therefore, such organisations started to embrace improvement concepts from different industries. For example, organisations adopted improvement frameworks from production industries and utilised models such as the Lean Six Sigma model, which recommends eliminating unnecessary processes that could waste time. The model also focuses on enhancing products to increase customers' satisfaction (Munro, 2009).

Healthcare organisations then turned to other industries such as airlines and car production companies which had introduced models of continuous quality improvement (CQI), excellence, and safety culture. These models aimed to constantly improve products or services in a safe environment. Therefore, managements at hospitals adopted similar techniques to introduce concepts of quality management in healthcare settings, offering an ongoing improvement of services through HCPs' continuous professional development (Campbell et al., 2021).

Moreover, healthcare organisations aimed to become reliable and safe entities through minimising accidents and errors. Therefore, organisations worked according to the aforementioned models of excellence, including the concept of highly reliable organisations (HRO) (Gutzeit et al., 2021). The concept of HRO refers to organisations that take rapid action to resolve errors and prevent them from reoccurring by acknowledging problems earlier and attempting to resolve them using fewer resources (Weick, 2015). To sustain a safe environment for patients,

healthcare organisations were required to regularly inspect their facilities (WHO, 2003).

Indeed, healthcare is one of the most inspected and regulated fields. Quality improvement assessments have become a constant obligation during the development of healthcare services (WHO, 2003). These inspections are performed mostly by external accrediting organisations to award healthcare facilities with accreditation certificates. An accreditation certificate acts as evidence of the facility's commitment to implementing quality measures and to ensure the safety of patients (Campbell et al., 2021). Evidence shows that accredited hospitals, in the US, scored higher in the quality of care and patients' satisfaction compared to non-accredited hospitals (Lam et al., 2018). In addition, the World Health Organization demonstrated its commitment to the quality improvement of healthcare services in the Middle East by introducing accreditation in its first regional meeting in 1999 in Amman, Jordan (WHO, 2003).

2.2 Healthcare accreditation

Accreditation is recognised worldwide as one of the main derivers for implementing quality and patients' safety standards. Accreditation is a voluntary external process that evaluates healthcare organisations based on a set of standards carried out by healthcare professionals (Myers, 2012). External surveys and accreditation in healthcare facilities were developed to ensure objectivity and scrutiny of assessments (Myers, 2012). Generally, the process of inspection or assessment by an international organisation is referred to as the survey and inspectors are called surveyors (Scrivens et al., 1995). The process of accreditation resembles a peer review assessment given that surveyors are carefully selected to

match the clinical quality of the surveyed facility. Standards, however, are developed to include various services provided in healthcare organisations through a consensus process (WHO, 2003).

As discussed earlier, the aforementioned report, '*To Err is Human'* (2000), urged healthcare organisations to create a safe environment for patients through regulatory mechanisms that include accreditation, licencing, and certification. The WHO has also supported the establishment of national programmes that encourage the continuity of healthcare improvement and evaluate healthcare organisations' performance (WHO, 2003, 2018). As a result, many countries developed strategies to utilise accreditation to ensure best practices are being fulfilled in health organisations which have limited resources, including quality and patients' safety.

Since the 1990s, a rapid growth in evaluating healthcare systems has been observed, which was triggered by the need to know how to enhance the delivery of services with the least possible resources (Heidemann, 2000). Data published by the Office for National Statistics (2019) showed that the UK, in 2017, spent around £3000 per individual on healthcare. Further, the percentage of growth domestic product (GDP) spent on healthcare had fallen from 9.8% in 2013 to 9.6% in 2017. This compares with 8.6% of budget allocated to the healthcare in the UAE in 2017, which had fallen to 6.9% in 2020 (UAE, 2021). However, the Organisation for Economic Co-operation and Development reported an increase in healthcare spending worldwide on average of 2.0% (OECD, 2019).

Therefore, countries endorsed strategies to reduce spending on healthcare systems through implementing concepts of quality and standardisation (i.e., Accreditation). It is not clear whether accreditation is designed to help reduce spending on healthcare. However, looking at figures from the UAE's budget

allocated to healthcare and the number of accredited facilities presented in Table 1-1 (Chapter 1), one might consider a correlation between accreditation and the percentage of spending on healthcare.

2.2.1 Concepts of quality

Quality is identified as a property of a product or a service that has value (Atkinson et al., 2010). Crosby (1979, p. 6) defined quality as "*an achievable, measurable, profitable entity that can be installed once [organisations] have commitment and understanding, and are prepared for hard work*". According to Crosby, quality is manifested in the way work should be performed correctly, from the first attempt, to limit repeating unnecessary failures. Hence, Crosby's book is called 'Quality is free' and argues that, through improved quality, the cost of error is eliminated or reduced (Crosby, 1979). It is worth noting that the definition of quality includes 'hardworking'. Of course, improvement requires dedication; however, managers may overlook these aspects of quality when attempting to improve a service or a product and focus only on the positive outcomes (Ehlers et al., 2017). Given that there is hard work in the process of improving quality in organisations, the need to link quality concepts with OHP models is the aim of this research. This thesis assesses the extent of the hard work and the nature of the demands associated with the concept of quality improvement concept and its' effect on HCPs.

Further, Edwards Deming, who is known as 'the father of quality' (Best & Neuhauser, 2005), stated that "*quality should be aimed at the needs of the customer, present and future*" (Deming, 2000, p. 5). He explained how quality should start with managements' intention to improve production or services, followed by sharing this intention with other members of the organisations. Deming introduced 14 points that

aimed to solve organisational problems. These points have a clear emphasis on organisational change; however, only those of direct relevance to this thesis will be considered here, namely: having a clear purpose for improvement; adopting new philosophy for change; ending the reliance on inspection to achieve quality; improving the system constantly; and eliminating fears and barriers to improvement (for more information, see Deming, 2000). Surprisingly, the third point encourages the termination of inspections, as Deming explained that inspection might be ineffective and might increase organisational costs rather than improve its' processes. He also stressed that quality is argued to be a way toward improvement rather than merely inspecting facilities regularly (Deming, 2000).

2.2.1.1 Total Quality Management in healthcare

Healthcare systems have adopted quality concepts to enhance decision making and professional involvement regarding patients' safety. Quality in healthcare however has changed over time and varies among countries. Due to the complexity of healthcare and its services, defining quality is challenging and controversial, as there have been over 100 definitions and measures of quality in healthcare identified by the Institute of Medicine (IoM) (Lohr & Schroeder, 1990). The IoM recognises quality in healthcare as an improvement of the services that enhances patients' health. Improvement, therefore, should be coherent with evidence-based knowledge (Lohr & Schroeder, 1990). As a result, several initiatives were adopted to assess the quality of healthcare including total quality management (TQM).

Total Quality Management (TQM) is a quality concept that gained wide popularity within Western countries in the 1990s, mainly after Deming's views on improving the production of the US companies to compete with those in Japan

(Brown, 2013). The most prominent aspect of TQM is that it emphasizes the involvement of all employees during quality improvement. The concept of TQM led to a significant growth in organisations providing consultation services regrading quality management, which encouraged researchers to investigate the effect of the concept (Brown, 2013). In healthcare, TQM allowed administrative staff to get involved in the quality of care and clinical services, which until then had been limited to healthcare professionals only (WHO, 2003). Elements of TQM address the standardisation of organisational processes or services and the promotion of continuous quality improvement.

Although the concept of TQM seemed optimistic, few challenges were observed when it was applied in healthcare settings. It was found that the success of this concept in healthcare varied between countries (Alzoubi et al., 2019). For instance, Mosadeghrad (2015) tested TQM in healthcare organisations in Iran, and concluded that implementing this concept there was not successful due to the bureaucracy and complexity of healthcare systems. His findings supported the work of other researchers who suggested the presence of barriers between HCPs and managements when implementing TQM in healthcare (Huq & Martin, 2000). Therefore, sustaining TQM in healthcare organisations was challenging because the approach was not easy to implement and required the involvement of leadership as well as HCPs (Øvretveit, 2000; WHO, 2003).

2.2.1.2 ISO in Healthcare

Many concepts of standardisation have been developed to measure and regulate the performance of healthcare organisations. The International Organization for Standardisation (ISO) is one of the most well-recognised organisation developing

international principles which aim to standardise product design (Heires, 2008). ISO was established in 1946 to provide agreement on standards for use in production (Murphy & Yates, 2009). In healthcare, ISO developed a series, known as the ISO 9000, which creates a set of standards on improving the quality of management. The series focused on improving the administrative procedures instead of the clinical ones (WHO, 2003). Despite the limitations this series offered to the service sector, healthcare systems worldwide adopted ISO standards to systematically manage the quality of services, (Sweeney & Heaton, 2000). Furthermore, Ritchie et al. (2019) assessed survey data from 88 hospitals that used the new ISO 9001 healthcare standards. They concluded that hospital managers who used ISO 9001 standards showed improved relationships with governments, patients, and insurance companies.

Generally, to ensure standardisation, healthcare services have focused on three basic elements, which include inputs, conversion processes, and outputs (Figure 2-1) (Spath, 2017). Inputs refer to the structure and resources found in a facility (i.e., supplies, equipment, and personnel resources), while conversion processes relate to the clinical and administrative functions in each facility. Diagnostic processes and treatments are examples of clinical functions, which are encouraged to be standardised to maintain the high quality of services in these facilities and achieve optimal patients' health outcomes. It was suggested that standardisation, be it clinical or administrative, improves the quality of care through increasing patients' satisfaction with services and boosting employees' behaviours (Spath, 2017).



Figure 2-1 Elements of healthcare services adapted from Spath (2017, p. 66)

2.2.1.3 Accreditation in Healthcare

Standardisation has influenced contemporary medicine by forming collaborative protocols and guidelines. Guidelines, which are processes based on scientific evidence-based knowledge, are regularly used in healthcare to help HCPs form appropriate decisions for specific clinical conditions (Timmermans, 2003). Timmermans (2003) defined standardisation as the process established by an authority or an external entity that ensure procedures and processes remain uniform and standard. Standardisation can be applied in designing a service or a piece of equipment, defining and assigning medical terms, performing a procedure or a service, and assessing performances.

Further, the concept of standardisation in healthcare was adopted by the society of American College of Surgeons (ACS) as early as 1917, which established minimum guidelines for hospitals containing only five standards (Scrivens, 1995; Myers, 2012). According to Scrivens (1995), the standards gained wide acceptance by hospitals in the US and over half of these hospitals volunteered to be accredited. In the 1950s, the ACS along with the joint commission had expanded these standards and introduced an organisation, called the Joint Commission for the Accreditation of Health Organisations (JCAHO), to respond to such high demands for accreditation (Pomey, 2015).The organisation has expanded its services to

survey international healthcare organisations through its standards, and has introduced a manual that has more than 250 standards (Myers, 2012)

In the US, there are almost nine organisations that offer accreditation and inspection services; however, 88 percent of the accredited hospitals are surveyed by the Joint Commission (JC) (Willis, 2021). Although healthcare organisations are not required to obtain their accreditation from the JC, these organisations are expected to pay fees to become accredited. The fees to accredit hospitals in the US, using JC, are unknown given that accreditation inspections are performed on a group of hospitals rather than on an individual one. However, it was suggested that other programmes might cost $3400 for the annual survey and additional $1500 per survey day (WHO, 2003). Further, the average cost to accredit a hospital using the international JC standards was estimated to be $46,000 (*JCI Accreditation*, 2010). Although these costs are estimations, these costs might have changed over the years.

The development of JC standards encouraged other countries, such as Canada and Australia, to develop their own standards, followed by the UK and the majority of the European countries (Shaw et al., 2010). Although many countries developed their own standards for quality inspections, the JC remains the largest international accrediting organisation that extends its services to developing countries, which is known as the Joint Commission International (JCI). Additionally, the JCI expanded its focus from accrediting hospitals to include nursing homes and primary care as well.

Using the JCI standards, accreditation spread first in European and other Western countries followed by Latin America, Africa, and Western Pacific countries (WHO, 2003). In 1994, the WHO held its first meeting with Eastern Mediterranean

countries to introduce the concept of healthcare quality and accreditation. By 1998, those countries had adopted strategies to improve the quality of healthcare services. Since then, many countries have used the JCI standards and competed to accredit their facilities and boost the their medical tourism (Khan & Alam, 2014). Further still, some countries, including France and the UAE, developed national policies that mandate hospital accreditation (Pomey et al., 2005; Devkaran & O'Farrell, 2015), while others have used accreditation as a voluntary process. Although it is valid and useful to apply quality management concepts, only hospital accreditation is addressed and further discussed in this research.

2.2.2 Accreditation versus ISO

Shaw et al. (2010) compared the performance of hospitals with different external assessment, such as ISO or accreditation, to those unevaluated ones in seven European countries, namely Belgium; Czech Republic; France; Ireland; Poland; Spain; and UK. The authors compared hospitals based on their adherence to the adopted standards (n=229 standards), which were clustered into six categories. These categories involve criteria related to management, patients' rights, patients' safety, clinical organisation, clinical practice, and the working environment. Findings suggested that hospitals with external assessment, either ISO or accreditation, showed higher compliance with patients' safety criteria compared to hospitals operating without these standards. Furthermore, the impact of accredited hospitals on management, patients' safety, and clinical practices was found to be more distinct than hospitals with ISO assessment (Shaw et al., 2010).

When comparing ISO standards to accreditation, Guerra Bretaña and Marín Álvarez (2017) concluded that there was no differences between these programmes

in promoting the quality and safety of services. They suggested that programmes, in general, complement each other to increase patients and stakeholders' satisfaction. However, differences were observed in the type of standards, as ISO standards focus on the administrative processes the organisations follow, while accreditation standards address best practices used in the medical felid and directed toward patients' safety. Furthermore, the assessment in ISO is commonly performed by auditors from the quality management department. Accreditation assessment, on the other hand, is performed by medical professionals. Given these differences between ISO and accreditation, governments and policy makers tend to choose accreditation assessments to evaluate operational aspects of healthcare organisations.

2.2.3 Defining accreditation

As mentioned, accreditation is a process that provides acknowledgement to healthcare organisations in relation to the quality of services they provide (Scrivens, 1995; Campbell et al., 2021). The process assesses healthcare organisations based on their performance against a set of agreed standards. The assessment is carried out by external accrediting organisations to provide objectivity and external scrutiny (ISQua, 1998; Myers, 2012; WHO, 2018). These organisations can include public non-profit organisations or for-profit/private ones (WHO, 2018). Healthcare facilities are therefore evaluated with regard to their structures and regulations on the quality of health services, including the availability of proper medical equipment, adequate staff ratios, and suitable quality measures (Shaw, 2015).

Different strategies of accreditation have been identified reflecting the approach and purpose of accreditation. It is worth looking at the accreditation systems of two European countries, France and Denmark, because these countries

mandated the accreditation scheme similar to the UAE. For example, the accrediting agency in France defined accreditations as an independent evaluation carried out by a self-governing organisation to ensure that the safety standards are followed by healthcare organisations. Further, the agency mandates accreditation for all healthcare organisations, and expects these organisations to renew their accreditation every five years (Pomey et al., 2005). In Denmark, the accreditation scheme, which was launched in 2009, aimed to assess the continuous quality improvement and transparency of healthcare organisations by emphasising on the elimination of errors (Bogh et al., 2016). Denmark have also mandated the national accreditation of public healthcare organisations that provide a framework for quality improvement across the country.

2.2.3.1 Standards of Accreditation

Whether accreditation is made voluntary or required by governments, the standards of accreditation need to have common principles of safety, which are recognised internationally (ISQua, 1998). Donahue and Vanostenberg (2000) described the process involved in developing these international standards, mainly for the JCI accreditation manual. The process starts by assigning two members from seven international regions that represent the International Society for Quality in healthcare (ISQua). The standards are then developed to evaluate healthcare organisations regarding patient-centred care, the structure and processes of organisations, and organisational outcomes. These standards are regularly amended and modified to account for new events related to healthcare.

ISQua (1998) defined six main principles to guide members who develop standards in healthcare. These principles are:

1. Standards are presented according to the underpinning concepts including patient-centered care, quality monitoring and risk management.
2. Standards should have a clear definition of the requirements that are classified as structure, process, and/or outcome.
3. The scope of the standard needs to be addressed, as standards need to cover the improvement process including the clinical and the administrative aspects of healthcare organisations.
4. Standards should have clear and structured content, and the requirements are organized to account for different departments in organisations.
5. Organisations need to comprehensively define the processes of these standards and test and evaluate them regularly.
6. Standards are amended to measure the compliance and performance of organisations.

2.2.3.2 Assessment in Accreditation

The assessment process of healthcare organisations is the core concept of accreditation. External surveyors visit a healthcare organisation to assess its processes followed in the workplace based on the adopted standards. A minimum of two surveyors are required to evaluate and review the structure of the inspected organisation to assess the level of safety and consistency of services (ISQua, 1998). Further, surveyors evaluate the process organisations taken to change, train, and educate staff, including HCPs, using performance indicators. Surveyors also evaluate the way organisations monitor such changes to benefit patients. Accreditation assessment includes observing the facility through onsite rounds, talking to staff and/or patients, examining evidence that includes medical records,

and attending staff presentations that cover their improvement progress (NHS, 2021).

It is worth mentioning that accreditation does not guarantee the best care (Lam et al., 2018); however, it creates a basis for high quality and safe practices (El-Jardali et al., 2013). Lam et al. (2018) reported that almost 3,000 hospitals in the US underwent accreditation by the joint commission (JC) between the years 2014 and 2017. The authors found that hospitals accredited by the JC did not give a better healthcare compared to hospitals with a different type of accreditation. Although assessment procedures can be overwhelming, it is claimed that these assessments provide support and encouragement to standardise practices related to safety and quality (WHO, 2003). However, there is a paucity of knowledge on the impact of assessments on HCPs' levels of psychological distress and well-being. Further, the level of engagement HCPs have toward these assessments needs to be further explored because it assesses the level of committed HCPs show to the organisational values and goals.

2.2.3.3 Strategies of Accreditation

As mentioned earlier, accreditation is usually a voluntary process, yet some governments (i.e., the UAE) mandate this assessment to ensure healthcare services are in line with required safety and quality measures. The process of accreditation can lead to an extensive change across healthcare organisations. It requires frequent control and constant surveillance of HCPs to reach the required standards. Quality and safety standards are enacted as forms of rules in mandatory accreditations. Ouchi (1979) reported that individuals show different levels of commitment during accreditation. He argued that monitoring and evaluating upset

individuals, hence, mandatory assessments are negatively perceived by HCPs, especially doctors (Ehlers et al., 2017). As a result, the levels of adherence to accreditation standards have been observed to drop immediately after the assessment is over (Devkaran & O'Farrell, 2015).

The process of accreditation encourages healthcare organisations to change. It was suggested that accreditation systems, "when properly designed and managed, can be powerful forces for quality and change in any complex system" (Boelen & Woollard, 2009, p. 893). To achieve the accreditation certificate, healthcare organisations are expected to change (Shaw et al., 2010; Cooper et al., 2014). However, reflecting on the global pandemic emergency, healthcare systems have been under the pressure of not having enough capacity within their workforce to respond to the high demands of healthcare needs (AlJhani et al., 2021; Mayer, 2021). This research, therefore, attempts to explore the psychosocial hazards in hospital accreditation.

2.3 Previous research on accreditation.

Governments have established national strategies to utilise external assessments as tools to improve the quality and safety of healthcare settings. Governments mandating accreditation aim to ensure a certain level of quality of healthcare services. Since the introduction of quality concepts in healthcare to the Middle Eastern countries, many countries have used accreditation, especially the JCI standards, as a guideline to improve and accredit their healthcare facilities (WHO, 2003). Therefore, the growth of JCI accreditation had motivated researchers to study the effects of these programmes on the organisational culture and on patients as well. Studies however do not show a straightforward impact of accreditation on the

working environment, patients, or HCPs. Although accreditation programmes are highly valued, there is little evidence to support the benefit of these programmes in improving the quality of patient care (Alkhenizan & Shaw, 2011).

It is worth mentioning that research in accreditation has taken different methodological approaches to study the impact of the programmes. Hence, findings are inconsistent and vary among countries. The methods used to study the impact of accreditation include different qualitative and quantitative methods, and systematic reviews. Previous research has shown a lack of in-depth analysis and most of the results aimed to test the strategies taken by governments to promote organisational changes (Grepperud, 2015). However, accreditation is viewed as an external driver for change and safety (Greenfield et al., 2019). Further, with many accrediting agencies, participation in a scheme depends on leaders and the managers of health organisations. Although hospital accreditation has gained in popularity, there have been few detailed investigations into the impact of these programmes on HCPs' levels of psychological health and positive well-being.

2.3.1.1 Qualitative research

Studies using qualitative methods (e.g., interviews) aimed to explore and understand HCPs' perceptions of accreditation. For instance, Melo (2016) conducted a study in a teaching hospital in Portugal and interviewed a total of 46 participants, both HCPs and administrative workers. The author found that accreditation contributed to organisational change, given that members of the accredited hospital became more aware of the safety practices. Further, managerial commitment was a key finding that supported the improvement of the quality of services by providing necessary resource that facilitated such change. It was emphasized in the study

results that the hospital voluntarily applied for accreditation; hence, staff showed high levels of acceptance to the standards and were collaboratively working toward implementing these standards. It appears that where a hospital volunteers to be accredited, rather than having accreditation imposed from above, staff see the process more favourably and are more willing to participate.

Alyahya et al. (2018), on the other hand, interviewed 56 employees, administrative and HCPs, working in primary healthcare centres in Jordan. According to the authors, centres were under pressure from the government to achieve the accreditation certificate, which was triggered by the aforementioned WHO's meeting in Jordan to introduce accreditation to the region (WHO, 2003). Their findings suggested a change in organisational culture through the adoption of common quality and patients' safety terms. Further, results showed how participants developed new knowledge of safety through training sessions and various workshops that standardised their practices. However, findings suggested a sense of increased coercive pressure among employees to achieve accreditation, as they were focusing more on administrative tasks and prioritising patients' medical report requirements. Such pressure was found to be stressful, especially before the surveyors' visit.

In a recent qualitative study in Denmark, HCPs were found to view hospital accreditation as contributing to the structural improvement of hospitals, yet such improvement was not seen to directly influence the overall care processes (Bogh et al., 2018). However, preparing for hospital accreditation was found to influence the time spent with patients, as HCPs focused on the improvement initiatives during the preparation for accreditation assessment. A similar finding was also demonstrated in a study conducted among clinical students in 11 medical schools in Taiwan (Ho et

al., 2014). Participants reported delaying patients' care to fulfil the requirements for accreditation, which was resumed a week after the assessment. Patients' care was mainly affected by the sheer amount of administrative work exerted on participants, mainly paperwork. Consequently, the current thesis seeks to fill the gap in accreditation research and investigate the work demands experienced by HCPs to achieve accreditation yet influence the quality of care.

2.3.1.2 Quantitative research

While qualitative studies may enrich the understanding of accreditation processes, the findings of this type of study depend on participants' perceptions and memories. Fortunately, accreditation has been empirically investigated either with cross-sectional or longitudinal designs to allow for more robust and objective assessments. For example, El-Jardali et al. (2008) investigated the perceived impact of accreditation among nurses working in accredited hospitals in Lebanon. Using a survey tool, the authors tested quality as an outcome variable and found positive correlation with the seven independent variables namely those that involved leadership, commitment and support, strategic quality planning, accreditation, use of data, availability of resources, and quality management.

Using the same variables, El-Jardali et al. (2014) assessed the impact of accreditation in a different setting (i.e., primary healthcare centres) using a cross-sectional mixed-method approach. Furthermore, the authors tested the perceptions of HCPs on the benefits of accreditation and its effect on staff and patients using open-ended questions including asking participants to list barriers or challenges that they faced throughout the accreditation process. The results from this study supported their previous work (i.e., in hospitals) and demonstrated a positive

relationship between quality, as an outcome variable, and accreditation, as a predictor variable.

Additionally, findings showed that accreditation improved staff satisfaction, as well as professional and organisational development. Hospital accreditation has succeeded in gaining public trust and improving leadership and managerial skills (El-Jardali et al., 2014). The qualitative results of this study nevertheless showed that accreditation increased workload and job stress. As mentioned earlier, accreditation assesses the performance of healthcare organisations of a defined set of standards. However, such assessment was found to increase the stress level among employees immediately before the surveyors' visit.

Longitudinal designs have been used to study the impact of accreditation on healthcare systems. Pomey et al. (2004, p. 114) believe that accreditation is "an agent of change" influencing different departments of healthcare organisations. Their study took place in France, where accreditation is mandatory, and found that such assessment helped to create shared values among professionals (i.e., organisational culture). The results showed that nurses were more motivated to participate in accreditation when compared to other staff. Due to the mandatory nature of assessment, staff viewed accreditation as a bureaucratic process forcing them to attend meeting and training sessions and to meet with the standards requirement. In a following review, Pomey et al. (2005) suggested that HCPs should to be aware of the contradictions mandatory accreditation could bring and of the fact that being accredited does not necessarily indicate improvement in care.

Similarly, Bogh et al. (2016) assessed the stability of quality indicators in hospitals after their first accreditation cycle in Denmark. Results demonstrated a sharp increase in the quality before accreditation which continued after accreditation;

however, these improvements flattened out over time thereafter. It is thus suggested that pre-accreditation improvement is driven and influenced by the pressure of external assessment. In a follow-up study, Bogh et al. (2017) attempted to examine the effect of patients' conditions and the type of given care on hospitals' performance measures (i.e., indicators). Findings were heterogenous and showed that performance measures for heart failure and breast cancer were negatively affected during the accreditation, while performance measures related to diabetes were improved. While accreditation promotes organisational change, results from these studies suggested inconsistency of the reported change.

Interestingly, in 2015 and after 10 years of implementing national accreditation standards, the Danish Ministry of health decided to replace accreditation with other quality programmes because it was viewed, by front line staff, as a burden and ineffective (Engel & Andersen, 2016). Eliminating inspection reiterates Deming's argument, which suggests that organisations should focus on implementing quality standards instead of inspecting workers (Deming, 2000). Using surveys, Ehlers et al. (2017) tested the attitude of employees toward the new quality programme and hospital accreditation in Denmark. Their findings indicated that managers and administrators valued accreditation irrespective of physicians and nurses' views on it. Physicians were also sceptical about the new quality programme, while nurses and administrative workers were optimistic. The authors suggested that barriers to the implementation of new quality programmes that include a lack of support from managers and insufficient communication between members of different teams.

While the majority of studies have aimed to test the effect of accreditation, very few studies have tested the stress level and the impact of such assessment on

employees' mental health due to increased workload. For example, Elkins et al. (2010) conducted a survey to test the level of stress, anxiety and depression among nurses in Texas, US, at two time points, one week before the assessment visit and one month after the visit. Their findings suggested an increase in stress level prior to the inspection visit, which is related to increased depression and anxiety. However, their findings were limited to a very small sample size (n = 55 participants) and the results would need to be replicated with a larger sample. Fortunately, Al-Faouri et al. (2019) tested the effect of accreditation on the stress level using a relatively large sample (n = 422). Their results implied that employees experienced stress before the accreditation visit. Furthermore, findings suggested that HCPs working in public hospitals were more likely to experience stress compared to HCPs working in the private sector. The studies presented suggested that the process of accreditation might increase the psychosocial hazards including increased job demands which increase the stress level among workers. These hazards are discussed in the following chapter (i.e., Chapter 3).

2.3.1.3 Systematic reviews

In a commonly cited systematic review on accreditation, Greenfield and Braithwaite (2008) found varying views and perceptions with regards to the impact and benefits of accreditation. Their results were classified in ten categories; however, only two categories had consistent findings which were that accreditation promotes change and facilitates professional development. The study suggested that accreditation can positively influence professional development. Further, according to Greenfield and Braithwaite (2008) hospital accreditation promotes organisational change through creating a better environment for patients that enhance the communication methods with patients.

Further, a review, which was published by the national accrediting organisation in Canada (Nicklin & Dickson, 2009), reported several benefits, positive impacts, and concerns of accreditation. The benefits were shown to enhance the safety of patients through measuring quality improvement indicators. Also, accreditation was found to enhance the reputation of healthcare organisations among patients and other users. Positive impacts of external assessments were found to improve the collaboration and teamworking among members of the accredited organisations and to decrease variances in practices through standardisation. The concerns, however, manifested in the lack of connection between the assessments and patient outcomes.

A recent systematic review aimed to identify and examine recent evidence on hospital accreditation. Hussein et al. (2021) reviewed 76 studies and thematically clustered them into six categories focusing on the changes that accreditation brings to hospitals. These changes were: organisational culture, patients' satisfaction, job satisfaction level, patients' clinical outcomes, quality performance measures, and economic outcomes. The result were heterogenous and the majority of the studies reported positive effects of accreditation on the safety culture and performance measures. However, negative findings, such as job stress due to accreditation processes were prevalent throughout the reviewed paper. Further, staff satisfaction and patients' experience were found to be unrelated to accreditation. Yet, the review concluded that these studies suggested inconclusive evidence on the impact of accreditation on the negative consequences, including job stress. In addition, the results of this review echoed the work done by Swathi et al. (2020) who concluded that HCPs found accreditation to be stressful and reduced the time that HCPs had available to spend with patients.

A comparative meta-analysis study was carried out by Touati and Pomey (2009), which compared accreditation in two different national healthcare systems (i.e., Canada and France). Although both countries have robust healthcare systems that are accredited through a rigorous assessment process, accreditation strategies differ in both countries. In France accreditation is mandatory, while in Canada, accreditation is voluntary. The review selected studies of both programmes and found that the number of accredited facilities in France were higher than those in Canada, which can be explained by the compulsory status of accreditation in France. The impact of accreditation in France was found to create an organisation-wide structure that was devoted to quality and safety, while accreditation in Canada aimed to improve the continuum of care.

The authors concluded that a centralised approach of decision-making to accredit healthcare organisations can oversimplify the claims of accreditation in promoting quality and patients' safety. Instead of a bureaucratic approach to force accreditation on healthcare organisation, the authors suggested applying a hybrid approach, where decisions are made by both higher and lower-level authorities (Touati & Pomey, 2009).

It seems that previous research noticed the workload associated with accreditation and echoed it after applying different research approaches. However, there have been few detailed investigations into the impact of accreditation on HCPs' burnout and work engagement. Therefore, the current thesis is an attempt to fill this gap in the research and highlight the burnout and work engagement experienced by the HCPs during these assessments.

2.3.1.4 Accreditation in UAE

As mentioned in Chapter 1, the UAE has a comprehensive public healthcare system, including four government-funded health authorities, and developing private sectors. Improving the quality of healthcare has always been a priority among UAE's health authorities (UAE, 2021). According to the World Health Statistics series (2019), the UAE showed promising trends in promoting the health of residents by eradicating infectious diseases, such as malaria and measles. Further, in 2017, the maternal mortality ratio (MMR) was reported to be 6 per 100,000 live births, compared to 14 in the US, and 9 in the UK (WHO, 2019).

In 2009, MOHAP announced that healthcare organisations, public or private, should aim to implement systems to meet international standards in healthcare quality and patients' safety. Accreditation was voluntary at that time. In 2014, a set of strategic goals were launched by the UAE government to achieve a world class healthcare system by 2021. These strategies were part of the UAE's national agenda, which was launched by the president of the UAE and supported by his vice president (Devkaran, 2014). Since these declarations, healthcare organisations, public and private, started to implement international standards, mainly the JCI standards, for accreditation. The UAE now has the highest number of JCI-accredited organisations and the country was recognised by the President and Chief Executive officer of the Joint Commission for its achievement (MOHAP, 2018).

Indeed, implementing international standards across the UAE helps to guarantee quality of care and patient safety; however, earlier studies showed that the process also can lead to increased stress for HCPs. Yet, few empirical research has been conducted to examine the effect of JCI accreditation in MOHAP facilities. Devkaran and O'Farrell published several studies on the impact of accreditation in a

private hospital in Abu Dhabi (i.e., the capital of the UAE) (Devkaran & Farrell, 2014; Devkaran & O'Farrell, 2015; Devkaran et al., 2019). In their first study, the authors recorded a series of 23 quality measures on a monthly basis for four years. The measures were related to the JCI standards, which included but were not limited to the assessment of patients. Findings showed that, although measures of performance had fallen immediately after the accreditation inspection, these measures thereafter remained steady and sustained improvement until the end of accreditation cycle, i.e., 3 years.

Devkaran and Farrell (2014) hypothesised a four-phase cycle model predicting HCPs' compliance with accreditation standards. The first phase is the initiation phase consisting of a slow improvement and gradual compliance with the standards. The second phase starts three to six months before inspectors visit and a sharp improvement occurs in facilities. The authors suggest that in this phase employees reach the peak of compliance, and everyone works hard to achieve the accreditation. The third phase, which appears immediately after the assessment is finished, shows a drop in the level of compliance. The fourth phase, which is the inactivity phase, is where compliance to standards is flattened. In a follow up study, Devkaran et al. (2019) evaluated the hospital performance after three cycles of accreditation using 27 quality measures. Their results suggested that the level of compliance among HCPs was maintained. They also explained how achieving the first cycle of accreditation with a high level of quality was important to maintain this level of quality.

Further, Koornneef et al. (2017) reviewed peer-reviewed publication on the progress of the healthcare system in the UAE and the challenges that healthcare organisations face. Interestingly, and although the UAE has the highest number of

JCI-accredited organisations, several studies reported on the quality and outcome of accreditation (discussed in the first paragraphs of this section) and concluded that accreditation did not contribute to the overall improvement. Therefore, there is an ongoing need to investigate the impact and outcomes of hospital accreditation on both HCPs and the working environment in healthcare settings.

2.4 Summary

Quality and patients' safety are key elements in healthcare systems. Significant strides forward have been observed in reforming healthcare facilities to improve and sustain quality of care through accreditation assessments. Accreditation has sparked a considerable interest in studying the effect and impact of these assessment. The findings of previous literature however have lacked consistency and robust evidence to support the accreditation of healthcare organisations. Given that few studies have explored the impact of accreditation on HCPs' stress level, and therefore no attempt has been made to test or extend the concept of accreditation to models and theories of occupational health psychology (OHP). Therefore, the current research aims to study the impact of external assessment on the health and well-being of HCPs from an OHP perspective. The following chapter discusses the theoretical frameworks applied in this thesis.

Chapter 3 Theoretical Framework

"Among the widespread definitions for a theoretical framework, we distill them to mean an explanation of the way things work." (Collins & Stockton, 2018, p. 1)

Work-related stress is one of the most challenging issues in organisations, generally, and in healthcare particularly. The Organisation for Economic Co-operation and Development (OECD, 2018) reported that one in six people in European countries has mental health problems, including stress, burnout, and anxiety triggered by the workplace. Consequently, many researchers have shown interest in different aspects of work that trigger and increase the level of stress among workers. This chapter aims to integrate the growing knowledge from theories and evidence in occupational health psychology (OHP) with healthcare accreditation programmes to further understand the burnout and work engagement of healthcare professionals (HCPs) as the outcomes of such programmes.

3.1 Background

OHP is a branch of psychology that improves our knowledge of the occupational factors and working conditions that influence workers' health and safety (Schonfeld, 2017). While researchers in OHP have advanced concepts of health and safety, work-related illnesses (both physical and psychological) are still a concern in many organisations (Clarke et al., 2015). The concepts of preventing stress and poor workplace environment and promoting healthy workplaces run simultaneously; therefore, the first part of this chapter highlights work-related psychosocial factors that pose a risk to employees' health. The second part of this chapter discusses the

theoretical frameworks employed in this research and how they can be applied to the specific context of hospital accreditation.

Throughout the rest of this thesis and within the context of OHP, several important terms are introduced and explained. These terms include hazard, risks, safety, health and well-being. A hazard is defined as anything that can harm a person, while a risk is the potential of something to cause harm to a person and the magnitude of that harm (Leka & Houdmont, 2010). Safety refers to the qualities that protect a person from risks or harm, whereas health, as defined by the WHO, is a 'state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO, 2020, p. 1).

Although the definition of 'health' has not changed from the very early definition developed in 1948 (WHO, 1948), it has received criticism from researchers due to its oversimplification of what the term health means (Larsen, 2022). To improve this simple definition, many attempts have been made to redefine health. For instance, Leonardi (2018, p. 472) defines health as the 'capability to cope with and to manage one's own malaise and well-being conditions'. However, this definition includes pain and discomfort (i.e., malaise) as part of being healthy, which contradicts the state of being healthy. Therefore, in this thesis, the WHO definition of health is used to describe the health and well-being of HCPs during the process of accreditation.

The studies in this thesis also adopt the definition of mental health from the WHO, which is the 'state of mental well-being that enables people to cope with the stresses of life, realise their abilities, learn well and work well, and contribute to their community' (WHO, 2022). Well-being is defined as the positive perceptions individuals can have about their lives, including emotion, satisfaction and

engagement (Brough, 2009). However, work-related stress and burnout are examples of negative states of well-being in the workplace. This thesis operationalises psychological health as workers' emotional, mental, or psychological health in addition to the level of satisfaction in their work or personal life (Brough, 2009; Nielsen et al., 2017). Psychological well-being is operationalised as workers' view of work control, work-related stress and anxiety and depression, which could influence their ability and interest to work and achieve organisational goals (Brough, 2009; Nielsen et al., 2017).

3.2 Psychosocial hazards at work

Due to globalisation, psychosocial hazards in the workplace have become a growing burden on organisations. The constant change and emergence of new features at work have influenced the health and wellbeing of employees. Psychosocial hazards can include the demographic shifts of workers, advanced technologies and outsourcing of tasks, which have led to the progression of work-related stress (EU-OSHA, 2007; Zadow & Dollard, 2016). Without a doubt, one of the most researched outcomes of psychosocial hazards is work-related stress. Several approaches have been taken to define work-related stress; however, the majority agree that stress occurs when there is a negative interaction between employees and their work environment leading to emotional, physical or cognitive reactions (Cox, 2000; Dewe, 2001).

There is evidence of an association between exposure to psychosocial hazards and health-related outcomes, which affect both individuals and organisations (Cox & Leiter, 1992; Cox, 2000; EU-OSHA, 2007; Drebit et al., 2010; WHO, 2010; Andersen et al., 2019; Sandeva & Gidikova, 2020). More specifically,

exposure to work-related psychosocial hazards has been found to impact employees' physical, psychological, and social health, which influence individuals' performance and organisations' productivity (Leka & Houdmont, 2010; Leka et al., 2015; Sandeva & Gidikova, 2020; Howard et al., 2022). Although psychosocial hazards are present in every occupation or organisation, HCPs are heavily exposed to different psychosocial hazards as they deal with mental and physical workloads, demanding patients, shift work and poor work-life balance (Lipscomb, 2017; Sandeva & Gidikova, 2020).

Previous studies have established that HCPs face prevailing pressure in their daily routines and are exposed to both physical and psychological hazards (Drebit et al., 2010; Kumar, 2016; Andersen et al., 2019). HCPs are at risk of accidental injuries including needle sticks and sharp injuries, which can be associated with various infections (Lipscomb, 2017; Mengistu & Tolera, 2020). In addition to accidental injuries, Drebit et al. (2010) investigated the occupational and environmental hazardous factors related to fall incidence among HCPs using incident-reporting data. Although they found that HCPs were more likely to fall in a hazardous working environment, their data were limited to HCPs' descriptions of the fall incidents and did not include other factors such as organisational culture.

Furthermore, HCPs face a higher incidence of physical injuries and illness at work, which has been found to impact healthcare organisations and patient care (Horan et al., 2019). Supporting these findings, previous studies have established the indirect effect of workload and the quality of patient care (Shirom et al., 2006; Salyers et al., 2016; Loerbroks et al., 2017). Furthermore, Loerbroks et al. (2017) and Teoh et al. (2019) found an association between a hazardous working environment and the quality of care provided to patients.

Despite the importance of physical hazards faced by HCPs, a growing body of evidence has demonstrated the impact of psychosocial hazards and work-related stress among HCPs. For example, HCPs experience different psychosocial hazards that include increased work demands, low control, lack of support from managers or co-workers, poorly managed changes, and organisation injustice (Wright & Khatri, 2015; Chemali et al., 2019; Sandeva & Gidikova, 2020; Howard et al., 2022). As a result, studies have shown that HCPs experience high levels of stress (Rickard et al., 2012; Teoh et al., 2019), depression and anxiety associated with psychosocial hazards (Hakanen et al., 2008; Creedy et al., 2017). For example, long working hours and workload have been found to increase stress and reduce job satisfaction (Piko, 2006; Shanafelt et al., 2015; Govindaraju, 2019). Working hours influence not only HCPs' mental health but also their health behaviours, such as consuming unhealthy food (Fernandes et al., 2013), smoking, having social problems (Grati, 2021), and drinking more alcohol (Medisauskaite & Kamau, 2019).

The importance of the literature on the direct effect of psychosocial hazards on HCPs' mental health is clear. However, Maslach (1982) also explained how professional helpers, including HCPs, experience emotional strain when they treat so many patients in a short time (see Chapter 1, section 1.1.2). Furthermore, in a systematic review of prevalence factors associated with burnout in Arab countries, Elbarazi et al. (2017) showed a positive relationship between workload and burnout and an inverse relationship between fairness and rewards and burnout. Therefore, the research in this thesis aimed to explore the unique psychosocial hazards that have emerged in the accreditation process in an Arab country (i.e., the UAE).

During the last two years, the world has witnessed the outbreak of COVID-19, which has had a further impact on HCPs' psychological health. Sandeva and

Gidikova (2020) found that the COVID-19 pandemic resulted in an increased prevalence of anxiety, depression and insomnia. They also reviewed and identified the most prevalent psychosocial factors in healthcare settings and their impact on the health and well-being of HCPs. They found that job strain, violence and harassment, poorly managed change and biohazard stressors were the most predominant psychosocial hazards experienced by HCPs. While these psychosocial hazards were found to influence HCPs' mental health and well-being, they were also found to influence their intention to leave. Supporting this finding, Eneroth et al. (2017) and Laeeque et al. (2018) found a positive relationship between patient-perpetrated violence and HCPs' turnover intention that was mediated by job-related stress. In addition, previous research has shown a link between abusive supervisors' behaviours and medical errors (Wright & Khatri, 2015).

Besides, studies indicated the high stress level among HCPs during organisational changes (Shanafelt et al., 2016; West et al., 2018). West et al. (2018) found that introducing computerised patient medical records and mandating a proper documentation, which is emphasised during hospital changes, contribute to burnout and can, in fact, increase the rate of burnout by 29%. Therefore, this thesis addresses the problems related to documentation that exist during the process of accreditation and how these demands influence HCPs' health.

Another aspect of psychosocial hazards within the work environment is quality control inspections, for instance, accreditation programmes. Although there is limited research on the impact of accreditation on the working environment, evidence indicates that it increases HCPs' stress levels (Elkins et al., 2010; Al-Faouri et al., 2019). The constant change in the healthcare work environment, together with the trend of healthcare accreditation, can be perceived as a highly stressful situation for

HCPs. Therefore, good management of psychosocial hazards during accreditation and appropriate support from peers and supervisors are required to ensure the protection of HCPs' mental health.

The process of accreditation itself could be viewed as a unique type of demand that increases and changes the workload, which can have a significant impact on HCPs' psychological health. Although some research has examined the psychosocial hazards experienced by HCPs, there are still very few empirical investigations into the role of accreditation in increasing such hazards. Therefore, by identifying potential psychosocial hazards during the process of healthcare accreditation, this thesis underlines the serious and unintended consequences of the process of accreditation and their possible effects on HCPs, such as burnout and work engagement. The next section describes the psychosocial hazards that are related to the context of this thesis.

3.2.1 Categories of psychosocial hazards

Psychosocial hazards are defined as those characteristics of work, including design and management, that can harm employees' physical or psychological health (Cox, 2000). Cox (2000) argued that employees experience stress when they cannot cope with demands at work. The interaction between psychosocial hazards and employees' inability to cope with them was found to cause harmful outcomes to employees' health (Houdmont & Leka, 2010). Cox (2000, p. 68) categorised psychosocial hazards at work into ten different categories (Table 3-1).

Although psychosocial hazards in workplaces can affect both the physical and psychological health of employees in general and HCPs in particular, four categories were selected that are relevant to the studies in this thesis. These categories include

organisational culture, role in the organisation, workload, and interpersonal relationships. By restricting the number of hazards investigated in this research to four only, this thesis provides a more specific and focused evaluation of these hazards in healthcare accreditation. While some research has been carried out on healthcare accreditation, there have been few empirical investigations on the psychosocial hazards that arise during accreditation and their impact on HCPs' psychological health, particularly in the UAE. Therefore, extensive qualitative data collection in the first study (i.e., Chapter 5) allowed a subsequent focus on a smaller number of psychosocial hazards that were then explored quantitatively.

Table 3-1 Categories of stressful characteristics of work (Cox, 2000).

No.	Category	Examples of hazards at work
1.	Organisational culture and function	Poor communication and low level of support for problem solving.
2.	Role in organisation	Role conflict and ambiguity.
3.	Career development	Career uncertainty and job insecurity.
4.	Decision latitude and control	Low participation in decision making.
5.	Interpersonal relationships at work	Poor relationship with supervisors and lack of social support.
6.	Home-work interface	Conflicting demands of home and work.
7.	Work environment and work equipment	Problem regarding the reliability and availability of equipment's and facilities.
8.	Task design	Lack of task variety.
9.	Workload and workplace	High levels of time pressure and work over- or under-load.
10.	Work schedule	Inflexible work schedule.

The other hazardous categories suggested by Cox (2000) can have the potential to cause employees physical and psychological harm. However, these hazards were not considered important in the context of this thesis (i.e., accreditation in UAE healthcare organisations). For example, decision latitude and job control are important at work. Job control reflects the ability of individuals to make decisions in their organisations (Cox, 2000; Konze et al., 2017). Although they have an important role, decision latitude and job control were excluded from this research because HCPs, in general, experience low levels of control at work, which is associated with work-related stress (Cox, 2000; Konze et al., 2017). Furthermore, this thesis explores the nature of accreditation in the UAE context, which is mandatory (as discussed in Chapter 1), and the psychosocial hazards that are associated with such programmes. Therefore, it is expected that job control is not a central feature of accreditation, and that HCPs may face strong pressure from management through the imposition of mandatory accreditation.

Although lack of control can lead to stress, evidence has shown that having control can also lead to harmful consequences for employees' mental health (Schwartz, 2000; Konze et al., 2017). Schwartz (2000, p. 87) argued that there is a 'dark side to all this freedom from constraint', which leaves people uncertain about what to do. For example, employees may struggle to find a balance between the advantages of having self-efficacy resulting from a high level of control and the uncertainty they may encounter when facing multiple options (Cox, 2000; Konze et al., 2017). Therefore, assessing the four selected categories in relation to the process of accreditation was vital to bridge the gap between accreditation and OHP theories and to understand the effect of accreditation processes on HCPs' health.

Researchers should justify the need to explore hazards based on the work context. This thesis therefore discusses four psychosocial hazards due to their relevance to the qualitative results (i.e., Chapter 5). The first category is organisational culture, which is defined as a set of beliefs, assumptions or values that members develop about their organisation (Schein, 2004). These values and assumptions are used to guide employees when they face challenges at work (EU-OSHA, 2007). Indeed, negative cultures in organisations can be stressful, especially when managers or supervisors do not communicate properly with their subordinates. Evidence suggests that organisational culture could affect individuals' health and well-being (Cox & Howarth, 1990). Therefore, organisations invest in enhancing their employees' well-being by developing robust support systems that create shared values and assumptions.

The second category is related to the role of employees in their workplaces. Although employees have different roles and responsibilities, some roles can affect employees' health when faced with contradictions or ambiguous situations at work (Kahn et al., 1964). For instance, experiencing uncertainty at work was found to confuse workers, which resulted in them developing burnout (Piko, 2006; Zábrodská et al., 2018). Kahn et al. (1964) suggested that workers with role ambiguity were more likely to experience tension at work. They also noticed that workers were less likely to be satisfied at work due to such ambiguity. While role ambiguity refers to a lack of clarity, role conflict occurs when workers have various roles that conflict with each other. Role conflict was found to have a negative impact on workers' mental health, which influenced their performance (Gilboa et al., 2008). Piko (2006) found that role conflict was positively related to burnout among Hungarian healthcare

workers, suggesting that when HCPs face conflicting roles, their level of burnout increases.

Furthermore, some professions have roles that require them to take responsibility for other people, such as those working in the healthcare sector. Therefore, employees working in human services are more likely to develop stress and emotional exhaustion compared to those working in offices (Leiter, 1991). Cavanagh et al. (2020) found that emotional distress, including burnout and compassion fatigue, exists among a wide range of HCPs. Indeed, HCPs can experience considerable mental health issues at work, especially in the role of caregivers to patients (Allen, 2017). Thus, this research considers the roles of HCPs when studying the effects of psychosocial hazards in hospital accreditation to understand the relationship between such risks and HCPs' health and work outcomes.

The third and most studied category that explains work-related stress is workload, which is one of the first psychosocial hazards to receive attention due to its strong association with work-related stress (Sales, 1970). Workers' can be overloaded or underloaded with work depending on the amount of work expected from them in a given time. Sales (1970) identified and distinguished between different types of workloads and suggested that staff can experience qualitative workload (i.e., subjective) or quantitative workload (i.e., objective). A qualitative workload occurs when the required task is beyond employees' abilities or skills, whereas a quantitative workload occurs when individuals are asked to work beyond their physical abilities.

Most researchers agree that stress can occur when there is a negative interaction between employees and their work environment leading to emotional,

physical or cognitive reactions (Cox, 2000; Dewe, 2001). Furthermore, Shaw and Weekley (1985) found that stress is associated with workload, which influences individuals' outcomes and performance. Previous research has also established the association between workload and occupational injuries among healthcare workers (Sepkowitz & Eisenberg, 2005; Probst & Graso, 2013; Gomaa et al., 2015; Bagheri Hosseinabadi et al., 2019; Mengistu & Tolera, 2020). For example, Probst and Graso (2013) showed that employees who perceived high workload not only experience more accident at work, but also, they do not report these accidents. Therefore, assessing the unique workload experienced by HCPs during the process of accreditation is vital to understanding their safety.

Although workload can influence the mental and physical health and well-being of employees, interpersonal relationships at work are essential for both individuals and organisations. Interpersonal relationships in organisations are an inevitable reality, and many argue that the need to belong is a fundamental human motivation that guides workers' behaviours (Reich & Hershcovis, 2011). Therefore, the final risk category discussed in this thesis is the interpersonal relationship, which is defined as the relationship between individuals and other employees at work (Cox, 2000; WHO, 2010). Reich and Hershcovis (2011, p. 224), however, define an interpersonal relationship as 'the subjective experience of repeated interaction or connection with another individual'. Relationships can include those with colleagues, subordinates and/or supervisors (Sauter et al., 1990). In this thesis, the support perceived from interpersonal relationships is operationalised as social support.

The term 'social support' is regarded as the perception of being valued by others, where individuals believe that they are part of a network (Dormann & Zapf, 1999). When reviewing the theoretical relationship of social support, several effects

have been identified of social support on employees (Cohen & Wills, 1985; Johnson & Hall, 1988; Cox & Griffiths, 2010). First, social support has a direct effect on work-related stressors and reduces the adverse effects of stressors on health (Demerouti & Bakker, 2011; Bronkhorst, 2015). Second, social support can moderate the effect of stressors on strains (Bakker et al., 2010). Finally, social support can increase the health and well-being of employees by reducing the consequences of stressors (Cox & Griffiths, 2010; Demerouti, 2018). While different types of support are expected to act differently on stressors, it is expected that there could be other theoretical effects of support (Leather et al., 1998).

To further understand the effects of social support, researchers have reported the impact of insufficient social support on the physiological health of individuals, e.g. increase blood pressure and heart rate (Johnson & Hall, 1988; Bowen et al., 2013; Lei et al., 2019). Lack of social support has also been linked to several illnesses, including cardiovascular diseases (Steptoe & Kivimäki, 2012). Furthermore, Berkman and Syme (1979) demonstrated the critical nature of social support and concluded that greater support is associated with increased life expectancy. In addition to the physical effect of support on health, there is evidence of an effect of social support on the psychological health of workers.

An extensive body of literature has demonstrated the importance of different social factors on workers' psychological health (Eklöf et al., 2014; Orgambídez-Ramos & de Almeida, 2017; Haslam et al., 2018; Williams & Kemp, 2020). Studies have found a strong association between social support and stress. For instance, Israel et al. (1989) showed that unpleasant relationships between manufacturing workers and their supervisors were strongly related to work-related stress and physical injuries. In addition, Oksanen et al. (2010) found that employees working in

public hospitals with poor workplace relationships with either their managers or colleagues were 30–50% more likely to be diagnosed with depression. In contrast, interpersonal relationships can moderate the workload–stress pathway (Cousins et al., 2004; Hartley & Coffee, 2019). It has been argued that workers cannot reduce the number of stressors they experience, but they can buffer these stressors through adequate social relationships at work (Dormann & Zapf, 1999).

Efforts to improve the quality and safety of healthcare services have focused on enforcing routine inspections and accreditation programmes. However, to maintain the quality of services and sustain accreditation results, organisations must consider interpersonal relationships and improve psychosocial factors. Organisations with formal approaches and less emphasis on interpersonal relations can risk the safety of patients (Eklöf et al., 2014). Social support has proven to be a health-promoting factor in organisations by strengthening the ability of individuals to cope with stressful situations (Haugan & Eriksson, 2021).

While some work characteristics can increase HCPs' experience with stress, experiencing organisational changes can negatively affect employees' mental health (Bamberger et al., 2012b; Harvey et al., 2017). A change in the work system involves introducing new and different aspects of work that increases the productivity or services of workplaces (Murphy, 2002), which was found to introduce new demands to workers and influence their mental health (Bamberger et al., 2012a). This thesis conceptualises healthcare accreditation as a form of organisational change. The next section discusses work and stress theories before outlining the main theoretical models applied in this thesis.

3.3 Theoretical models

Over the past few decades, many theories have been introduced to account for the interaction that occurs between individuals and their workplaces to explain work-related stress. Of course, these theories have different definitions and competing approaches to explain work-related stress (Cox & Griffiths, 2010). Theories in OHP are categorised as early or contemporary models, and each category evolves into two further sub-categories (Figure 3-1).

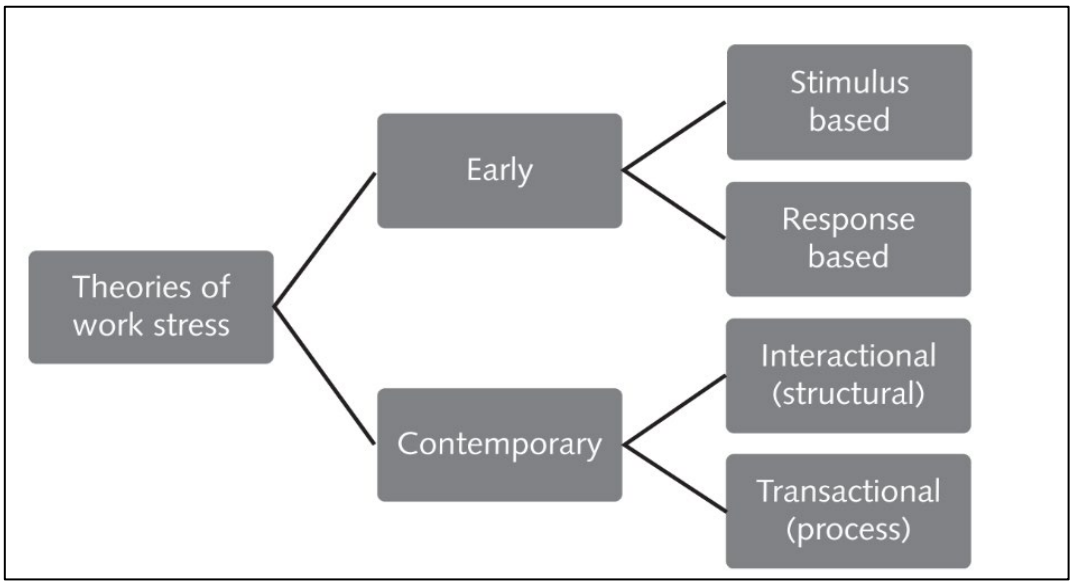


Figure 3-1 OHP theories of work-related stress (Cox & Griffiths, 2010)

Early stress theories are either based on an external stimulus or an internal response (Cox & Griffiths, 2010). In 1947, Sir Charles Symonds explained how external threatening events trigger individuals' behavioural or psychological responses and regarded stress as a cause rather than a symptom (as cited in Cox, 1978). Alternatively, Selye (1978), defined stress as an individual's reaction to an external threatening event. The author described the types of responses individuals show when faced with stressful events; for instance, an individual first becomes alarmed but they soon recover to restore their energy. However, when a stressful

event persists, a person will no longer have the energy to recover and will soon be exhausted (i.e. burnout) (Selye, 1978).

While the early theories explain the process of stress, they fail to account for the interaction between individuals and their working environments, which causes work-related stress. In the 1970s, new theories emerged and defined stress as unpleasant emotions developed when employees experience excessive demands or when they are unable to cope with such demands (Cox & Griffiths, 2010). With time, stress changes employees' perceptions about their work, which ultimately affects their psychological, physical, or social behaviours. Therefore, interactional theories focus on the contextual aspects of work that interact with individuals and influence their comfort level. However, transactional theories focus on the methods individuals employ to cope with stress and determine the outcomes of such feelings. The next paragraphs briefly discuss, in chronological order, some of the earliest contemporary models that attempt to understand the impact of work on individuals' health.

Hackman and Oldham (1976) introduced the job characteristics model (JCM), which explains the effect of work characteristics on employees' behaviours, including job satisfaction and motivation. They discussed five essential job characteristics to explain work-related outcomes, including task significance and identity, skills variety, autonomy and feedback. While JCM has been utilised to stimulate job redesigning and develop our understanding of human factors in workplaces, the evidence fails to fully support the relationship between job characteristics and workers' psychological health (Boonzaier et al., 2001).

Karasek's (1979) job demand-control (JDC) model, which is one of the most well-known models in OHP, explains the relationship between job demands and poor mental health. By putting forward four different types of jobs based on their

categorisation as having high or low demands and high or low control, the JDC model explains the relationship between high work demands and workers' health. As jobs were categorised according to the type of work demands and levels of control employees have in their work, it was suggested that employees who experience high job demands are more likely to develop poor health when they have a low level of control over their job (Cox, 2000).

It is worth mentioning that Karasek (1979) placed HCPs in the high control quadrant, although nurses have higher physical demands compared to physicians. Although the JDC model received broad acceptance from OHP's research community, it was claimed that the model was too simple and ignored the moderating effect of other work aspects, such as social support. Therefore, Johnson and Hall (1988) expanded the JDC model to include social support (i.e., the job demands-control-support model).

On the other hand, Siegrist (1996) suggested a model that offers a broader scope in assessing demand and control constructs. He introduced the effort-reward imbalance (ERI) model where effort refers to the experience of workload and the rewards given to workers as incentives for their efforts at work. It was claimed that rewards act as coping mechanisms, and can include monetary, security, or promotional rewards. Furthermore, it was suggested that workers experience depressive symptoms when rewards are low (Rugulies et al., 2017). While the ERI model achieved empirical support, in their review, Vegchel et al. (2005) found that employees' commitment to efforts varied among workers and, therefore, health outcomes were rarely examined in such a model.

To overcome the limitation of the previously discussed models, the next section introduces new models that are employed in this thesis to further explore the

psychosocial hazards experienced by HCPs in hospital accreditation. These models are the job demands-resources (JD-R) model and the psychosocial safety climate (PSC).

3.3.1 Job demands-resources model (JD-R)

The job demand-resources (JD-R) model (Demerouti et al., 2001) is a contemporary theory of work-related stress that has become highly popular among researchers (Schaufeli & Taris, 2014). It provides useful explanations of the impairment of workers' health caused by increased job demands, which leads to both mental and physical exhaustion. Due to the dynamic relationship between work characteristics and work outcomes, the JD-R model is considered one of the most widely used and studied models in OHP (Rattrie & Kittler, 2014). For instance, in November 2021, a search for 'the job demands-resource model of burnout' by Demerouti et al. (2001) in Google scholar revealed that the model was cited 11,622 times.

The popularity and strength of the JD-R model lie in how the model combines theories of both work stress and job design (Demerouti et al., 2001; Bakker & Demerouti, 2007; Schaufeli & Taris, 2014). Schaufeli and Taris (2014) claim that the model is one of the leading models in work-related stress, together with Karasek's (1979) Job Demand-Control (JD-C) model and Siergrist's (1996) Effort-Reward Imbalance (ERI) model, because it assumes that any type of demands and resources may impact workers' health. Furthermore, the JD-R model is considered a parsimonious model, which describes the notion of a 'one model fits all' approach.

The model provides the simplest way to describe how individuals interact with their work environment. In addition, it allows the empirical addition of different

demands and resources without compromising the original framework of the model. In their review, Taris and Schaufeli (2015) highlighted how the model could explain the dual processes of health impairment and motivation, which makes it attractive to occupational health psychologists. The JD-R model provides a pathway to work engagement through the motivational process, in addition to a pathway to burnout through the health impairment process. Therefore, the simplicity and flexibility of the JD-R model are the main reasons for selecting it over the models explained earlier. However, the JD-R model presents a broader scope than other models because it does not restrict itself to certain types of demands or resources (Schaufeli & Taris, 2014).

Demerouti et al. (2001) defined job demand as the specific characteristics of work that require employees to exert physical, social, or cognitive efforts, which might lead to physical or psychological impairments. Examples of job demands include workload, role conflict, heavy lifting, and job insecurity. Selye (1978) explained how individuals get exhausted and burnt-out when they cannot fully recover from the constant demands placed upon them due to insufficient time to regain their energy at work. Job resources are job characteristics that help workers achieve professional goals, reduce the effect of job demands, and stimulate professional growth by learning and developing new skills (Demerouti et al., 2001; Arnold. Bakker et al., 2003; Bakker & Demerouti, 2007). Examples of job resources include social support, feedback, and job control. It is argued that job resources reduce the effects of job demands by stimulating workers' growth and development (Demerouti et al., 2001).

Given that the model is parsimonious, research in the JD-R model has produced inconsistent and conflicting findings (Crawford et al., 2010). Crawford et al.

(2010) argue that the model fails to distinguish between different types of demands. However, they propose that when the distinction is made, a meaningful relationship between demands and well-being can emerge. Job demands are viewed as challenging or hindering demands. Crawford et al. (2010) explain the difference between challenging and hindering demands as those that either promote individuals' growth and development or threaten their growth and goal attainment. An example of a challenging demand includes increased pressure of responsibility and high working demands. In contrast, hindering demands include role conflict and role ambiguity (Crawford et al., 2010; Schaufeli & Taris, 2014). It is worth noting that the model has been supported empirically over the last two decades using different research methods and designs. The following sections include a review of the evidence on the JD-R model using cross-sectional and longitudinal evidence.

The rationale for selecting the JD-R as a primary model in this thesis rests on the simplicity and broader scope of this model. Therefore, by applying the JD-R model to investigate the impact of accreditation on the work environment, the model emphasises the importance of certain work characteristics that may increase stress levels among HCPs. Furthermore, the model assesses motivational job characteristics that are important for HCPs' well-being. Utilising the JD-R model in this thesis allowed the examination of both theoretical and practical aspects to investigate the effects of healthcare accreditation in workplaces.

The JD-R model is used in this thesis to understand the process of accreditation and its possible consequences for HCPs' health and well-being. As this model suggests that occupational stress occurs when workers experience a high level of demands, it is expected that accreditation involves a period of increased demands. However, with high demands, different resources can be available within

UAE healthcare settings that could mitigate the adverse effects of these demands. Therefore, the JD-R model is considered flexible enough to explore and identify the specific demands and resources relevant to the context of accreditation. It is therefore expected that as the job demands peak before the inspectors' visits, HCPs will feel supported, and others will not resent them when they asked for help or information during the preparation phase.

The JD-R model has gained immense popularity and has been examined in different occupations by customising the type of job demands and resources to match the different occupations under investigation (Hu et al., 2013). Also, the model recognises that occupations are unique in their psychosocial risk factors, which are categorised into two higher-order factors (i.e., job demands and job resources). The model was first published to understand factors that lead to burnout by considering the negative relationships between increased job demands and low levels of psychological health and well-being, and a positive relationship between job resources and job performance.

The JD-R model was proposed as a leading concept of burnout theory (Demerouti et al., 2001), which argues that high demands and a lack of appropriate resources can cause burnout among workers. A large and growing body of research has investigated the dynamic relationship between job demands and job resources to explain workers' health and motivational pathways (Lesener et al., 2018). For example, Arnold Bakker, Evangelia Demerouti and Wilmar Schaufeli (2003) found that job demands were positively related to emotional exhaustion (i.e. burnout) among call centre workers, which predicted long-term absence. They also found that job resources could predict work commitment and dedication. However, the study could not identify causal relationships due to the method used for investigation (i.e.,

cross-sectional design). In a follow-up study, Bakker and Leiter (2010) demonstrated the interaction effect between job demands and job resources to predict that motivational outcomes and the lack of appropriate resources can cause burnout among different organisational workers, including healthcare workers.

The JD-R model was revised to include work engagement as a predicted outcome of job resources (Schaufeli & Bakker, 2004). According to Schaufeli and Bakker (2004), work engagement is a positive and fulfilling behaviour towards one's work, which includes high levels of energy, enthusiasm, and being focused at work. These three characteristics of work engagement are known as vigour, dedication, and absorption. Studies that support the effect of JD-R on burnout grew with replication across different cultures. By adding work engagement, the authors included a positive aspect to the JD-R model that not only explained burnout, but also, its opposing construct, as explained in section 1.1.2.

The revised model of JD-R explains the processes of health and work outcomes in two distinct hypotheses (Figure 3-2) (Schaufeli & Taris, 2014). The first hypothesis assumes that health impairment occurs when individuals experience a high level of demands and a low level of resources that influence their mental health through energy depletion (i.e., burnout). However, the second hypothesis postulates that job resources are inherently motivational, and a high level of job control and support increases workers' motivation and engagement at work through the motivational pathway (Taris et al., 2010; Christian et al., 2011). The revised model received extensive recognition among researchers and was tested in different cultures, including China (Hu et al., 2011), Australia (Rickard et al., 2012), Japan (Demerouti et al., 2013), the United Kingdom, the United States, Brazil, Croatia, and Poland (McGonagle et al., 2014), and Finland (Hakanen et al., 2008).

The JD-R model has been used to identify job demands and job resources within healthcare settings. Job demands in this thesis are conceptualised as any physical or psychological strain defined by the JD-R model and experienced by HCPs during the process of accreditation. Previous research has outlined the psychological consequences of the inspection process during accreditation (Elkins et al., 2010; Al-Faouri et al., 2019). Furthermore, documentation and comprehensive writing of patients' medical records have been found to contribute to burnout. Therefore, the unique demands in accreditation, such as documentation or attending frequent meetings, are operationalised in this thesis as job demands.

Hospitals preparing for accreditation can be viewed as stressful environments compared to other hospitals. However, in such a stressful environment, it is expected that the organisation will encourage a psychologically safe environment for HCPs to seek support. As the main job demands in this thesis are the unique accreditation demands, job resources are conceptualised as the type of support from supervisors or colleagues that can be helpful prior to accreditation. Social support, therefore, should offer the opportunity for work clarity during the uncertainty of accreditation demands.

The core theoretical model in this thesis is the JD-R model, which builds upon the empirical evidence related to social support as a job resource. In relation to healthcare, previous research has found that perceived social support from managers has a positive effect on productivity and a negative effect on job-related stress among hospital nurses (AbuAlRub, 2004). While social support from managers and supervisors has been found to be effective in reducing stress, support from co-workers also reduces stress (LaRocco et al., 1980). As evidence shows the importance of social support as a predictor of well-being, this thesis employed the

JD-R over other models in OHP because it provides a pathway to work engagement through the motivational process (i.e., social support) and to burnout through the health impairment process.

The model has been supported empirically over the last two decades using different research methods and designs. The following sections include a review of the evidence on the JD-R model using cross-sectional and longitudinal evidence.

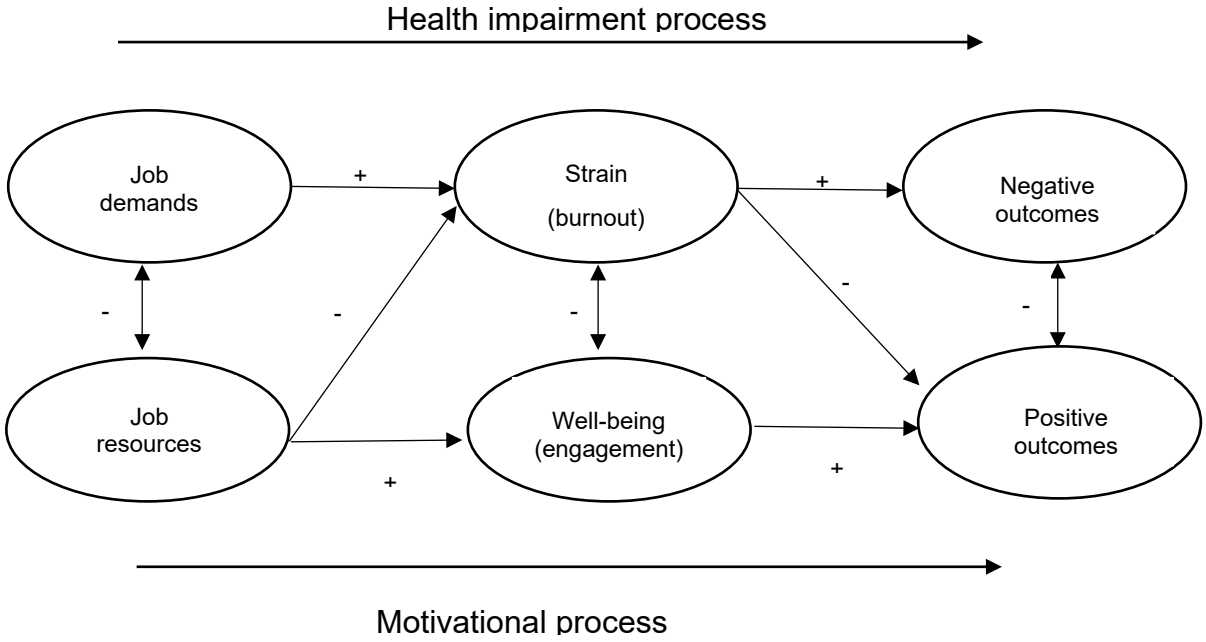


Figure 3-2 The revised JD-R model (Schaufeli & Taris, 2014).

3.3.1.1 Cross-sectional evidence of the JD-R model

Arnold Bakker, Evangelia Demerouti and Wilmar Schaufeli (2003) studied the JD-R model among a group of workers in the Netherlands and found that job demands impacted emotional exhaustion in call centre workers, which predicted long term absenteeism and turnover intentions. They also found that job resources could predict work commitment and dedication. In a follow-up study, Bakker et al. (2010) tested the interaction effect between job demands and job resources to predict motivational outcomes and found job resources to have significant moderating

effects, including task enjoyment and commitment. The model was also tested on healthcare staff and found that high levels of job demands and inadequate job resources predicted burnout level; whereas, job resources only predicted work engagement (Schaufeli & Bakker, 2004). The model was also used to investigate burnout and work engagement in healthcare settings.

It is now well established that higher job demands are significantly associated with a higher level of burnout, while job resources are significantly associated with work engagement (Berthelsen et al., 2018). Additionally, the level of burnout appears to increase when job resources are insufficient, triggering the health impairment pathway. Hu et al. (2017) found that nurses with chronic job demands experience high levels of burnout due to the delay in recovery from their persistent demanding jobs, which reduces their levels of energy. They also found that frequent exposure to job resources had little effect on decreasing burnout levels among nurses.

In a cross-sectional study that examined the effect of JD-R on burnout, Xanthopoulou et al. (2007) found that job demands are the most powerful predictor of exhaustion, while the lack of adequate job resources was the most crucial predictor of cynicism among home care professionals. Furthermore, they found that employees working in healthcare occupations experienced exhaustion and cynicism when they were subjected to patient harassment and emotional demands. While this method allows valuable associations to be made across variables, a cross-sectional study cannot identify causal relationships between constructs. Therefore, causal relationships would be better captured by a longitudinal design as employed in this study and recommended by Rattrie and Kittler (2014).

3.3.1.2 Longitudinal evidence of the JD-R model

Several studies have employed a longitudinal design to test the JD-R model. For instance, Demerouti et al. (2013) investigated the impact of workload and supervisors' support on personal well-being in a two-wave longitudinal study and found that job demands and job resources can impact workers' personal lives. Moreover, it has been demonstrated that hospital-related job demands can reduce the quality of care over time. A longitudinal study by Kraemer et al. (2016) showed a direct relationship between job demands and the perceived quality of care irrespective of HCPs' psychological health. Therefore, excessive job demands and adverse psychosocial work conditions can hinder HCPs from working with patients effectively. Furthermore, a two-wave cross-lagged study among Finnish dentists supported the health impairment and motivational pathways of the JD-R model (Hakanen et al., 2008).

Whether using a cross-sectional or longitudinal design, the previous studies found strong evidence of the JD-R model on workers' health and work engagement. In these studies, a range of specific types of job demands was investigated including quantitative workload (Arnold Bakker, Evangelia Demerouti, & Wilmar Schaufeli, 2003; Hakanen et al., 2008; Bakker et al., 2010), emotional demands (Schaufeli & Bakker, 2004; Xanthopoulou et al., 2013; McGonagle et al., 2014), and work-home conflict (Bakker et al., 2005; Garry. Hall et al., 2010). However, job resources included social support (Orgambídez-Ramos & de Almeida, 2017; Nasurdin et al., 2018), job control (Taris et al., 2010; Hu et al., 2017), and feedback (Bakker et al., 2005). Using this model as a theoretical basis, studies in this thesis assess the impact of the specific and unique demands that arise during hospital accreditation in determining HCPs' burnout level after accreditation.

Regardless of its popularity, Schaufeli and Taris (2014) made critical comments on unnoticed issues related to the JD-R model. Although the JD-R model is considered flexible and allows different types of job demands and resources to be included, researchers find it difficult to generalise their outcomes because of the variability in the context they investigate. Therefore, researchers are advised to explicitly explain the reasons for selecting specific demands and resources to be tested in a model over others.

The JD-R model also needs to justify and explain the psychological processes that have influenced the inclusion of demands, resources and outcomes. Schaufeli and Taris (2014) argued that the model is descriptive rather than explanatory. They explained how job demands, by definition, consume workers' energy and may lead to health-related problems (i.e., burnout), while job resources are motivational and can lead to work engagement. Therefore, the model provides limited insight into the psychological processes and mechanisms that explain the outcomes of the JD-R model. However, the model is considered parsimonious and provides an elegant interpretation of the relationship between demands, resources, and outcomes (i.e., psychological and motivational states).

Previous studies on the JD-R model found a negative relationship between job demands and job resources (Schaufeli & Bakker, 2004), burnout and work engagement (Schaufeli et al., 2002), and job resources and burnout (Hu et al., 2017). Although constructs were different across varying work contexts, such constructs indicate that not all demands, resources, or outcomes are necessarily relevant among different work contexts. Besides, these findings can be interpreted as supporting evidence of the model (Taris & Schaufeli, 2015).

3.3.2 Accreditation demands and burnout: Health impairment process

As mentioned earlier, several studies have investigated the relationship between job demands and burnout among workers. However, there is a considerable gap in the research that draws attention to the psychosocial hazards associated with hospital accreditation programmes and their risk of influencing HCPs' burnout and work engagement levels. A common perception among HCPs regarding the process of hospital accreditation is that it increases their workload before the inspection visit (Greenfield & Braithwaite, 2008; Bogh et al., 2018; Al Shawan, 2021).

Furthermore, previous studies found that health impairment and the motivational process of the JD-R model were directly related to the violation of safety behaviours, where employees tend to undertake alternative practices that are less demanding to complete certain tasks (Hansez & Chmiel, 2010). Such behaviour can influence the quality of services provided to patients or increase work-related injuries (Zadow et al., 2017). Therefore, this thesis focuses on the under-researched but frequently mentioned consequences of accreditation (i.e., accreditation demands) and their effect on HCPs' health and well-being. The developing accreditation demands construct is discussed in Chapter 6.

By drawing on the concept of the JD-R model in healthcare services, Teoh et al. (2019) revealed an association between job demands and clinical excellence among healthcare workers in the UK. The authors found a negative relationship between job demands and the quality of care provided to patients. In a more recent study, Teoh et al. (2020) utilised the theoretical framework of the JD-R model to predict work-related stress, presenteeism, and work engagement. Their findings demonstrated a stronger association between job demands and workers' perceived

stress and presenteeism when compared to job resources. The study illustrated a negative relationship between job demands and work engagement, while job resources were found to be positively related to work engagement. Although these studies pose strong evidence to JD-R pathways, they relied on a cross-sectional method to collect data.

Therefore, one of the aims of this research is to identify and investigate the unique demands of hospital accreditation using the JD-R framework. The JD-R model is argued to be flexible and accommodates different constructs and measurement instruments to capture demands and resources in workplaces (Demerouti & Bakker, 2011). Such flexibility allows the addition and testing of different demands and resources that are customised to a specific working environment and context (i.e., hospital accreditation). It is also essential to identify the types of demands in hospital accreditation (i.e., challenging or hindering demands). Crawford et al. (2010) explained the different challenge and hindrance demands as those that either promote individuals' growth and development or threaten their growth and goal attainment.

It is worth noting that previous research in hospital accreditation explored professional development as an outcome of accreditation (Greenfield & Braithwaite, 2008; Maziero & Spiri, 2013). Therefore, testing the relationship between job demands, specific to accreditation programmes, and work engagement, and assessing the direction of such a relationship helps this research decide if these demands are challenging or hindering. Crawford et al. (2010) showed that challenging demands are conceptualised as resources and are positively related to work engagement, whereas hindering demands are viewed as obstacles and barriers that obstruct the progress of workers towards their objective. Thus, this

research contributes to the development of the JD-R model by identifying and testing the unique job demands involved in hospital accreditation.

3.3.3 Social support and work engagement: Motivational process

Job resources provide a great advantage in explaining the motivational process of the JD-R model. In this research, social support is operationalised as one of the resources of the JD-R model. Since the 1970s, many scholars have focused on how social support at work affects workers' health (Cohen & Syme, 1985; Karasek, 1990). According to Cohen and Syme (1985), social support is the type of resource provided by other people, including family members. However, in a work context, social support refers to the ability of co-workers and supervisors to provide helpful social interactions when needed (Karasek, 1990).

Social support has gained greater attention in OHP research as it allows workers to cope with stressful events at work (Schwarzer & Leppin, 1991; Schwarzer & Knoll, 2007). Furthermore, social support was found to play a key role in buffering the relationship between job demands and health problems (Cieslak et al., 2007), coping with high demands (Schwarzer & Knoll, 2007), and influencing positive behaviour among employees (Arnold Bakker, Evangelia Demerouti, & Wilmar Schaufeli, 2003). By testing the effect of social support on job performance among nurses in Malaysia, Nasurdin et al. (2018) found that support from colleagues buffers the negative effects of work-related stress. Their results also show that social support positively influences work engagement.

Therefore, this study sets out to assess the effect of job resources, namely, social support, on work engagement as an outcome of the process of hospital accreditation. Social support, which includes adequate support from supervisors and

colleagues, was originally tested as a moderator of the health impairment pathway in the JD-R model (Arnold Bakker, Evangelia Demerouti, & Wilmar Schaufeli, 2003; Xanthopoulou et al., 2007). It involves the supportive relationships between employees and their supervisors and colleagues. Such forms of support occur when people at work help or support their co-workers or subordinates as a form of assistance or coping mechanism (Schwarzer & Knoll, 2007). By drawing on the concept that social support influences work engagement positively, it seems necessary to explore social support and its effect prior to hospital accreditation.

However, Cohen and Syme (1985) argued that social support enhances health, irrespective of the presence of a stressful situation. They suggested that an individual's perception of the help they could get from colleagues and supervisors increases their self-esteem and encourages them during stressful events. Therefore, the social support received by HCPs during the process of hospital accreditation is expected to have a positive effect on workers' engagement. HCPs are expected to fulfil multiple roles during hospital accreditation, including administrative roles (Ho et al., 2014), and social support is argued to provide a refuge for HCPs who experience high job demands.

Previous studies have explored the direct and moderating effect of social support on predicting work engagement. Bakker et al. (2005) used social support to examine work engagement, social support and good relationships with supervisors and discovered that the impact of job demands buffered the effects of emotional exhaustion. Furthermore, Biggs et al. (2014) suggest that working in an organisation with a supportive culture can predict the level of support from supervisors and colleagues, which, in turn, predicts work engagement after 12 to 18 months. When testing the moderating effect of social support, Orgambídez-Ramos and de Almeida

(2017) found that help from colleagues moderated the relationship between work engagement and job satisfaction in a sample of Portuguese nurses. They also demonstrated that social support from supervisors and colleagues predicts job satisfaction.

The other form of social support is the main effect, which predicts a positive influence on employees' health regardless of the perceived level of stress (Haugan & Eriksson, 2021). Schaufeli and Bakker (2004) explain how job resources can play a motivational role, which inspires workers to dedicate their efforts to work demands. Furthermore, the importance of social support from supervisors and managers in relation to employees' health and well-being has been previously demonstrated. Evidence suggests that support from managers and supervisors is directly related to job satisfaction and productivity (Baruch-Feldman et al., 2002; Jolly et al., 2021). In this thesis, social support is conceptualised as a job resource that influences work engagement. Social support, therefore, acts as an intrinsic factor that helps HCPs achieve and maintain their accreditation goals.

In a longitudinal study, Mauno et al. (2007) investigated work engagement and its antecedent factors among Finnish healthcare workers. They showed that job resources are robust predictors of the JD-R model's motivational pathway. Therefore, this research aims to examine the role of social support from colleagues and supervisors during the process of hospital accreditation. Social support is operationalised as a job resource, including support from colleagues and supervisors, that is essential in increasing work engagement (Bakker et al., 2005). When job demands are high during the preparation for accreditation, HCPs are expected to seek support knowing that they are cared for during such an intense

period. However, different types of resources should signal HCPs to the availability of such support and allow them to utilise it (i.e., psychosocial safety climate).

3.3.4 Psychosocial safety climate as moderator in the jd-r framework

To elaborate on the JD-R model, Dollard and Bakker (2010) introduced the psychosocial safety climate (PSC) as an additional organisational resource to further understand the influence of work contexts on employees' health. They recognised the gap in safety research, which focuses on the physical safety of employees, and articulated it to work-related stress research. PSC is an organisational construct intended to protect workers' psychological health and well-being through the presence of policies, procedures, and practices (Dollard & Bakker, 2010). As Dollard and Bakker (2010, p. 580) state, PSC is the 'freedom from psychological and social risk or harm'. The concept of PSC encapsulates how committed the management is to employees' psychological health (Zadow & Dollard, 2015). Therefore, PSC links research in safety climates (Zohar, 1980) to research in work stress theory (Cox, 1978), and is postulated as the 'cause of the causes' of work-related stress (Dollard & McTernan, 2011, p. 290).

3.3.4.1 Roles of PSC

The concept of PSC extends existing models, such as the JD-R model (Idris et al., 2011; Garrick et al., 2014), because it has two roles in explaining the process of health-related outcomes resulting from work (Figure 3-3). First, PSC acts as an antecedent to the psychosocial factors that predict work-related stress and erode employees' psychological health. Hence, PSC was operationalised as a precursor to stressors found in workplaces (Dollard & Bakker, 2010; Law et al., 2011). For example, PSC was found to predict work pressure and emotional demands (Dollard

& Bakker, 2010), workload and unhealthy work behaviours (Dollard, 2012), physical strain (Bailey, Dollard, McLinton, et al., 2015), unsafe work behaviours such as

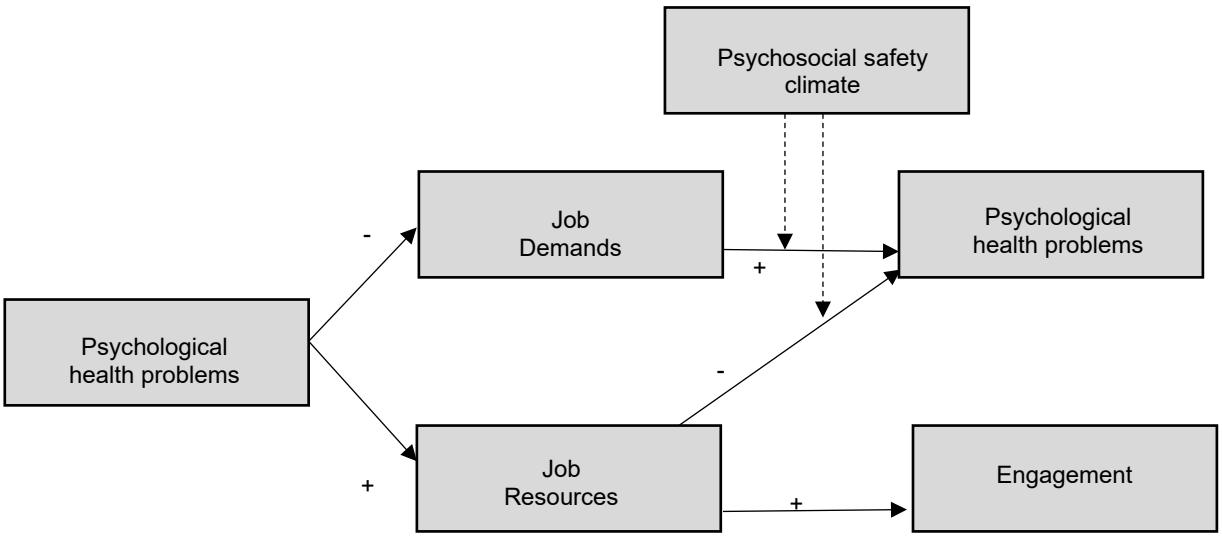


Figure 3-3 The PSC model (Dollard & Bakker, 2010).

harassment and bullying (Kwan et al., 2014), and workplace violence (Bronkhorst, 2015). PSC can also predict job resources at work, including supervisor support and job control (Bronkhorst, 2015). In addition, employees' psychological health and work performance, including work engagement, can be predicted by PSC (Dollard, 2012).

Second, PSC can moderate the effect of job demands on workers' health outcomes (Dollard, 2012; Liu et al., 2020). As an organisational resource, PSC was suggested to moderate different job demands because it allowed workers to choose appropriate job resources to cope with work-related stress (Hall et al., 2013). For instance, Dollard et al. (2012) proposed that PSC enabled police officers to use organisational resources to reduce the effect of job demands on workers' psychological health. In their two-wave study, they found that the interaction between emotional demands and emotional resources was only evident when the total PSC score was high. They also argued that utilising job resources was contingent upon the level of PSC, which means that organisations with high levels of PSC allow

employees to utilise available job resources to reduce the effect of job demands. Furthermore, Garrick et al. (2014) suggested that PSC had a moderating effect on the health impairment pathway of the JD-R model. The authors found that PSC interacted with job demands to buffer perceived fatigue among teachers and boost their recovery. Additionally, a previous study found PSC to moderate the positive relationship between bullying at work and psychological health problems (Hall et al., 2013).

Given that PSC can moderate the relationship between constructs, this thesis assumes that the PSC before hospital accreditation would buffer the effect of job demands on HCPs' psychosocial health and accentuate the relationship between job resources and positive motivational behaviours. It is worth noting that the majority of studies on PSC have been conducted in the Asia–Pacific region and this research contributes to this growing field by examining the effect of PSC in a Middle Eastern country (i.e., the UAE). Considering the differences between Middle Eastern countries and other countries, it was sensible to verify the effect of PSC from a different culture. Several possible reasons might explain such differences, including different working conditions, various access to stress management programmes and cultural context which might influence workers' perceptions on PSC.

3.3.4.2 Measurement of PSC

Bailey, Dollard and Richards (2015) originally developed a 12-item measure of PSC and benchmarked different levels of PSC depending on the total score measured on the 12-item scale. To benchmark PSC levels, the authors obtained data from three different samples taken from three Australian cities. They suggested that organisations scoring 41 and above have good levels of PSC, meaning that

participants showed no signs or symptoms of depression, whereas organisations that score 37 or below have low levels of PSC. Organisations with scores ranging from 37 to 41 have moderate levels of PSC (Bailey, Dollard, & Richards, 2015). In organisations where employees do not have signs or symptoms of depression (i.e., a good level of PSC), supervisors and managers are expected to provide support and commitment when faced with hazardous psychosocial factors in the working environment (Zadow et al., 2017). Employees working in organisations with a low PSC level were found to experience higher levels of psychosocial hazards and work-related stress (Dollard & Bakker, 2010; Law et al., 2011).

Previous studies have established the effect of high and low levels of PSC on individuals' health through its relationship with job demands and job resources. However, the strength of a PSC on such a relationship is yet to be explored. PSC assesses individuals' perceptions regarding the policies and procedures pertaining to their psychological health (Dollard & Bakker, 2010). PSC acts as a strong signal that allows employees to use resources to manage high demands. Chapter 2 discusses how work demands are expected to be high when preparing for hospital accreditation; however, the utilisation of available resources depends on the level of PSC before the inspection process that allows HCPs to use these resources.

Afsharian et al. (2018) attempted to test the moderating effect of a strong PSC on burnout and work engagement outcomes. They aggregated the data and assessed the strength of the PSC by multiplying the standard deviation (SD) of the PSC, which assesses the within-group variability by -1. They found that a strong signal of PSC improved work engagement among workers in a private hospital in Australia. Therefore, PSC is operationalised in this thesis as an organisational

resource, signalling workers to use social resources to mitigate the effect of high accreditation demands.

3.3.4.3 Levels of PSC

PSC is considered an organisational-level construct and a considerable amount of research operationalises PSC at a group level (Dollard, 2012; Idris et al., 2014; Zadow et al., 2017). As argued by Neal and Griffin (2006), shared organisational perceptions need to be aggregated to explain their unique features. However, a recent review showed that PSC can be operationalised at an individual level (Yulita et al., 2016). For instance, Hall et al. (2013) examined the role of PSC as a wider organisational resource, which allows workers to utilise available job resources when experiencing increased job demands. They found that the interaction between PSC and job demands, at an individual level, had a negative effect on the damaging effects of job demands on depression. Furthermore, Mansour and Tremblay (2018) considered PSC as a safety resource that gave healthcare workers a signal to safely utilise resources at work to reduce the negative effect of work-family conflict.

It is worth noting that many recent studies have tested PSC at an individual level. For instance, Zadow et al. (2019) reviewed recent studies on PSC and showed that out of 51 published papers, 25 papers used multilevel compared to 20 papers using individual levels to analyse PSC. Since the publication of the previous review, seven more studies have examined PSC at an individual level (see, for example, Berthelsen et al., 2020; Liu et al., 2020; Afsharian et al., 2021; Biron et al., 2021; Brunetto et al., 2021; Gazica et al., 2021; Klinefelter et al., 2021). However, these

studies tested the antecedent role of PSC on the psychosocial hazards in workplaces.

While some researchers argue that climates are shared perceptions and should be analysed at the group level (Zohar & Luria, 2005), others suggest that these perceptions represent individuals' interpretation of the situation they experience and should be measured at the individual level (Jones & James, 1979). Hence, in this thesis, PSC ought to be operationalised at an individual level when used in conjunction with other individual-level self-reported measures in the realm of work-related stress. This research also attempts to examine a relatively short-term demand (i.e. accreditation demand), which might affect HCPs when compared to other workers in hospitals. Hence, individual-level variability is expected to occur among HCPs, influencing their need to draw on job resources.

Accordingly, this research aims to test the moderating aspects of PSC at an individual level and as a wider hospital resource in reducing the lagged effect of accreditation demands on burnout and increasing the lagged effect of social support on work engagement. The presence of an adequate level of PSC before hospital accreditation is posited to offer a safety signal of the available options in hospitals that help HCPs cope with demanding work situations and prevent burnout.

3.3.5 Current research

This research aims to bridge the gap between the field of OHP and regulatory mechanisms that include hospital accreditation. It attempts to widen the efficacy and evidence-based policies of accreditation programmes through the application of psychological frameworks and worldviews. More specifically, hospital accreditation programmes work to change the structure of hospitals to become a safer

environment for patients. The application of these programmes needs to be aligned with the conceptualisation of OHP frameworks that explain the process of workers' health impairment and motivational processes.

Therefore, this thesis aims to bridge the gap in the literature of healthcare accreditation by studying the process of such programmes according to the theoretical frameworks known in the field of OHP. The thesis attempts to explore the nature of accreditation and the psychosocial hazards associated with such programmes (i.e., accreditation demands). This thesis also examines how the processes of accreditation fit into OHP frameworks, namely, JD-R and PSC, to explain HCPs' health and well-being. Finally, the thesis contributes to the growing body of literature by testing the applicability of the aforementioned models to the UAE's healthcare context. The next chapter, therefore, describes the methodological approach followed in this thesis.

Chapter 4 Research Design and Methodology

4.1 Introduction

Although previous research has investigated the impact of healthcare accreditation, until today, there has been no clear agreement on the effectiveness of such programmes or the outcomes it may have on the work environment and the health and wellbeing of healthcare professionals (HCPs). Most of the published studies on healthcare accreditation have addressed the quality of healthcare services based on the perceptions of frontline HCPs with regard to the standards of accreditation (Greenfield & Braithwaite, 2008; El-Jardali et al., 2014; Bogh et al., 2016; Devkaran et al., 2019). However, there has been little effort to investigate the impact of accreditation on the work environment. Therefore, this research attempts to bridge the gap in the literature of healthcare accreditation by studying the process of such programmes according to theoretical frameworks in the field of occupational health psychology (OHP) (as discussed in Chapter 3).

Chapter 1 highlights the increased attention and interest given to the health and wellbeing of HCPs. While there is solid evidence that addresses this group (Abdulla et al., 2011; Pisanti et al., 2013; Hall et al., 2016; Lemaire & Wallace, 2017; Khan et al., 2018), few studies have focused on the role of regulatory mechanisms, such as accreditation, in shaping the health and wellbeing of HCPs (Elkins et al., 2010; Al-Faouri et al., 2019). Given these circumstances, this thesis has three aims: (1) to explore the nature of accreditation and the psychosocial hazards associated with it, particularly accreditation demands; (2) to examine how accreditation fits into the job demands-resources (JD-R) and psychosocial safety climate (PSC)

frameworks to affect HCPs' wellbeing; and (3) to test the applicability of these models and methods in the United Arab Emirates' (UAE) healthcare context.

To achieve these aims, three studies are devised following a sequential exploratory mixed-method design. The first study is qualitative and aims to explore the experience of healthcare accreditation in public healthcare facilities in the UAE. The UAE has mandated accreditation in public healthcare facilities, which creates an appropriate environment to explore the psychosocial hazards that can emerge during the implementation of accreditation standards and the risks of influencing HCPs' health and wellbeing using a qualitative paradigm.

The second study aims to develop and validate a tool to assess accreditation demands that could be used in the UAE context. Previous literature on the impact and outcomes of accreditation neglects the unintended risks that accreditation can bring to the work environment. Therefore, the second study attempts to address this research gap by developing a tool that investigates the unique psychosocial hazards associated with the accreditation process through the application of the JD-R and PSC frameworks. Finally, the third study aims to examine the causal relationship between job demands (i.e., accreditation demands) and job resources, such as social support and PSC, experienced three months before an accreditation assessment and their impact on outcome variables, namely, personal burnout and work engagement, three months after the assessment.

Therefore, this thesis attempts to contribute to the knowledge of psychosocial hazards that arise during healthcare accreditation. This research applies a different approach to those previously used when investigating the accreditation process, namely, sequential mixed-method design. Chapter 2 explains that the impact of accreditation on HCPs' burnout and work engagement is under-researched and

lacks robust information on such a process. Therefore, this thesis bridges the gap in the literature by using a mixed-method research design that includes qualitative and quantitative studies. This thesis not only contributes to the understanding of certain risks that could be associated with accreditation but also enables the examination of such risks using advanced analytical methods that might suggest causality (i.e., structural equation modelling (SEM)).

The following sections of this chapter present the epistemological worldview used in this research. By discussing the most followed worldviews in applied psychology, this chapter highlights the rationale of selecting a mixed-method approach to bridge the gap between accreditation in the healthcare sector and OHP frameworks. Through the application of both quantitative and qualitative elements, this chapter discusses the measures taken to collect and analyse data. Consequently, the chapter explains the triangulation method and the principle applied to integrate the results from different approaches to draw a conclusion that can be applied to a wider population. Finally, a discussion on the ethical considerations that were followed before conducting these studies is presented at the end of this chapter.

4.2 Research approach: Psychological worldviews

Researchers in psychology and social science apply different research methods (i.e., quantitative or qualitative) to collect and analyse data to answer their research questions (Johnson et al., 2007; Tashakkori & Creswell, 2007; Doyle et al., 2009; Creswell, 2018b, 2018a). Studies in these fields are underpinned by ontological and epistemological positions. The ontological position concerns the nature of reality and if it is independent of individuals' practices (Haverkamp &

Young, 2007; Braun & Clarke, 2013). The epistemological position determines what is true knowledge and how can it be found through research (Packer & Goicoechea, 2000) to describe the nature of our knowledge (Braun & Clarke, 2013). As research attempts to answer philosophical questions, different research approaches are followed to echo different epistemological worldviews.

A worldview is defined as a set of beliefs and assumptions on a theoretical issue that guides researchers' decisions (Koltko-Rivera, 2004). The most common worldviews discussed in this chapter are post-positivist, constructivist, and pragmatic. A post-positivist perspective attempts to answer research questions using scientific approaches and relies on numeric data to infer conclusions (Phillips & Burbules, 2000). A constructivist approach seeks to understand the world by using open-ended questions to explain individuals' views and perspectives of their world (Raskin, 2008). A pragmatic worldview combines both approaches to fully understand the problem that researchers encounter (Frey, 2018). Researchers with a post-positive worldview use quantitative designs with measurement tools to create numeric data, while constructivist researchers use qualitative designs that generate themes created from texts and observations to understand the phenomena under investigation. However, a pragmatic perspective uses a mixed-method approach to combine both qualitative and quantitative designs.

Quantitative methods were dominant in the late nineteenth to twentieth centuries through notions of experimental and semi-experimental designs that accounted for the differences between experimental groups and control groups (Campbell, 1963). Researchers who use a quantitative approach follow a post-positivism worldview (Tashakkori, 2020). Furthermore, they adopt scientific methods and empirical evidence that depend on developing numeric observation and

measurement of an objective reality that exists. Such a worldview includes theories, and laws and requires frequent testing to verify the knowledge that forms a phenomenon or an effect (Creswell, 2018b).

Positivism or post-positivism worldviews follow the same quantitative approach to develop knowledge; however, the difference between both worldviews is that post-positivism is more relaxed and acknowledges researchers' values when interpreting results (Phillips & Burbules, 2000). Quantitative methods also test the relationship between variables by explaining complex relationships using statistical techniques, such as SEM and multilevel modelling. It is worth mentioning that a positivist worldview is commonly applied in healthcare research (Doyle et al., 2009).

Alternatively, researchers with a constructivist worldview follow a different philosophical perspective. Constructionism is an epistemological perspective that explains how researchers construct their knowledge by connecting information to what is already known (Frey, 2018). These researchers propose an alternative approach to collecting data, i.e., qualitative methods (Braun & Clarke, 2013; Creswell, 2018b). Researchers supporting qualitative paradigms use several paradigms that attempt to construct meanings of the world they are engaged with (Raskin, 2008; Frey, 2018). Knowledge from a constructivist perspective is formed by interacting with other individuals using qualitative methods to collect data, hence, it is called constructivist.

Qualitative methods gained wide popularity in the twenty-first century as they use open-ended questions that allow individuals to speak openly and explain the topic under investigation. Studies following such an approach facilitate the formation of narratives to explain individuals' experiences of a certain phenomenon. Although this worldview uses different methods to collect data, researchers usually adopt

open-ended questions and rely, to a great extent, on individuals' views and perceptions to understand their world (Creswell, 2018b). Given that qualitative findings can be influenced by researchers' reflective positions, the results cannot be replicated or falsified (Braun & Clarke, 2013). Therefore, researchers using qualitative methods need to acknowledge the issues that are related to the subjectivity and reflexivity they hold, which can influence the knowledge constructed from such research. Reflexivity refers to how knowledge is produced, while subjectivity refers to the researcher's values that add to the research (Creswell, 2018b).

The third and final paradigm discussed in this research is the pragmatic paradigm. This paradigm focuses on 'what works' rather than finding the objective truth or reality (Frey, 2018, p. 1287). Researchers often follow this worldview when they conduct research using a combination of different data collection methods (Frey, 2018). This philosophical movement was founded by Charles Sander Peirce in the late nineteenth century (see, for example, Frey, 2018), and he claimed that people usually doubt their trusted beliefs when given the right reason. However, William James (1907) suggested that people develop new sets of beliefs that take the place of the older ones. According to James (1907), a pragmatic method attempts to interpret each belief by outlining its practical consequences. Therefore, researchers with a pragmatic worldview use different methods of inquiry that contribute to the continuation and development of knowledge (Frey, 2018). It is worth noting that a pragmatic worldview is not committed to a philosophical position; thus, the reality in such a paradigm is subjected to frequent changes to reflect human experience when solving a certain problem.

The pragmatic perspective has gained wide popularity among researchers in the OHP field because it uses different methods to explore different aspects of science. Therefore, one cannot simply choose one philosophical orientation over the other because worldviews depend on the research question being investigated (Cunliffe, 2011). Indeed, individuals develop their worldviews based on the field that they work in or the research community they belong to. In this research, a pragmatic philosophical position is followed to develop a new perspective on the impact of healthcare accreditation on HCPs.

4.2.1 Research design: Mixed methods

The main research approach followed in this thesis is a sequential mixed-method approach that integrates both qualitative and quantitative designs. This approach is utilised to answer the research question that involves the impact of accreditation on HCPs' burnout and work engagement. According to Tashakkori (2020), scholars have identified the mixed-method approach using different names that include a third path approach, a third research paradigm or a third methodological movement. Remarkably, all of these names identify mixed-method as a third approach, suggesting its progressive position as the third method following quantitative and quantitative methods.

Mixed-method studies begin when researchers believe that quantitative and qualitative approaches are practical approaches to answer their research questions (Johnson et al., 2007). The approach provides researchers with a holistic view of problems under investigation (Tashakkori & Creswell, 2007). The mixed-method approach emerged in the late twentieth century to overcome the dichotomy of quantitative design that examines the presence or absence of observed effects. The

approach started with Campbell and Fiske (1959) who used different quantitative methods to examine the validity of a psychological trait. Sieber (1973) used mixed-method, including observations and surveys, and argued that such a method can improve data collection and data analysis. By the 1990s, a mixed-method approach was utilised more frequently and identified as the integration of quantitative and qualitative data collection (Creswell, 2018b).

Applying mixed-methods designs in healthcare research has increased notably in the past few decades (Doyle et al., 2009). The complexity and dynamic of healthcare organisations have challenged the methodological approaches that examine the work environment in the healthcare sector. Therefore, adopting a mixed-method design and a pragmatic worldview to investigate how different psychosocial hazards arise during the process of hospital accreditation opens up the possibilities to study such hazards using different methods (El-Jardali et al., 2014; Al Shawan, 2021; Long et al., 2021).

Indeed, designing a study using the mixed-method approach adds value to understanding the perceptions of hazards experienced by HCPs. Furthermore, such an approach allows the development of a measurement tool to investigate psychosocial hazards that are unique to the process of accreditation. It is also considered a useful way to collect different types of data that consider the different viewpoints and perceptions of individuals. The following section therefore discusses the approached that is followed in this thesis, which is an exploratory mixed-method approach.

4.2.1.1 Research design: Exploratory sequential design

An exploratory sequential mixed-method approach is selected because it fits the philosophical worldview of this research (i.e., a pragmatic worldview), which attempts to understand and examine the psychosocial hazards that arise during the process of accreditation. Considering the complexity and dynamic nature of healthcare services, studying the impact of accreditation on the work environment from one sample might not provide comprehensible and quantifiable relationships between the concepts of interest. In this research, multi-method techniques from different samples are used to address the research question: 'what is the relationship between healthcare accreditation and healthcare professionals' health and well-being?'.

Accreditation has been investigated thoroughly in previous studies (IoM, 2000; Greenfield & Braithwaite, 2009; El-Jardali et al., 2014; Bogh et al., 2017); however, the heterogeneity of methods and results reported in these studies have created a gap in the field that can be addressed in this research. These studies also focused on professional development and organisational outcomes without making firm conclusions about the relationship between accreditation and patients' outcomes (Brubakk et al., 2015). While some research has highlighted the workload and stress experienced by HCPs during accreditation (Greenfield & Braithwaite, 2008; Elkins et al., 2010; El-Jardali et al., 2014; Alyahya et al., 2018; Kousgaard et al., 2019), the mechanism by which hazards are generated during the preparation for accreditation and how they increase the risks of harm have not been fully established yet.

Therefore, the purpose of this thesis is to highlight the psychosocial hazards experienced by HCPs and the mitigating factor that reduces the effect of these hazards on the health and wellbeing of HCPs. The first phase in this thesis is

qualitative and explores potential risks using interviews and focus group discussions conducted at recently accredited facilities. Interviews are followed by focus group discussions to enrich and support the findings from the interviews (Lambert & Loiselle, 2008). The interviews target HCPs working in hospitals that have recently been accredited (i.e., three to six weeks after achieving accreditation). Focus groups are conducted with a group of HCPs working in a recently accredited but different healthcare setting (i.e., primary healthcare centres (PHCs)).

Findings from the qualitative study facilitate the development and selection of questionnaire items administered to a larger group of participants. Furthermore, the qualitative findings help create hypotheses that can be tested in the subsequent quantitative studies (Doyle et al., 2009). While the first study is important in the development of items for the questionnaire, the second study is equally important in testing and validating these items. In the third study, a longitudinal design with a two-wave cross-lagged study is employed to collect data three months before an accreditation inspection and three months after an inspection. Therefore, the quantitative data which are collected from participants working in hospitals undergoing the process of accreditation to assess two things: (1) the validity of the newly developed measure and (2) the effect of accreditation demands and social support on HCPs' burnout and work engagement. The quantitative studies use data derived from two online surveys to build a model that assesses the theoretical frameworks employed in this research (i.e., JD-R and PSC models).

Although this research aims to study the psychosocial hazards related to the process of healthcare accreditation in public healthcare facilities in the UAE, each study uses data from different sources. For example, the first study approaches HCPs working in public hospitals (n=3) for interviews, which are conducted three to

six weeks after the hospitals achieve their accreditation certificates. Focus group discussions follow the interviews using different groups of HCPs working in a network of PHCs (n=16) to validate and confirm the findings from the interviews. The second study targets three hospitals to validate the constructs that are developed from the qualitative studies, while the third study, which is conducted in two hospitals, investigates the relationship of these constructs in a two-wave longitudinal design. The second and third studies are based on online self-reported surveys.

The studies in this research are conducted sequentially, as one study is implemented and then analysed to inform the next study. However, the process is interactive in assessing the same phenomenon using different methods (Greene et al., 1989). It is worth reiterating that the aim of using a mixed-method approach is to contribute to the development of the theoretical frameworks, which include the interaction between the JD-R and PSC models to explain burnout and work engagement. Figure 4-1 presents a diagram for the studies in this thesis.

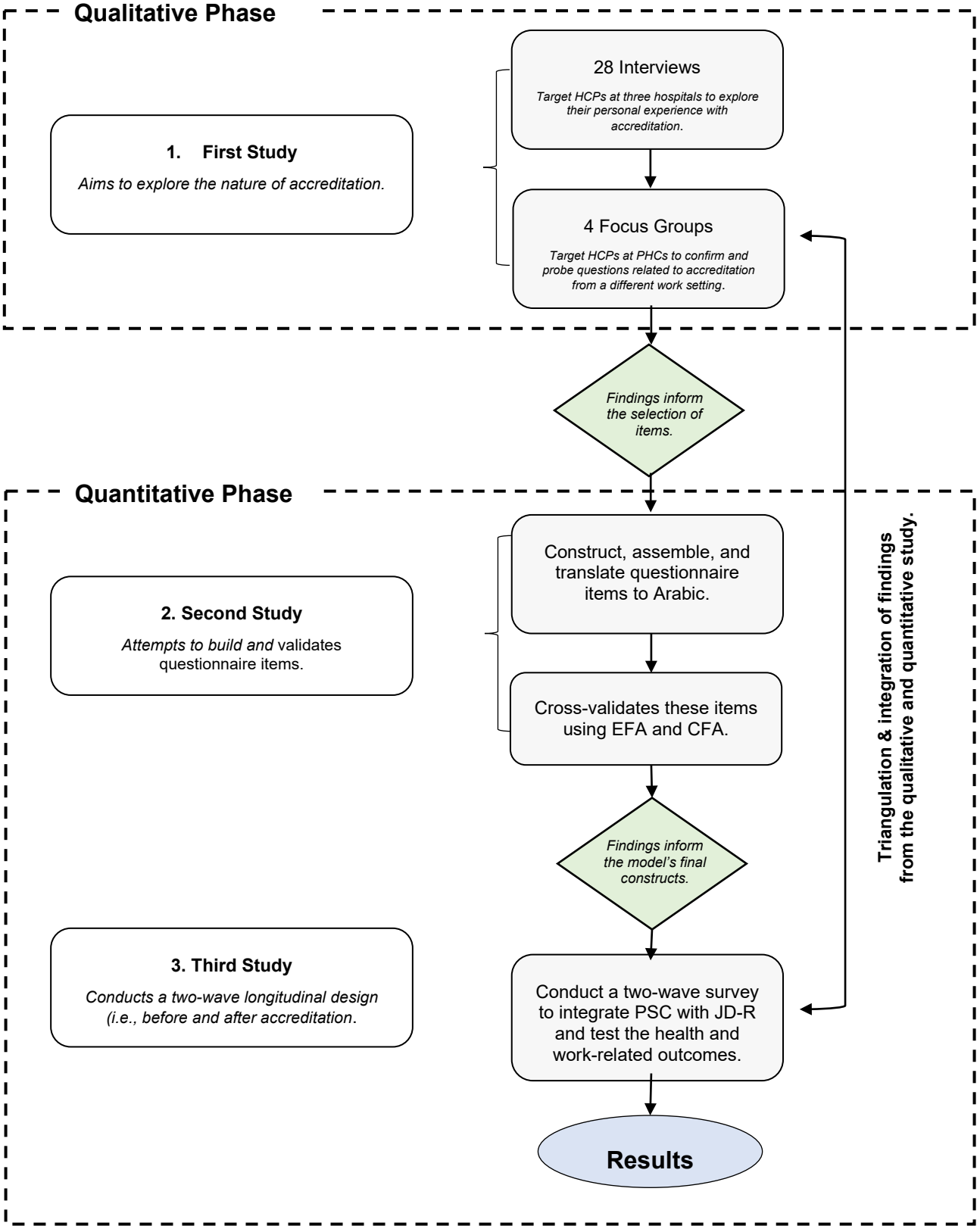


Figure 4-1 Research design for this thesis.

4.2.2 Quality criteria for mixed methods

Although mixed-method research uses approaches from quantitative and qualitative paradigms, it is important to consider both the validity and reliability of findings established from mixing both paradigms. Scientific researchers have established criteria to test the objectivity of scientific paradigms, which includes internal and external validity, reliability, and objectivity (Schwandt et al., 2007). Such studies often start with researchers familiarising themselves with the problem under investigation, followed by generating hypotheses and testing them.

Given that quantitative studies depend on paradigms that generate information using numeric data analysed statistically (Stevens, 1946), different numeric scales could be used. Therefore, researchers are encouraged to use standardised measures to allow participants to respond to a predefined and scaled measurement tool, i.e., a questionnaire (Golafshani, 2015). Thus, the reliability and validity of measures are considered essential tools for empirical studies that address the appropriateness of quantitative measurement scales. Reliability is the consistency of results over time, whereas validity refers to the ability of a scale to measure what it is intended to measure (Cronbach & Meehl, 1955).

Alternatively, qualitative studies utilise different paradigms to suggest findings derived from the phenomenon under investigation without using statistical methods or numeric data (Patton, 2015). Qualitative methods seek to understand and highlight certain phenomenon instead of predicting and generalising findings. Patton (2015) suggests that researchers of qualitative studies understand the meanings of the world they observe; therefore, researchers need to be concerned about reliability and validity when designing qualitative studies. However, Stenbacka (2001) argues that applying reliability and validity concepts to qualitative studies can be misleading

because tools used in the design lack consistency compared to quantitative designs. To address this conflict, Lincoln and Guba (1986) introduced new criteria to address issues related to reliability and validity in qualitative research, which include trustworthiness and authenticity.

In qualitative studies, the concept of trustworthiness is parallel to the concepts of validity and reliability (Lincoln & Guba, 1986; Schwandt et al., 2007). Researchers conducting qualitative studies cannot maintain an objective distance from the problem being studied and might hold values about the issue under investigation. Therefore, Lincoln and Guba (1986) suggest using different terms such as credibility, transferability, dependability, and confirmability of findings when assessing the reliability and validity of qualitative studies. Indeed, credibility requires researchers to have a prolonged and persistent engagement with the phenomenon, which is healthcare accreditation in this study.

Triangulation is another form of credibility that is achieved through the application of different methods to cross-check and validate results from different studies (Greene et al., 1989). Therefore, a triangulation protocol is followed in this research that tests the application of two different methods (Farmer et al., 2006). Another form of trustworthiness is transferability that preserves the robustness of themes developed from qualitative data. Finally, dependability and confirmability refer to the auditing process carried out by other researchers to check the themes developed from the analysis.

Authenticity describes the fairness of evaluations that balances the themes developed from the qualitative analysis and the value that comes from these constructs (Lincoln & Guba, 1986). To achieve fairness, Braun and Clarke (2013) stress that researchers need to present conflicting views to avoid misrepresenting

participants who hold different views. Researchers need to balance issues regarding authenticity with issues regarding the representation of participants when analysing qualitative data. Fairness also requires obtaining informed consent, not only at the beginning of qualitative research but also throughout the study to continually reaffirm participants' consent. Hence, all aspects of the mixed-method criteria, especially qualitative criteria, represent the measures taken to address some of the criticism and problems often discussed when using qualitative research design (Lincoln & Guba, 1986; Patton, 2015; Smith, 2015; Creswell, 2018a; Smith & McGannon, 2018; Tashakkori, 2020).

Greene et al. (1989) suggest that mixed-method research should include at least one quantitative study using numeric data and one qualitative study using words. They explained that the common purpose of mixing methods is to enhance and elaborate on findings known as complementary design. Therefore, the application of interviews and self-reported questionnaires to assess healthcare accreditation programmes illustrates the intent of triangulation and authenticity in a mixed-method approach.

Although qualitative approaches generate varied and rich data, some drawbacks are observed in their application. Qualitative research allows researchers to explore and understand sensitive issues cost-effectively; however, such an approach might be considered less valid or reliable (Breakwell et al., 2020). Participants might not give accurate answers due to the sensitivity of the topic being discussed. Furthermore, participants might know the aim of the study which could influence their responses to match the research topic. Therefore, researchers can ensure consistency in participants' responses by creating structured questions, i.e., semi-structured questions. Although consistent responses might not indicate

accuracy, there is a solid argument that combining different qualitative designs can complement and support participants' responses (Lambert & Loiselle, 2008; Breakwell et al., 2020). Hence, the first phase of this study combines interviews and focus groups to enrich the conceptualisation of accreditation through data saturation (O'Reilly & Parker, 2013).

Rubin and Rubin (2005) discuss factors that enhance the credibility of qualitative research, such as interviewing appropriate participants. The qualitative study in this thesis aims to interview and discuss matters related to the accreditation process and the way it had influenced the health and wellbeing of HCPs, in addition to the quality of patient care. Therefore, participants who work directly with patients, have clinical roles and are knowledgeable about the accreditation process are approached. This research also targets HCPs working in healthcare facilities that have recently experienced accreditation to build confidence in the developed qualitative results.

Another drawback to qualitative research is the generalisability of findings. To overcome this challenge, qualitative research emulates quantitative research via proper sampling techniques (Melia, 2010). The quality of research findings is related to how inaccuracies are controlled by limiting errors while designing a qualitative study, analysing and reporting it (Murphy & Dingwall, 2003). Designing qualitative research has become increasingly informed by previous studies, which are approached and designed in similar ways.

4.2.2.1 Data triangulation

Given that studies in healthcare widely adopt a mixed-methods approach, it is essential to highlight the methods used to corroborate results from qualitative and

quantitative data, known as triangulation (Greene et al., 1989). Triangulation occurs when researchers combine two or more methods to investigate a certain phenomenon (Frey, 2018). The integration of different approaches allows researchers to look into comprehensive overviews of the topic under investigation; therefore, strengthening the conclusions drawn from such studies (Doyle et al., 2009). O'Cathain et al. (2010) suggested three major techniques to integrate data in mixed-methods studies, including: triangulation protocol (Farmer et al., 2006), following a thread (Moran-Ellis et al., 2006), and a mixed-methods matrix (O'Cathain et al., 2008). In this study, the triangulation protocol suggested by Farmer et al. (2006) is used. The protocol includes:

- Sorting findings related to the research question from both methods.
- Coding findings to identify commonalities from different data sources. Codes are formed according to the following criteria:
    - Agreement between the sets of results.
    - Partial agreement, which suggests an agreement in one method but not in both.
    - Silence suggests the absence of data from one method but presence in the other.
    - Disagreement suggests that findings from one methodology contradict the other.
- Convergence assessment that fully assesses findings based on the previous point.
- Completeness assessment to compare the nature and scope of unique contributions and similarities to the research questions.

Although the mixed-method approach is increasingly used in healthcare research (O'Cathain et al., 2010), there are a few limitations to mixed-method designs, including the philosophical stance of the design. It has been viewed that quantitative and qualitative methods cannot be mixed due to the differences in the epistemological origin of both approaches (Doyle et al., 2009; Creswell, 2018a). Furthermore, triangulation or mixing methods might contradict the researcher's epistemological worldview, which amplifies research errors and bias in the final results (Farmer et al., 2006). As discussed previously, a pragmatic worldview is not committed to a specific reality or a philosophy; thus, the reality is changing to reflect human experience when solving a problem (Creswell, 2018b, 2018a). It is worth noting that the appropriateness of findings from the qualitative study and the selection of samples to represent both phases posed a challenge to the mixed-method approach (Creswell, 2018b).

4.3 Data sources

4.3.1 Qualitative study

As previously mentioned, the first part of this research follows a qualitative approach that attempts to explore and to understand the influence of accreditation on the working environment and HCPs' health. The approach includes interviews and focus group discussions designed to generate a conceptualisation of HCPs' experience of accreditation. The interviews and focus group discussions use semi-structured questions allowing participants to engage easily with the researcher. Additionally, the design aims to evaluate the influences on HCPs' health, wellbeing and work engagement during the process of accreditation using the JD-R and PSC models.

While qualitative studies should not be tied to a specific theory, interviews and focus group questions are articulated to reflect the two theoretical frameworks that capture the unique demands and resources that are evident in the accreditation process (Gale et al., 2013). Merriam and Tisdell (2015) state that data are analysed according to a theoretical framework and findings are usually discussed to reflect an existing knowledge. Therefore, it is inevitable to collect data with pre-existing knowledge about the topic under investigation (Guba & Lincoln, 1994). Theories, therefore, provide foundations to understand and organise the findings.

Combining interviews and focus group discussions increase the richness of the data in the qualitative study. Although interviews and focus group discussions are independent data collection methods, the rationale for combining both methods is to understand HCPs' perceptions of accreditation from different settings using a pragmatic approach. In addition, combining both methods allows for data saturation to be reached through the confirmation of findings (Plack, 2006). Therefore, the first study is designed to conduct a series of individual interviews and then perform focus group discussions to confirm, extend or refute initial findings.

Although there is increasing attention on the combination of qualitative and quantitative methods, there is a need for more qualitative research that mixes qualitative methods to complete and confirm findings (Lambert & Loiselle, 2008). Lambert and Loiselle (2008) explain how qualitative methods add different dimensions to the phenomena under investigation when seeking data completeness. Hence, the combination of interviews and focus groups contribute to a thorough understanding of the impact of accreditation on HCPs' health and well-being.

Furthermore, conducting focus groups after interviews allows researchers to probe for information that can confirm initial findings and identify missing information

(Plack, 2006). For example, interviews with HCPs at the hospital level are utilised to explore HCPs' personal experiences with the accreditation process and how such a process influenced their health and well-being. At the same time, focus groups are used to examine the opinions and beliefs of employees who had experienced accreditation in a different healthcare setting (i.e., PHCs). HCPs' experience with accreditation could be extensive, ranging from doctors and nurses to managers and administrators. Therefore, it is expected that the data obtained from interviews at the hospital level would predict and confirm those acquired from focus groups at the PHC level.

As the interviews and focus groups are conducted in two different settings, findings are expected to be similar and likely provide comprehensive interpretations of the data. Moreover, the scope of services and the geographical location vary between hospitals and PHCs. Therefore, by utilising interviews and focus groups, the study attempts to address the limitations often discussed in quantitative research, which typically ignores participants' experiences to provide an overall interpretation of their views (Carr, 1994).

Interviews and focus groups are carried out face-to-face and cover topics related to the psychosocial hazards experienced by HCPs during accreditation. They attempt to address participants' feelings towards these risks and the job demands experienced by them. Topics that cover job resources are also included to reveal participants' views on the opportunities of accreditation and the support provided by their supervisors or colleagues during accreditation. This study, which is presented in Chapter 5, also focuses on leaders' roles in taking actions to counter the accumulative psychological risks related to the demands of accreditation and

interpersonal relationships. Such a role can indicate, to some extent, the climate within the organisation during the accreditation process.

A semi-structured scheme is used with an average of 12 main questions that focus on the different aspects of job demands, job resources and health-related outcomes perceived by HCPs. Additional probing questions are added when further explanations are needed. These questions are not asked in order but according to participants' input. Rowley (2012) suggest that robust semi-structured interviews consist of questions that are appropriately selected and phrased and allow flexibility in ordering the questions. Further information on the qualitative schedule is found in Chapter 5 (section 5.3.4).

Focus group discussions are conducted after the interviews and follow a confirmatory approach to support the findings (Lambert & Loiselle, 2008). The nature of applying such data collection method allows participants to debate and expand the discussion related to the process of accreditation (Smith, 2015). Group discussions create a dynamic interaction between members and enhance the interpretation of findings developed from interviews (Braun & Clarke, 2013). Although interviews are effective ways in understanding participants' opinions and experiences regarding a certain process (Rowley, 2012), focus groups provide a safe environment for participants to talk openly about sensitive issues in health research (Wilkinson, 1998). A combination of interviews and focus groups are selected for pragmatic reasons to enrich the knowledge of accreditation process.

4.3.2 Quantitative studies

As the qualitative study aims to identify psychosocial hazards experienced by HCPs, relevant questionnaire items were informed by the study's findings. The

questionnaire attempts to measure different constructs experienced in the accreditation process by asking HCPs working in hospitals that are preparing for accreditation inspections to complete it. Qualitative findings not only help to establish a measurement tool but also enable the development of hypotheses that test the relationship between constructs included in the developed measure (Doyle et al., 2009). Therefore, the second phase of this research, which consists of two studies, aims to build and test a model that integrates the two theoretical concepts of the JD-R and the PSC models. The second study evaluates the construct's validity and internal consistency of the developed and translated instrument (as detailed in Chapter 6). The third study examines the relationship between constructs using a two-wave longitudinal design (as described in Chapter 7).

Researchers have investigated psychosocial hazards in different ways, including self-reported questionnaires, observations, and biological measures (WHO, 2010). While biological assessments, such as testing the blood or hormone levels of workers, are considered reliable, they are invasive and expensive (Cox, 2000; Kompier, 2005). Therefore, self-reported questionnaires are used in the quantitative part of this research. Questionnaires are used widely to investigate psychosocial hazards. Furthermore, questionnaires are tools recognised by governments that invest in understanding the health and safety of employees. However, self-reported questionnaires have an intrinsic limitation, which is related to participants' perceptions of certain questionnaires items (WHO, 2010). Cox (2000) explained how the process of measuring workers' experience of negative outcomes, such as burnout, using scales can lead to biased findings. He argued that measuring an objective work environment construct using a subjective questionnaire that measures workers' perceptions is the reason for such bias.

Self-reported questionnaires have been used widely to measure work-related risks because they are inexpensive. However, many instruments have been created that challenge researchers on which tool to select. In a systematic review, Tabanelli et al. (2008) evaluated available instruments used in OHP to facilitate the decision of selecting the appropriate measure. They identified 26 questionnaires that can evaluate psychosocial hazards in work environments, the most common of which are the Copenhagen Psychosocial Questionnaire (COPSOQ) (Pejtersen et al., 2009), the Job Content Questionnaire (JCQ) (Karasek et al., 1998), the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981), and the Copenhagen Burnout Inventory (CBI) (Kristensen et al., 2005).

While items in the questionnaire are initially informed by the qualitative study to test the constructs of the theoretical models used in this research, five final constructs are selected to create a parsimonious model. Constructs of the questionnaire are operationalised using items from COPSOQ II (Pejtersen et al., 2009) to test social support, CBI to test personal burnout, PSC-12 (Garry Hall et al., 2010) to measure PSC, and the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2006) to evaluate work engagement.

The job demands construct is developed from the qualitative study to highlight unique demands required from HCPs in the accreditation process, defined as the accreditation demands. Previous studies showed that the unintended consequences of accreditation process were perceived to influence HCPs' psychological health and the continuity of patients' care (Greenfield & Braithwaite, 2008; Alyahya et al., 2018; Bogh et al., 2018). Therefore, the new construct emphasises these demands using concepts that are frequently referred to by HCPs in the qualitative study.

While some of the measurement tools are well known and have been validated previously, they have not been translated or tested in a Middle Eastern country, e.g., the UAE, before this research. Therefore, items of the instrument have been translated into Arabic using back-translation (Brislin, 1970), and the survey is presented using the UAE's official languages which are Arabic and English. Online surveys were sent to HCPs working in selected public hospitals in the UAE either through their work email or social media (i.e., WhatsApp application).

4.3.2.1 Online surveys

In the quantitative phase, online surveys are used to examine the five main constructs of the measurement tool: job demands, job resources, PSC, burnout and work engagement. Online surveys have gained popularity by replacing conventional paper surveys. Previous studies have extensively discussed the advantages and disadvantages of online surveys, which include cost-effectiveness and the time-saving aspects of approaching participants (Couper, 2000; Duffy et al., 2005; Selm & Jankowski, 2006; Breakwell et al., 2020). Online surveys also can offer embedding elements that are not easily added to conventional surveys (Breakwell et al., 2020). For example, consent forms and participant information sheets can be embedded into online surveys to ensure participants are approached ethically. Furthermore, online surveys can be delivered to a wider population using different platforms, and this allows researchers to approach participants in advance compared to traditional methods (Brislin, 1970). Participants can also access surveys and answer them at a convenient time.

However, previous literature has addressed some of the drawbacks related to online surveys, one of which is the lack of motivation participants might feel to

complete them. As this research is part of an educational programme, a lack of incentive or direct benefit could reduce the response rate for motivational reasons. Participants might also fear that their answers could be revealed to their managers (Sheehan, 2002). Although participants are frequently assured that their responses are anonymous, some participants might be concerned about the confidentiality of their input, especially when they receive the survey link from their directors or line managers. Such a limitation could lead to another problem related to the administration of online surveys, which is known as the measurement error.

Measurement error is when respondents deviate from the true value on the measure while answering a close-ended survey questionnaire (Couper, 2000). When constructing survey items, Couper (2000) suggested that wording of questions plays an important role in minimising measurement errors. Whether constructed or adopted, the online surveys in this research used close-ended questions to reduce the ambiguity related to wording and enhance the coding process researchers carry out when analysing data (Breakwell et al., 2020).

4.3.3 Sample size

In the qualitative phase, the study aims to interview a maximum number of 25 participants to highlight the relationship between accreditation in the context of job demands and job resources and employees' outcomes related to wellbeing and safety. Once interviews are completed, focus group discussions are conducted in a different context. As described by Wilkinson (1998), focus groups involve one or more groups of six to eight participants to collectively discuss one topic. In this research, focus groups allow HCPs to share their experiences and talk about accreditation and the related psychosocial hazards that are associated with it.

Indeed, interviews help determine the most relevant questions so that optimal time is spent in the focus group discussions. Four focus group discussions, with six participants in each group, will be delivered in a different setting, i.e., PHCs, to understand and broaden the response rates from a different perspective.

The sample size is an important consideration in quantitative studies as it affects the accuracy of the conclusions that can be drawn from statistical analysis. In the quantitative studies in this thesis, confirmatory factor analysis (CFA) and SEM are used to analyse data. SEM techniques are more efficient in a large sample (Kelloway, 2015). For example, Marsh et al. (1988) state that using a sample smaller than 100 increases the risk of drawing inaccurate conclusions. They also suggest that researchers should be careful when applying CFA to a sample size less than 200. Furthermore, sample size depends on the complexity of the tested model (Lei & Wu, 2007) or the number of cases per parameter (i.e. 5–10 cases per parameter) (Brown, 2015). Therefore, the quantitative studies aim to have a minimum sample size of 200. To avoid committing Type I errors, a 95-significance level is selected for α, which is 0.05 and uses a power of 0.80 (1–0.20), to avoid Type II errors. A medium effect size=0.175 is selected as workers are expected to notice the change after accreditation (Joop J. Hox, 2018). Hospitals are included based on the accreditation plan for 2019.

4.4 Data analysis

4.4.1 Qualitative study

To analyse qualitative data, the thematic analysis (TA) approach of Braun and Clarke (2006) is used to capture the uniqueness of demands and resources perceived during the accreditation process. Considering its wide and flexible

approach, TA is used to develop a better understanding of the psychosocial hazards that are found to be associated with the accreditation process. While such an approach is not guided by a theoretical framework, TA can follow both realist and constructivist assumptions and can range from a simple descriptive approach to a more complex approach that reflects deeper meaning in the data (Smith, 2015).

The gathered data from interviews and focus groups are expected to be rich and substantial, therefore, information collected from participants is coded using both deductive and inductive approaches for TA (Fereday & Muir-Cochrane, 2006; Gale et al., 2013). The deductive approach uses concepts from the JD-R and PSC frameworks to provide the initial structure for coding and analysis. Themes could include but are not limited to job demands associated with the accreditation process, support from management and HCPs' related outcomes. Alternatively, an inductive approach allows new themes to emerge from participants' experiences of accreditation without imposing an initial structure. Qualitative data analysis software (NVivo) is used in this phase to sort and code the data. NVivo is an efficient tool to handle and link different data extracted from interviews and focus groups to explore the influence of accreditation on employees' psychological health.

The study uses an inductive and deductive coding approach to thematically analyse the qualitative data. Such an approach is complemented by the research questions, which are driven mainly by the JD-R model and the PSC construct. Therefore, the analysis allows aspects of the OHP models to be integrated while acknowledging new themes outside of these models that emerged from the data. Fereday and Muir-Cochrane (2006) demonstrated a hybrid approach that uses both inductive and deductive coding to interpret qualitative data. The authors applied theory-driven and data-driven codes to provide overarching themes and capture the

role of performance feedback in nursing practices. Therefore, combining both coding methods complements the research questions related to the nature of accreditation and its psychosocial hazards.

A hybrid method allows for themes to be integrated based on the JD-R and PSC constructs while also allowing other sub-themes to emerge from the data. Therefore, this study uses a flexible thematic analysis approach by applying a hybrid coding mechanism. As the epistemological position of this thesis is a pragmatic worldview, it is essential to follow a similarly pragmatic approach to answer the research questions. Instead of relying on the frequency of codes that contextualise the data, a hybrid coding technique allows for a balanced view of the data and the results to be achieved (Xu & Goodacre, 2018).

4.4.2 Quantitative studies

For the quantitative studies, data are first extracted from an online platform (Qualtrics^{X}) and transformed to IBM SPSS software to perform preliminary data analysis, including data exploration and factor analysis. The two studies take different analytical approaches as the second study attempts to validate the developed and translated questionnaire items, while the third study aims to test the lagged relationship between variables. The second study follows a quantitative approach to explore and validate measures applied in this thesis. Validation of measures include employing Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) techniques. EFA and reliability tests are performed using SPSS Statistics software (version 26), followed by CFA using MPlus software (Muthén & Muthén, 2002). Further discussion on the analysis is found in Chapter 6.

Items concluded from both factor analysis (i.e., EFA and CFA) became the foundation of the third study, which includes a longitudinal assessment of the impact of hospital accreditation on HCPs' work environment. To assess the effect of variables longitudinally, a cross-lagged panel design is used to test the causal relationship between variables while controlling variables measured in the first wave. Instead of multilevel modelling analysis (MLM), SEM and a cross-lagged panel design are applied to test the hypotheses regarding the moderating role of PSC in the JD-R model. SEM and cross-lagged panel designs are selected to estimate the fit indices of the model.

Furthermore, PSC is operationalised and measured at an individual level to reflect a wider organisational resource. However, considering the multilevel nature of PSC and the small sample size (i.e., individuals nested within two public hospitals), a vital step is taken to assess whether the data can be aggregated to the hospital level. The intraclass correlation coefficient (ICC) is calculated for every dependent variable (Koo & Li, 2016). It is recommended that the statistical independence of groups should be ignored if the attributed variance is less than 5% (Hox, 2010). The results of the ICC are further discussed in Chapter 7, section 7.2.3.

4.5 Location of the study

The following section explains the recruitment process of participants, which starts with participants recruited for the qualitative study followed by participants recruited for the quantitative studies. All studies took place in public healthcare facilities governed by the Ministry of Health and Prevention (MOHAP) in the UAE, which includes hospitals and PHCs, because of the researcher's experience with the public system and the opportunity to recruit participants using the predefined

inclusion criteria. It is assumed that interviewing participants without prior experience of the accreditation process would increase the strength of this research by exploring the psychosocial hazards derived from such external inspections.

Participants were identified with the help of the directors of the selected healthcare facilities. An email was sent to describe the nature and purpose of the study and a request for directors to send the invitation emails to all employees working in the selected facilities. Invitation emails were sent in both languages (English and Arabic), targeting a mixture of healthcare workers who provide services to patients, for instance, physicians, nurses, nurse assistants, pharmacists, laboratory technicians and radiologists. This mixture was chosen to obtain a representative sample of the resources available to conduct the research. Reminder emails were sent regularly for four weeks.

Focus groups were then categorised according to participants' occupations, with the first focus group open to nurses and nurse assistants only, the second focus group targeting physicians and dentists, the third focus group for technicians, including but not limited to pharmacists, physiotherapists, and laboratory technicians, and the fourth focus group was open to only managers and supervisors. By categorising groups, a safe environment is provided for participants to share their knowledge and to elaborate by discussing their honest views in front of others (Wilkinson, 1998; Braun, 2013). The expected time for each focus group was around 40–50 minutes, with 10 minutes for participants to ask the moderator questions. Further information is discussed in Chapter 5.

To investigate HCPs' experiences and attitudes towards the accreditation process, the quantitative part of this research deliberately selects HCPs working in healthcare facilities that were experiencing the accreditation process. The first

quantitative study collects data from three hospitals, whereas the second study collects data from two public hospitals. These hospitals are considered eligible for the inspection process and were soon to be accredited (i.e., three months before an inspection visit). The time was selected to reduce the effect of errors related to the recall period and to increase the reliability of the study (Warner et al., 2005).

Given that the quantitative studies have different objectives, samples were taken from three hospitals based on their accreditation status. These hospitals were soon to experience an inspector's visit to assess the quality of their healthcare services. The second study aimed to assess the construct validity of the selected items assessing the accreditation demands; therefore, a large sample size was expected from different occupational groups (see Chapter 6 for more detail). Alternatively, a relatively smaller sample was obtained from two hospitals that have completed a full cycle of accreditation to examine the lagged relationship between constructs before and after accreditation (see Chapter 7 for more detail).

4.6 Regulatory aspects

Before planning the research, initial approval was sought from the director of the Clinical Quality & Healthcare Accreditation department in the MOHAP to approach HCPs working in public healthcare facilities that underwent external inspections, i.e., accreditation. Furthermore, no data were collected or contacts made with any of the participants before getting the approval from the DPAP Research Ethics Sub-Committee at the University of Nottingham and UAE's MOHAP Research Ethics Committee.

For the qualitative study, a copy of the consent form was given to the interested participants at the beginning of each interview or focus group session.

Consent forms were kept with the interviewer in a locked cabinet, following the University of Nottingham's policy for data management. Additionally, a research information sheet with the aim and benefits of participating in this research was distributed among participants before consent was given. The Participant's Information Sheet contains participants' rights that guarantee their contributions are confidential and identities remain completely anonymous. The sheet also explains the possible risks that the collected data might encounter, for example, losing the records and jeopardising participants' confidentiality. Participants were reassured that they could withdraw from the study at any time. For the quantitative studies, consent forms and the participant's information sheet were embedded in the online survey.

All software data were secured on the university server, which was considered highly secure, while paper documents, for instance, notes and consent forms, were stored in a locked cabinet at the University of Nottingham and used for research purposes that adhere to General Data Protection Regulation (GDPR). Although there were no vulnerable groups in this study, proper language was used to respect participants' backgrounds, ethnicity and religion as multi-ethnic employees work in the UAE's public healthcare services.

4.7 Summary

This chapter discussed the philosophical worldview that guides the methodological design of this thesis. Considering the complexity of healthcare services, the main research approach followed in this thesis is a sequential mixed-method approach that integrates both qualitative and quantitative designs to explore and examine the nature of accreditation. To achieve the aim of this thesis, three

studies were designed and conducted, and this chapter briefly discussed elements of each study that include data collection and data analysis. The following chapter presents findings from the first study (i.e., the qualitative study).

Chapter 5 A qualitative study to explore the psychosocial hazards associated with accreditation

5.1 Introduction

This chapter seeks to explore the emerging psychosocial hazards associated with healthcare accreditation in public healthcare facilities in the UAE. It attempts to understand healthcare professionals' (HCPs) perceptions of the unexpected consequences accreditation programmes have created for them, including job demands and job resources. Indeed, the concept of continuous quality improvement (CQI) has inspired the growth of accreditation programs in the healthcare sector (Shortell et al., 1998), which aims to acknowledge healthcare organisations publicly and to encourage them to improve the quality of care provided to patients (as discussed in chapter 2). While the impact and outcome of healthcare accreditation remain debatable, the growth of such programmes has accelerated significantly over the past decades (Nicklin et al., 2017).

Accreditation has gained immense popularity and many countries have employed accreditation programs in their healthcare organisations, including developing countries such as Middle Eastern countries (Greenfield & Braithwaite, 2008; Devkaran & O'Farrell, 2015; Greenfield et al., 2019). While some countries have used accreditation programmes as a voluntary process, other countries have mandated hospital accreditation (Pomey et al., 2005; Devkaran & O'Farrell, 2015). However, little attention has been paid to the consequences of mandatory accreditation on workplaces and workers' psychological health. Chapter 2 explained the process of accreditation, which includes the external evaluation of performances using a defined set of standards.

Indeed, healthcare accreditation might be appealing to managers and stakeholders, yet many have argued that accreditation is a demanding process, which increases workload and stress levels among workers (Touati & Pomey, 2009; El-Jardali et al., 2014; Kousgaard et al., 2019). It is therefore important to note that mandatory accreditation of public health services and the pressure exerted by stakeholders to achieve a positive evaluation might increase psychosocial risk factors, including workload and stress levels among HCPs (Touati & Pomey, 2009; Ehlers et al., 2017).

In addition, recent studies have examined the effects of workload linked to the accreditation process on reduced care of patients (Ho et al., 2014; Bogh et al., 2018). Bogh et al. (2018) described how doctors and nurses were distracted by the requirement to fill patients medical records that influenced their time with patients. Although accreditation programmes have been studied widely, the changing nature of such programmes increases the importance of exploring psychosocial risk factors found in such programmes. What is currently missing from the research in healthcare accreditation is the acknowledgment of work-related hazards and the associated risks to HCPs found in accreditation programmes. Healthcare organisations are changing regularly, and many developed countries have recognised psychosocial hazards in the workplace. Therefore, this study builds on the established, yet limited, knowledge related to the psychosocial hazards found in the process of accreditation in healthcare facilities in the UAE.

Indeed, changes in healthcare organisations can introduce new risks, and the process of accreditation can be one of these changes. Since psychosocial hazards are common in healthcare services, these hazards may include work-related stress, role conflict, inadequate social support, staff shortages, work shifts, and attacks from

patients (Lipscomb, 2017). Therefore, the aim of this study is to understand the types of work-related hazards that emerge during hospital accreditation. The importance of the current study is that it explores whether such hazards indeed arise during the course of accreditation. Given that previous research on accreditation has focused on the change it could bring to healthcare, little attention has been paid to the emerging psychosocial hazards associated with accreditation.

Further, research on the impact of accreditation on HCPs' mental health as well as patient care are very little. Therefore, this study attempts to explore psychosocial hazards, including increased work demands that could influence HCPs' mental, social, and physical health. In addition, it attempts to understand management factors that can mitigate the effects of such risks. Smith and McGannon (2018) addressed the difficulty of understanding people's lived experiences without linking it to a theory or prior knowledge. Therefore, the current study lends itself to the theoretical framework discussed in chapter 3. This theoretical framework informing the research questions in the study is derived from the Job Demands-Recourses (JD-R) (Demerouti et al., 2001).

Demerouti et al. (2001) introduced the JD-R model as a contemporary model of work-related stress. The JD-R model links psychosocial hazards, including workload, role ambiguity, and role conflict to health-related outcomes such as burnout and stress. Job resources, such as teamwork and social support, can explain the motivational pathway of the JD-R model. So far, very little attention has been paid to the emerging job demands in the process of accreditation. Qualitative research can play a significant role in identifying different types of risks that are specific to accreditation process.

While some published qualitative studies have focused on staff views on accreditation as an improvement process, to our knowledge, little attention has been paid to the emerging psychosocial hazards during hospital accreditation. For this reason, the current study adopted a qualitative design using theoretical-informed thematic analysis approach to explore these hazards (Gale et al. 2013). The study aims to capture the unique demands of accreditation and to develop a clear understanding of the potential psychosocial hazards associated with accreditation processes. In addition, the study uses the JD-R model to ensure a better understanding of the themes developed in the study. Therefore, a theoretical framework (i.e., JD-R model) offers an effective way to categorize and develop themes that are related to the accreditation process.

5.2 Aims

The main aim of this investigation was to explore the nature of accreditation and the psychosocial hazards associated with it, particularly accreditation demands. In addition, this study attempted to understand how mandatory accreditation requirements influence the work environment in the UAE's public healthcare organisations, mainly those regulated by the Ministry of Health and Prevention (MOHAP). It sought to answer the following research questions:

1. What job demands are perceived by healthcare professionals during the process of accreditation?
2. What are the available job resources that mitigate and support HCPs throughout the process accreditation?

This chapter explains the research approach and the methods used to explore HCPs' experience with accreditation programmes. It also addresses different

strategies employed to achieve consistent findings that support the following quantitative study. Finally, the chapter presents and discusses the results explored to describe and interpret HCPs' views of the accreditation process. The study used 12 semi-structured questions focusing on the accreditation process's emotional, managerial and professional impacts before, during and after the inspection visit. These questions are presented in Table 5-2.

The research questions were structured according to the job demands-resources (JD-R) model (Demerouti et al., 2001) to identify aspects of job demands and job resources during accreditation. Furthermore, questions probed work-related risks associated with such processes, including increased job demands and work pace and how these facilities recognised and managed such risks. As this study aimed to identify unique demands and resources in the accreditation process, the JD-R model was included as part of the conceptual framework underpinning the interview and focus group study.

In addition, this thesis integrates PSC within the JD-R model. Therefore, the questions also included elements relevant to the PSC construct. These questions reflected how management values the psychological health of HCPs during accreditation. Since PSC is defined by policies and procedures protecting workers' psychological health (Dollard & Bakker, 2010), HCPs were asked about their thoughts on the availability of policies and procedures safeguarding their mental health. In addition, the PSC construct was operationalised as an organisational resource that influences HCPs' decisions about when to use appropriate resources. Therefore, questions sought to determine whether leaders or supervisors prioritise HCPs' mental health and well-being (Table 5-2). This question allowed for an exploration of the psychosocial safety climate when preparing for accreditation.

5.3 Methods

5.3.1 Design/methodology

Acknowledging the paucity of published studies regarding the UAE's healthcare sector and the impact of mandatory accreditation programmes were important aspects to consider when designing this study. For that reason, a qualitative method suits the rationale to explore the impact of healthcare accreditation on the work environment. Exploratory interviews and focus group discussions were employed to provide a thorough understanding of the psychosocial hazards that emerged during the accreditation process of public healthcare facilities in the UAE.

The Ministry of Health and Prevention (MOHAP) is a government-funded healthcare system that oversees more than 17 hospitals and 72 primary healthcare centres (PHCs) distributed across the UAE. These facilities provide comprehensive and sustainable health services for individuals and society. Since MOHAP regulates most of public healthcare facilities in the UAE, the study attempted to approach a wide variety of HCPs working in different geographical locations and experienced accreditation. Therefore, designing a study that combines interviews and focus group discussion was appropriate decision to take to enhance data richness (Lambert & Loiselle, 2008).

The methodological choice for this study was influenced by the epistemological paradigm, which motivated the selected approaches in this thesis, namely the pragmatic worldview. Therefore, interviews and focus group discussions were used to understand the perceptions of HCPs from different working environments. Interviews aimed to explore the variation of work aspects in a hospital

setting, while focus groups attempted to expand the knowledge developed from interviews through discussions with HCPs working in PHCs.

Although interviews and focus group discussions are independent data collection methods, the rationale for combining both methods was: (1) to compare and contrast HCPs' views with accreditation from different settings, (2) for pragmatic reasons, and (3) to achieve data saturation and confirm findings from both methods (Plack, 2006). Therefore, the design of this study was to first conduct a series of individual interviews and then to conduct four focus group discussions to confirm, extend, or refute findings.

Researchers are encouraged to combine different qualitative methods to enrich data, yet unskilful mixing of data and assuming that the data are equal could threaten the trustworthiness of data (Morse et al., 2002; Lambert & Loiselle, 2008). Therefore, researchers must explicitly acknowledge their motivations for combining qualitative methods (Morse, 2003). In this thesis, interviews and focus groups were combined for pragmatic reasons and to complete and confirm data generated from interviews. The focus of combining both methods was to verify and assess the similarity of HCPs' views about the accreditation process. Interviews were performed until the data reached saturation.

Data saturation is deeply rooted within qualitative studies and is a highly contested issue in the sampling process. Data saturation is the point where the highest level of information similarity is reached without adding new contributions to the study's findings (Alam, 2021). Although the validity of qualitative studies is often described through data saturation, the concept of when saturation is reached remains unclear. Although theoretical saturation was discussed in early qualitative research, such as grounded theory, the concept has transferred to other qualitative

methodologies (O'Reilly & Parker, 2013; Saunders et al., 2017). Researchers have been unable to clarify the methods to achieve data saturation; however, the sample size in this thesis depended on gathering sufficient data from HCPs after they had completed the accreditation process.

The qualitative study in this thesis followed the thematical data saturation concept, which refers to the point where no new constructs emerge from the data (Green & Thorogood, 2004). Thematical data saturation also involves ceasing data collection when redundancy of information is achieved. Therefore, data saturation is not defined by the number of participants but by the depth of the data. To ensure data saturation, this study interviewed HCPs from different professional backgrounds and hospital settings. This type of method aims for a purposive sample, especially when conducting research in health science (Guest et al., 2006).

Qualitative studies aim for a purposive sample to be homogenous. However, participants in the first study of this thesis (i.e., qualitative) were healthcare workers who had experienced the accreditation process, and the experiences of accreditation could differ among HCPs. For example, doctors and nurses may have different organisational experiences related to accreditation processes compared to administrative employees. Furthermore, HCPs working in various hospital sites may have a range of perceptions about accreditation depending on the organisational culture. Therefore, this study aimed to interview HCPs from different hospital settings and stop sampling and questioning when no further new information was added (i.e., data saturation was reached). In addition, the study sought to support and confirm HCPs' views on accreditation using focus group discussions.

Given that data from interviews and focus groups were conducted in two different settings, findings are expected to be similar and are likely to provide

comprehensive interpretations of the data. Moreover, the scope of services and the geographical location vary between hospitals and PHCs. Therefore, by applying both interviews and focus groups, the study attempts to address the limitations often discussed in quantitative research, which ignore participants' experiences to provide an overall interpretation of their views (Carr, 1994).

Although quantitative tools are available to test various types of psychosocial hazards and their association with workers' health (WHO, 2010), these assessment tools are specific and ineffective in exploring the unique nature of the risks associated with the process of accreditation. Furthermore, self-report questionnaires are limited in providing a detailed representation of HCPs' views regarding accreditation process. Therefore, the benefit of adopting a qualitative method was to highlight the authentic descriptions of HCPs during the process of accreditation. Further, it explores the type of hazards that arise during the process of accreditation from different healthcare settings. Thereby, the study aimed to convey HCPs' perceptions and experiences regarding accreditation by adding rich and diverse quotes that enable readers to understand their experience (Smith, 2018).

5.3.2 Ethical approval

Ethical permissions were obtained from the Division of Psychiatry and Applied Psychology Research Ethics Sub-Committee at the University of Nottingham (i.e., Reference Number - 0236) and the Ethical Committee of the Ministry of Health and Prevention in the United Arab Emirates (MOHP/REC-40/2018). These permissions were taken before approaching participants and collecting data.

5.3.3 Selecting participants

To understand HCPs' perceptions, the study deliberately selected three hospitals and a network of sixteen PHCs, which had gone through the process of accreditation three to twelve weeks prior to data collection (i.e., December 2018). Although the approach of selecting facilities could increase the reliability of the developed findings, the study could not prevent selection bias of participants. Participants from hospitals and PHCs were initially approached by emails sent to the directors of the selected facilities describing the nature and purpose of the study and requesting that invitation emails be sent to HCPs. Emails were sent to all workers in both English and Arabic.

Participants were first given the time to reply to the invitation emails and participate in the interviews. However, the number of HCPs who had replied to the invitation emails was initially small. Therefore, additional HCPs were invited at their facilities using snowball technique since the researcher was granted access to selected hospitals and PHCs. It was made clear to all participants that they were under no pressure to participate in the study. Only HCPs who volunteered in the study were interviewed or participated in the focus group discussion.

The primary inclusion criteria were opened to HCPs who provide services to patients to capture the change caused by accreditation and to understand factors influencing the delivery of services during accreditation. Doctors, nurses, and allied healthcare professionals, such as physiotherapists, were recruited for the interviews. Focus group discussions were stratified to four groups according to participants' occupations to give participants a safe space and to allow them to share their knowledge. A total of twenty-seven semi-structured interviews and four focus group discussions were conducted with a variety of HCPs.

Table 5-1 presents the number of participants in interviews and focus group discussions by job role. A wide variety of HCPs were chosen to obtain a representative sample considering the resources available to conduct this research. The study attempted to select a representative sample by recruiting participants who have experienced accreditation only once at their facilities. Experiencing accreditation for the first time was expected to change the working environment and to influence the psychological health of HCPs working in these facilities. Details on demographic data of participants from interviews and focus groups are presented in (Appendix 1).

Table 5-1 Number of participants and their professions.

Profession	**Interview**	**Focus group**	**Total**
Nurses	14	6	20
Doctors	9	7	16
Allied Health Professionals	4	4	8
Administrators	0	5	5

5.3.4 Data collection

Data collection started on December 2018 and ended in February 2019. Twenty-seven participants were interviewed, and four focus group discussions were conducted. Before data collection, participants from interviews and focus groups were given information sheets that described the purpose of the study. After reading the information sheets, participants were asked to sign a consent form prior to commencing the interviews and discussions. Interviews and focus group discussions

were recorded using a digital recorder and were uploaded to a password-protected database and erased from the recorder.

Interviews were conducted first in hospitals within three to six weeks after achieving accreditation. The time was selected to reduce the effect of errors related to the recall period and to increase the reliability of the study data (Warner et al., 2005). In addition, the study selected hospitals that had achieved accreditation for the first time to increase the strength of the data and avoid bias related to recalling the psychosocial hazards influenced by the process of accreditation.

The study used twelve semi-structured questions focusing on the emotional, managerial, and professional impacts of the accreditation process before, during, and after the inspection visit. These questions are presented in Table 5-2. These questions were structured according to the job demands-resources (JD-R) model (Demerouti et al., 2001) to identify aspects of job demands and job resources during the course of accreditation. Furthermore, questions probed work-related risks associated with such processes, including increased job demands and work pace, in addition to the ways in which these facilities recognized and managed such risks. The time allocated for the interviews was 20-30 minutes.

Four focus group discussions were conducted after the interviews, using the same questions but with different participants (i.e., from PHCs), and followed a confirmatory approach to support the developed findings. The discussions were stratified according to participants' occupations: the first focus group was open to nurses and nurse assistants only, the second group targeted doctors and dentists, the third group aimed to talk to allied professionals, including pharmacists, and laboratory technicians, and the fourth group was open to managers and administrators. By stratifying the focus groups, the study provided a safe space to

allow participants to share their knowledge and to feel comfortable when providing their honest views in front of others. Considering the number of participants in focus groups, the time given for focus group discussions was 40-50 minutes and 10 minutes will be offered for participants to ask questions to the moderator.

Questions probed work-related hazards associated with such processes, including increased job demands and pace, and how these facilities recognised and managed such risks. The time taken for the interviews ranged between 20 and 50 minutes, with an average time of 35 minutes, whereas the time taken for focus group discussions ranged from 23 to 50 minutes, with an average time of 40 minutes. The variability in the time duration was largely due to the translation process required for some participants' responses. Only two interviews were done in Arabic, the eleventh and twenty sixth interviews, and were 50 minutes long.

Questions were asked in English; however, participants were allowed to reply in Arabic when they felt they could express their experiences with accreditation better in Arabic. As both interviews and focus groups were recorded, the researcher translated participants' responses into English once they answered the questions to verify their responses. Hence, the duration varied during data collection. The variability in time in focus groups was due to the stratification of such groups, which allowed professionals such as nurses and doctors to discuss their experience more than administrative employees.

Table 5-2 Interviews and focus groups question scheme.

Interviews and focus groups question scheme
1. Can you tell me what do you do for a living? 1.1. Can you describe your profession? 1.2. For how long were you working here? 2. I would like to start out by just getting to understand your feelings toward accreditation. 3. Let's hear about the changes that occur at your work: 3.1. What duties does accreditation add to your typical work? 3.2. Can you describe the speed of work at your unit while preparing for accreditation? 3.3. Has your work always been that way; if it has changed, can you tell me more when did that happen? 3.4. How do you feel about those changes? 3.5. Can you think of any ways that these changes might had affected the actual care that the patients received? 3.6. How do your colleagues think of work changes in accreditation? 4. Can you think of any potential issues that could risk your health? 5. Would you please tell me about any of the changes in your work that created risks of injuries, mentally and/or physically? 5.1. How did those injuries affect you? 5.2. What did you do after you injured yourself? 6. Have there been any efforts to improve the emotional and mental health of healthcare providers with these changes?

Interviews and focus groups question scheme

6.1. How does your leader/supervisor recognise problems that affect healthcare providers' emotional and/or mental well-being?

6.2. Can you give me an example?

7. How does your facility provide support that helps reduce side effects of work demands?
8. Would you describe what happens after an employee contributes or gives suggestions that address workers' mental and emotional safety?
9. Do you have additional thoughts about whether policies and procedures would be enough to promote workers' mental, emotional, and social health?
10. What are the negative and positive aspects of change you have noticed while preparing for accreditation?
11. How did the preparation phase influence your normal or personal life?
12. Before we end, I was just wondering if there is any other feedback you would like to provide about the accreditation process and how you would like to do it differently.

5.3.5 Data analysis

The study followed a hybrid approach using inductive and deductive thematic analysis approach allowing the JD-R model to be integral to the process of coding and analysing the qualitative data (Fereday & Muir-Cochrane, 2006). Further inductive approach was used to allow themes to emerge from data. Figure 5-1 illustrates the analytic trail of coding for both interviews and focus group discussions. Themes were developed through a systematic search for similarities in the transcripts that could explain patterns of changes in the work environment during the accreditation process.

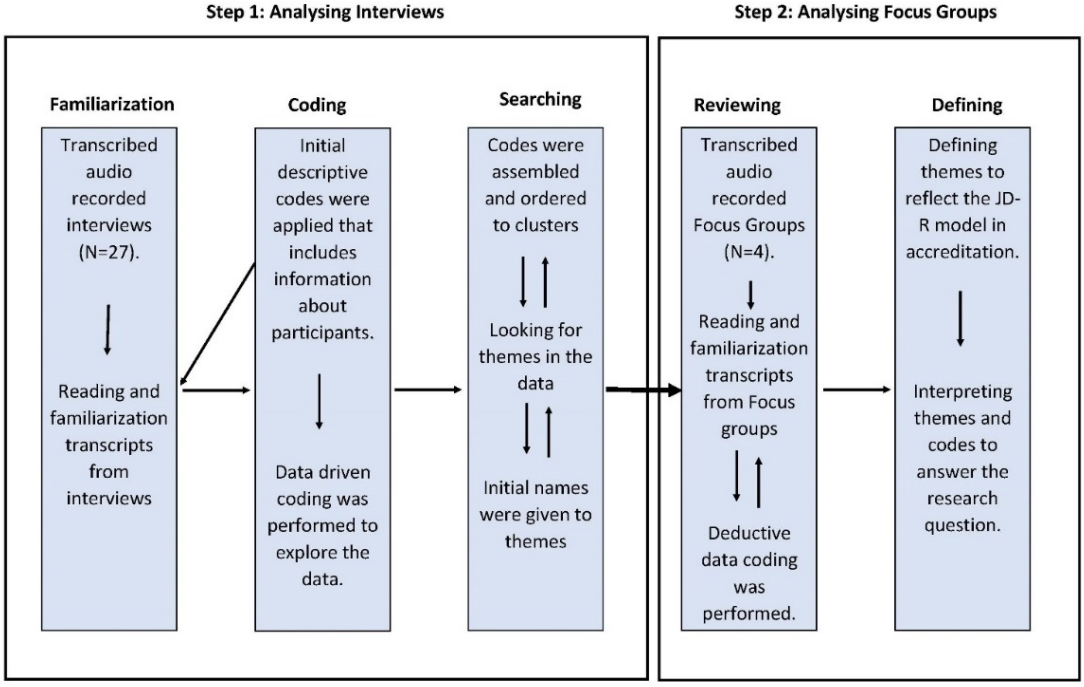


Figure 5-1 Data analysis steps and approach.

A hybrid method allowed for themes to be integrated based on the JD-R and PSC constructs while also allowing other sub-themes to emerge from the data. Therefore, this study used a flexible thematic analysis approach by applying a hybrid coding mechanism. The analysis in this research involved a considerable element of the deductive approach, as the questions were created before the data collection

from interviews or focus groups. These questions were designed to complement the JD-R model and PSC constructs. However, probing questions were asked during interview sessions to explore the unique experiences influenced by accreditation. Hence, an inductive coding approach was applied to allow codes to emerge from the data.

The steps of generating the initial codes were imbued with a cyclic and iterative process of reading and organising the data into meaningful clusters. While generating codes, the analysis combined data-driven codes to provide a deeper understanding of the accreditation process from the same data. The coding steps started by identifying statements that reflected common psychosocial hazards experienced by HCPs during accreditation using a theory-driven code.

The thematic analysis (TA) approach of Braun and Clarke (2006, 2013) was employed to analyse and capture the uniqueness of demands and resources perceived during the process of accreditation. Considering its wide and flexible approach, TA was used to develop a better understanding of the psychosocial hazards experienced during the process of accreditation. While TA is not guided by a theoretical framework, the approach can follow both realist and constructivist worldview, and can range from a simple descriptive approach to a more complex approach that reflects deeper meaning in the data (Smith, 2015).

Although TA does not follow a particular epistemological approach, it is essential to understand the rationale behind applying such an approach to analyse data (Gale et al., 2013). This study followed a theoretical framework because it seeks to develop a thorough understanding of different aspects of accreditation viewed by HCPs. Since the research questions were created based on a well-known model, namely the JD-R model, a deductive thematic analysis approach was used to

analyse the data. Further, Smith and McGannon (2018) addressed the difficulty of analysing data without prior knowledge of a theory. Therefore, themes were established through a systematic search for similarities in the transcripts that could explain patterns of changes in the work environment during the accreditation process and link them to the JD-R model.

Although the study used a deductive approach to code data, the analysis of interviews and focus group discussions moved beyond the exact meaning of codes to explain changes in work aspects with the process of accreditation. In addition, the homogeneity of the sample size had led to developing codes and themes centred around participants' views in accreditation. Moreover, codes and themes outside the JD-R model were allowed to emerge direct from the data. For example, question 3.5 from the question scheme (Table 5-2) attempts to understand the role of psychosocial hazards in influencing patient care. Therefore, inductive codes were assigned to describe themes which were derived from the text.

5.3.5.1 Analysing interviews and focus groups

Interviews and focus group discussions were transcribed and checked for accuracy. Identification numbers were used to recognize participants, for example, P001 for the first participant in interviews and FG001 for the first focus group session. The qualitative software NVivo 12 was used to manage the data and facilitate the coding process.

Braun and Clarke (2006) used six steps to thematically analyse qualitative data. Themes were developed through a systematic search for similarities in the transcripts that could explain patterns of changes in the work environment during the accreditation process. Once interviews and focus groups were transcribed,

familiarization of the transcripts was performed through repeated readings. Familiarization involved frequent readings of the transcripts to engage in an in-depth knowledge of the data set. Then, initial codes were developed using a descriptive and inductive coding techniques (Saldaña, 2016).

Interviews and focus groups' transcripts were coded to look for similar patterns in participants' perceptions with the accreditation process. Initial codes were descriptive and were classified to reflect participants' information such as gender, occupation, previous experience with accreditation, and years of experience. Then, the study first coded interviews transcripts using a deductive coding technique that could answer research questions (Smith, 2015). Codes were then reviewed and categorized into clusters where similar codes were grouped into two distinctive segments that include demands and resources. Furthermore, inductive codes were added to expand on codes from the deductive approach. To assess the reliability of the analysis, these codes were reviewed to ensure consistency of codes meaning.

Although frequent readings of the transcript and inspections for the codes are widely used, such inspection cannot produce codes or themes without linking them to a prior theory (Fereday & Muir-Cochrane, 2006; Smith & McGannon, 2018). Therefore, initial themes were developed by clustering codes with similar concepts that reflect the JD-R model. Themes were then created to answer the research questions. Weaker themes which were conceptually linked however were grouped together to form sub-themes.

Themes were then reviewed to refine and distinguish different themes and sub-themes from others. The review process consisted of reading the entire codes and checking the coherency and relevance of the developed themes. Sub-themes were named and identified according to the scope of psychosocial hazards in

healthcare accreditation and their influence on HCPs. Themes, however, were named to reflect the JD-R model in accreditation. These themes were then supported by data gathered from focus group discussions to confirm findings from interviews.

Despite the differences in the working context, codes from focus group discussions reinforced the elaboration of themes constructed from the interviews. Furthermore, focus group findings confirmed the similarity of changes in the work environments influenced by the process of accreditation despite the differences in contexts. A deductive and inductive thematic analysis generated two key themes that described different work experiences and outcomes of the accreditation process.

5.3.6 Validity and credibility of codes

Considering the open approach of qualitative studies, it is vital to develop sets of standards to check the validity of such research. Therefore, this study used the same terms used by participants to maintain the credibility of codes and to reflect the experience of accreditation as recommended by Whittemore et al. (2001). Furthermore, a valid and grounded interpretation of participants' own words was followed to maintain the integrity and representation of the results (Fereday & Muir-Cochrane, 2006; Smith & McGannon, 2018). To assess the robustness of the themes, the researcher coded the transcribed data, then reviewed and checked these codes to assess the accuracy and credibility of the developed themes.

5.4 Results

Considering participants' perceptions of accreditation, the thematic analysis generated two main themes to describe the accreditation process that could pose psychosocial hazards in healthcare facilities. Table 5-3 summarizes themes and

codes of the theoretical thematic analysis. These themes reflected the two main constructs of the JD-R model and included the following:

1. Theme 1: Challenging factors in the process of accreditation.
2. Theme 2: Enablers to achieve accreditation.

Themes are further explained in sub-themes and quotes to describe key findings in interviews and focus group discussions. To preserve the meaning of participants' responses, the researcher corrected grammatical errors in participants' quotes when necessary and removed speech fillers, such as "you know" and "okay". In addition, words were added in square brackets to clarify meanings in quotes and maintain anonymity of names disclosed by participants. Demographic data of participants from interviews and focus group discussions are presented in Appendix 1. Quotes from interviews are supported by those from focus groups which are presented in Appendix 3.

Table 5-3 Themes, Sub-themes, and Codes

#	Theme	Sub-theme	Codes	Types of codes
1	Challenging Factors in the Process of Accreditation	Focused efforts on administrative "work"	Participating in additional meetings	Inductive code
			Reading policies	Inductive code
			Training and educational activities	Inductive code
			Focusing on patient documentation and record-keeping	Inductive code

#	Theme	Sub-theme	Codes	Types of codes
		Observed work-related hazards	Time pressure due to delays of given resources	Deductive code
			Working additional hours	Deductive code
			Increased work pace	Deductive code
			Conflicting information	Deductive code
		Perceived Pressure of Accreditation	Impact on physical and emotional health	Deductive code
			Impact on family and social life	Deductive code
		Managements' role during accreditation	Perceived lack of managers support / stressed managers	Deductive code
			Fear of being blamed	Inductive code
			Restrictions on annual leaves	Inductive code
2	Enablers to Achieve Accreditation	Supportive approaches in accreditation	Observed collaboration and teamwork	Deductive code
			Support and encouragement from Managers	Deductive code
			Recognition of achievement	Deductive code
		Meaningful work after accreditation	Meaningful work	Deductive code
			Organized working environment	Inductive code

5.4.1 Theme 1: Challenging factors in the process of accreditation

This theme focused on the preparation phase and challenges participants faced while preparing for accreditation. The experienced work demands described in this theme extended from the beginning of the preparation phase, which varied from

six months to three years, depending on the size and complexity of hospitals and primary healthcare centres, until the visit of the external surveyors. Although the preparation phase was extended from six months to three years, most of the participants felt the pressure of the accreditation process predominantly one month prior to surveyors' visits. Four sub-themes were identified in this theme including focused efforts on administrative work, observed work-related risks, managements' role during accreditation, and perceived pressure from accreditation demands.

5.4.1.1 Focused efforts on administrative "work"

To understand and prepare for the newly adopted process, HCPs were involved in different administrative activities. These activities involved attending training sessions, reading policies, and participating in frequent meetings. At first, HCPs were eager and willing to participate in such activities, and they looked forward to the change accreditation would bring to their facilities. In all cases, participants stated that they went through a series of training sessions, which aimed to clarify the newly developed policies, procedures, and practices, for example, surgical safety procedures, infection control protocols, and fire safety practices. Although training programmes were frequent, participants argued that they had to attend either before or after their working hours because of their busy working schedules.

> *P004: For us it is not, [that] we cannot leave the department, and we have to adapt ourselves to do the courses, after our duty, or before our duty [hours]. If the course is at 10 am and my duty at 7 pm, I will come at 10 to finish the course by 1 pm, then I will go back home, then I will come back at 7 pm.*

In addition, some of the HCPs were involved in improvement projects aimed at enhancing the quality of services in their departments. Such projects are called quality improvement projects and are measured by performance indicators. Due to their involvement in these projects, HCPs had to respond to frequent calls and attend different meetings to clarify and update managers or supervisors on the status of their projects. Therefore, such activities were found to be time-consuming and took away valuable time that could have been devoted on patients:

> *P012: A lot of time had been consumed because every week there would be one hour or two [hours] I had to shell out either from my clinic or from the operating room. So, I had to be on my toes knowing that, yes, today I might be called many times for a particular meeting to clarify things.*

An apparent focus during the preparation phase was the emphasis on documenting patients' medical records as well as monitoring the improvement of these documents to a predefined goal. A common view among participants was that they focused mainly on completing patients' medical records. Hence, HCPs concentrated their efforts on improving these records before the inspection visit. While all participants agreed that documentation is a safety practice for both patients and workers, some argued that they were engaged in the documentation task, which, as they perceived, reduced the actual care of patients. One individual stated that the process of documentation put them in front of computers, which suggests less engagement with patients and more focus on producing perfect records.

> *P013: So, with this accreditation system, it focuses on documentation, timing of staff and putting orders in the system, and all this stuff. Thus, it pulled us away from patients and put us in front of the computer.*

This is what had happened for nurses, for lab technicians, for doctors, for [emergency] physicians, for everyone.

Not only had focusing on documentation influenced patient care but attending meetings with direct managers or other staff members to discuss the status of the preparations, was also perceived to have influenced the delivery of care. One participant stated:

P017: Appointments were cancelled, and appointments were postponed. Delays in inpatient services, it was seen and provided, but it was delayed more than [the] usual or the time that it was supposed to be given.

5.4.1.2 Observed work-related hazards

One of the risks identified during the preparation for accreditation was the additional working hours that HCPs had to spend at work. A possible explanation for spending additional hours at work could be that HCPs felt responsible for achieving positive accreditation remarks. The majority of participants felt the need to give up their leisure time to work and fulfil accreditation requirements. It was not possible for them to finish the required demands within the official working hours, therefore, HCPs spent additional hours at work to complete the required work and to attain the accreditation certificate. For others, they decided to work additional hours because they could not compromise on mixing patients' care with accreditation demands:

P009: We worked hard. We used to leave the hospital so late, after finishing our duty, we used to leave late from work.

In addition, the staff shortage was a vital reason why participants felt overloaded with work. Due to the staff shortage, workers were challenged to finish the requirements and take care of their patients at the same time.

P024: …if they [would] provide us [with] more staff, it would be fine. We [could have done] the documentation and patients care all together, but because of the shortage of staff we [were] really having a hard time doing this.

While some HCPs worked for additional hours to finish their work, others had to complete their work from home. In contrast, a few interviewees were able to manage the requirements without the need to spend extra hours at work.

P012: I never had to stretch beyond my limits to stay back [at the hospital] two or three hours just for this work [for the accreditation].

Further, participants explained as well how their work pace had increased to complete and meet the standards of accreditation before surveyors' visits. HCPs might have worked faster because of the late implementation of new adopted standards and policies. There are two possible explanations for the late execution of these standards. First, accreditation is a change process, and change requires sufficient time for workers to accept and adapt to the new standards. It is possible that resistance to change have led to delay in implementing certain standards, as participants were accustomed to previous practices and found it difficult to adapt to the new ones:

FG003: For me, I faced difficulties. Some of the staff did not accept these changes; there was some sort of negligence from the staff. Therefore, when we released the new [policies], we used to chase them. So, we used to teach them and inform them what to do… and for me, it was a challenge to come and ask them to work in a certain manner in a few months. Until now, I face the same challenge to change their mentality, [to ask them] to read and be updated about the policies. Yeah, there were difficulties.

The second explanation for the late implementation of standards could be the late arrival of resources, such as equipment and staff. Although resources were provided, these resources arrived late and challenged workers to complete the required demands within a limited time and with limited resources:

FG001: They have to give [us] the resources and the staff, whatever it is; staff are also resources. All the things to be in [our] hands, then [we can] start working. Therefore, it will not be tense and will go smoothly. This will not waste our time. Therefore, we can reach the goal very fast instead of wasting [our] time.

Due to limited resources, HCPs felt uncomfortable and overwhelmed by the requirements of accreditation, including increased work demands prior to the arrival of inspectors. Although these requirements were manageable, the time needed to fulfil the requirements created a sense of discomfort among HCPs.

P010: I mean, squeezing us in this small period [of time] to do all the [required] things. This was the worst thing at that time.

A common view among participants was the stressful feelings that went hand-in-hand with the preparation process, which was caused by the increased pace of work. Work pace describes the speed of work, and the pace HCPs maintained to organize their workplace before the arrival of inspectors. Participants felt they were pushed in a limited time to complete the required tasks before accreditation. Increased work pace was expressed through different statements about the speed of work. Many participants used the phrase "*we were running*" or "*we have to run*" to describe the pace of work prior to the arrival of surveyors.

P017: things were just announced at the last moment. And [we] had to rush through it to finish and [we] were not sure if it was right or wrong. There were things that had to be rushed and finished in the

morning that [surveyors] were here. Therefore, [we] had to run from one office to another.

Furthermore, conflicting information and frequent changes in tasks requested from HCPs during the accreditation process were found to be wasteful. HCPs were obligated to repeat or update certain tasks before the inspection date. These conflict created confusion and uncertainty about fulfilling certain requirements. Information that was perceived as conflicting was said to be given at the last minute and was a source of considerable frustration.

FG002: if things were clear from the beginning, it would not be easier, but better for the preparation. I mean, our time was wasted because we were repeating things. Because everyone was saying something different.

5.4.1.3 Perceived pressure from accreditation demands

This sub-theme refers to the pressure felt by HCPs to manage the demands of accreditation. It describes the impact of additional challenges placed upon HCPs during the preparation phase, which influenced participants' health and personal lives. A number of participants indicated that they had health problems during the preparation process for accreditation. HCPs reported high levels of stress due to their limited knowledge and skills related to the requirements of the process. Furthermore, HCPs faced additional work demands, such as working on files and paperwork, which intensified their work-related stress. One of the participants said:

P020: At first [I felt] nervous. Overly stressed – I can say – and a lot of work, a lot of paperwork, we [had] to read, we [had] to understand what [we were] reading, and [we had] to apply it. I mean before accreditation.

While the majority agreed that preparing for accreditation was a stressful experience, a minority noticed changes in their health. These problems included behavioural, psychological, and medical problems. Due to the increased workload and time pressure, HCPs noticed a change in their eating habits, such as increased consumption of carbohydrates. Some of the participants reported weight loss, while others reported weight gain. Altered eating behaviours could have contributed to weight fluctuations during the process of accreditation. Anger issues were observed by participants during this process as well. One of the HCPs said that she would prefer to have enough time to prepare instead of being angry and snapping at others suggesting behavioural problems triggered by increased work demands. Other health problems such as musculoskeletal problems, digestive problems, and sleep disturbances were observed before the inspection process.

P016: During the preparation, [I had to] sit, for example, in front of the computer for a long time, [and I had] neck problems, back problems, headache, these are the main things.

Psychological consequences, other than stress and anxiety, were also recognised during the preparation process. A few HCPs stated that they had to seek psychological consultation and had taken prescribed medications during the preparation phase. Although participants were aware of their psychological health prior to accreditation, they felt that the increased psychosocial demands during these processes had worsened their mental health.

P028: To be honest, I experienced a lot of stress. I have anxiety issues and, unfortunately, I had some, to a lesser extent, anger problems, and anger issues. So, I had to go and see a psychologist for that…. Honestly, it started before, but when I felt that I could not

handle it anymore, it was like, just to say, one month prior to the actual arrival of the [surveyors'].

Furthermore, preparation for accreditation had a clear impact on HCPs' families and social lives. Participants felt that work tension had transferred to their homes as they continued working from home to manage the workload and additional tasks. HCPs faced difficulties in balancing work demands related to the accreditation process and their family time. Participants often mentioned that working additional hours took away valuable time that could have been devoted to their families, and they faced problems adjusting their working schedules to their family needs:

FG002: During the [accreditation] preparation, it was really stressful for us as physicians, for our patients, and even [for] our families.

5.4.1.4 Management's role during accreditation

Participants had mixed views about the role of management in handling psychosocial demands during the preparation phase. Therefore, this sub-theme identified the way managers recognized and reacted to work demands during the preparation phase. Some participants expressed the need to have policies and systems in place to support their psychological health when meeting such demands and when experiencing time pressure. In addition, participants thought that their managers would listen to their problems or suggestions, but they would not react to them. Hence, one of the HCPs explained why she avoided reporting work-related problems:

P016: Actually, I feel bad that I am giving a lot of effort and I am not taking care [of] myself. Also, on the other hand, no one will respond to that, no one will take care [of us].

Participants felt that their managers were stressed as well during the preparation time; therefore, they were not able to show support or to acknowledge the stress felt by HCPs .

> *P001: I think because [my supervisor] was already busy, she was [running] meetings with us, trying to revise the policies with us, but nobody actually concentrated or thought about [the] psychological effect or the stress [placed] on the staff, because we [felt] she was already stressed.*

Participants were uncertain about the psychological support provided during increased work demands, and they were uncertain when asked about the support or activities that were planned to reduce their perceived pressure. Interestingly, few participants expressed their need to have a strong and firm style of management that engaged workers during the preparation phase. HCPs felt that they would not have achieved the accreditation certificate without the pressure exerted by their managers. It was common for managers and supervisors to remind HCPs frequently about inspection visits and to get HCPs to achieve accreditation:

> *P004: You cannot blame anyone if you are in this stressful situation because it is something mandatory to keep the hospital working, it is required from the Ministry of Health. They have to get it, they have to push all the people in the same way, they cannot push you in different ways like they are dealing with me because we have different mentalities and different attitudes. If they will treat each one according to their mentality and attitude, it will be difficult for the higher management to finish it, so they have to be like this, but, it is on the other side, [workers] who are receiving, it will be stressful [for them].*

Another challenge observed during the accreditation process was the lack of control over HCPs' leave. It was mentioned by a number of participants that the

management had strict rules for permitting leave prior to the arrival of the inspectors. Participants felt uneasy about not having control over their leave. In addition, HCPs felt that they were asked to work on their holidays, although they were allowed to take their leave due once they had achieved accreditation.

P012: [staff] were stressed, and a couple of them could not get their leave until the last minute. That is surprising because of the accreditation process [managers] wanted every individual to be around.

Although a number of participants commented on the general fear and anxiety, they felt due to the uncertainty of the accreditation process, participants felt that they might be blamed if they failed to achieve the accreditation. HCPs echoed the blame culture at their facilities, and they were afraid to be held responsible if they failed to answer questions asked by inspectors. As a result, they had to spend additional hours on the requirements for accreditation. Moreover, HCPs did not want to disappoint their colleagues or supervisors during the inspection visits. It seems that managers' strategy to engage HCPs with accreditation requirements was through the blame culture.

P012: I think the one single thing that I have noticed very prominently is the anxiety and the fear that was instilled, maybe coming from top down, from management level, coming down all the way to clinicians, to everybody.

5.4.2 Theme 2: Enablers to achieve accreditation

The HCPs mentioned possible factors that eased the effect of increased risks during the process of accreditation. The analysis in this study considered these factors as enablers or resources that were highlighted during the accreditation

process. These resources were based on interpersonal relationships, and perceived support from colleagues and managers. This theme has two main sub-themes that include supportive approaches in accreditation and perceiving meaningful work after accreditation.

5.4.2.1 Supportive approaches in accreditation

A common view among HCPs was observed teamwork and collaboration between HCPs. Participants acknowledged group efforts while working on the requirements, and the majority felt responsible for achieving such accreditation. The HCPs felt comfortable working in teams, and perceived their work to be easier as a result of teamwork. While some participants suggested that the presence of procedural policies and access to a compete set of patient records granted them the needed support, others felt that support from colleagues during accreditation eased the effects of the process and created memorable moments.

> *P023: I sometimes mean [we] feel that [it] is too much. But the team was good. I mean there were quite a few people, you know, who were really dedicated, and we worked out of fast. So, whenever you have teamwork, you feel good. I mean, sometimes even if [we] are stressed [we] just sit and have coffee together, [we] laugh and feel good about those things.*

Some participants felt that their managers supported them through the accreditation process. Subordinates felt close to their managers during the final phase of the preparations, and a sense of collaborative teamwork was clear during this phase. The type of support managers provided was through simple words of encouragement. Support expressed by participants included open access to

supervisors and managers during accreditation. Many HCPs were pleased to work directly with their managers:

> *P027: It is very rare to have the director and the medical director in this office here, but [during the accreditation] period we had them [here], they discussed with us the policies and highlighted certain areas. I felt like they [were] closer to us. Usually, they have the administrative part of work, and we have our clinical work. Therefore, we do not come to meet each other. Therefore, in the [accreditation] period we [worked] together. I felt that they were supportive.*

The majority of participants agreed on the approach their manager took to recognise their hard work during the preparation period, by allowing the HCPs to take leave as a compensation for their additional working hours directly after achieving accreditation:

> *P028: Also, I would say that they had provided us, later on, with the public holidays because the accreditation came at the time of our national day. Therefore, we were asked to come to work on these days, which was a public holiday; thus, they compensated us with a day off.*

Despite the fact that the majority agreed on the compensation of working days, some HCPs argued that their additional working hours were not fully rewarded, as the process of such compensation was not clear. Although interviewees took their time off after attaining accreditation, it was also likely that managers had requested employees to work additional hours during the preparation phase before inspectors' visit. Accounts seem to support the assumption that managers preferred a positive feedback from surveyors to avoid criticism (Ehlers et al. 2017). HCPs were asked to work additional hours, although they would be rewarded after accreditation with equivalent days off. In addition, participants felt close to their managers in social

events that followed the announcement of their accreditation status. HCPs felt recognized when their managers thanked them for their contributions to such an achievement.

5.4.2.2 Meaningful work after accreditation

This sub-theme suggests that achieving an international accreditation motivated HCPs throughout the process of accreditation. When asked about their feelings afterwards, the majority of participants felt proud to achieve an international accreditation. The HCPs felt that they were part of an international community, wherein all accredited healthcare facilities speak a common language of quality and patient safety. A possible explanation for such feelings is that HCPs valued accreditation outcomes due to the effort they had put in order to achieve the accreditation, which is known as the IKEA effect (Marsh et al., 2018). Moreover, having policies and good documentation in place gave them a sense of confidence that work was more accurate and safer for both patients and staff. Others felt that because of the knowledge that they had gained, they felt confident about working in any organization. HCPs noticed an increased sense of work engagement after attaining accreditation. A possible explanation for this may be that HCPs were involved and committed in the preparation process.

> *P020: I mean before it is just like I will come and go for [my] duty, I do something only [for the] patient's care, I do not need to do this one, and I do not want to do this. ” It is just like [to] come and go, but now, um, during the accreditation, I have to do something meaningful. I mean something meaningful in my life that I am doing because not only [it’s] for me but [also] for my colleagues [and] for the patients.*

Accreditation may have contributed to an increase in the sense of confidence and work engagement among workers. However, some participants would prefer not to repeat the process or be part of the preparation:

P028: I feel relieved, and I do not want to go through that again.

FG001: Those [staff] that were like in a [state of] tension [during] that time, I think they do not want to do it again. They do not want to repeat that on the next [accreditation].

The analysis shows that accreditation had a positive impact on organising aspects of work and promoting change in healthcare facilities, particularly in relation to safety practices. The data not only describes the work environment, but also the way accredited facilities continue to operate after achieving accreditation. HCPs' opinions about the working environment after attaining accreditation were positive. They became aware of a more organized work environment and safety procedures when dealing with patients. In addition, unnecessary processes were removed from certain professions. For instance, nurses reported that they used to perform certain tasks that were not part of their job description, such as storing and managing medications. HCPs perceived that accreditation accentuated their tasks and responsibilities and created a common patient-safety language among staff. Having clear policies and procedures introduced a safer working environment for HCPs. Participants appreciated the standardization of work practices in their workplace, which increased their level of confidence.

P010: [work] is now organized. I feel it is organized, I mean, now everything in its place, and dealing even with patients, we have specific [procedures] like, right and wrong, and all these things. We have many things changed and removed from the departments, which were not needed, and not to be used.

5.5 Discussion

Although the impact and outcome of accreditation in healthcare organisations remains debatable, many countries, including the UAE, have mandated accreditation assessments for a better delivery of healthcare services. This study provided a rich understanding of potential psychosocial hazards associated with the accreditation processes taking place in healthcare organizations. Accreditation programmes have been found to promote change, standardise work practices, and limit potential errors caused by different practices (Greenfield et al., 2012). However, unintended consequences were found to be associated with such programmes. Therefore, this study aimed to explore the nature of accreditation and the psychosocial hazards associated with it. By using a qualitative approach, the study was designed to understand the emerging psychosocial demands faced by HCPs in the context of accreditation, the unexpected pressure it had placed upon them, and the resources needed to manage such increased demands.

The study used interviews and focus group discussions to understand the perceptions of HCPs from different working environments on the accreditation process. Findings from interviews were confirmed and supported by focus group discussions. The analysis of interviews and focus group discussions generated two main themes: *Challenging factors in the process of accreditation* and *Enablers to achieve accreditation*. The process of accreditation started when facilities adopted and generated new policies and procedures to promote a safer environment for patients. After this, workers received sufficient training to work in line with such policies. Initially, HCPs were excited to be part of the change process; however, such excitement declined as workers approached the surveyors' visit.

The first research questions, which explored the type of job demand perceived by HCPs during the process of accreditation, it was found that preparing for accreditation went hand-in-hand with increased psychosocial hazards, such as increased job demands and work pace, conflicting information, and perceived strain. Such findings support evidence from previous observations regarding the negative impacts of accreditation, which include increased workload (Touati & Pomey, 2009; El-Jardali et al., 2014), increased stress levels (Kousgaard et al., 2019), and increase use of resources (Brubakk et al., 2015). Given the fact that the process of accreditation, and quality as defined by (Crosby, 1979), is demanding and requires hard work, some of these demands discussed in this study are used in the following quantitative studies for further empirical assessments.

Although the preparation phase extended from six months to three years, most of HCPs felt the pressure of achieving accreditation one month before the arrival of the inspectors. This pressure was due to the additional demands placed on HCPs and the late start to implement standards required to achieve such accreditation. A possible explanation for this delay could be the time needed from workers to adapt to such change. Accreditation is perceived as a change process, which adds new demands to HCPs. Previous research has suggested that organisational change is viewed as a traumatic event causing distress and disturbance among workers (Houdmont & Leka, 2010). Organisational change can create ambiguity about the role of individuals and the future of organisations.

Organisational change dependents on the way change is managed. If insufficient time was given by senior managers for the implementation of changes, and the there was no time put aside to manage resistance to change, but at the same time there was a fixed date by when the change must occur, then that would

lead to increased pressure from the demands and pace required. As a result, these hazards could ultimately come from the poor change management within the hospitals. With early adoption of accreditation, a top-down, planned change programme is required that culminates in accreditation inspections to ensure standards are in place. If these were managed appropriately then the risks to HCPs' harm would be reduced.

Preparing for accreditation seems to increase work demands and workload; therefore, HCPs' attitudes toward the process of accreditation were negative. HCPs had different responsibilities prior to the inspection visit. For example, participants defined their roles during such process as taking care of patients, familiarizing themselves with the new standards, attending different training courses, and completing patients' records and paperwork. Such an increased workload led HCPs to work additional hours. Furthermore, HCPs observed an increased pace of work to manage such requirements. HCPs often described working during the preparation phase as running to complete accreditation requirements. Increased work pace is one of the most obvious findings to emerge from the analysis. Previous evidence supports the relationship between the intensity or pace of work and HCPs' mental health (Leiter, 1991; Kinman & Teoh, 2018).

While documentation, the process of recording patient's medical status, is an essential requirement to assess the quality and safety of healthcare services (Myers, 2012), the current study found that such requirements compromised the time spent with patients, as HCPs focused on enhancing the quality of such records. Furthermore, attending frequent meetings related to the accreditation process was found to delay the delivery of services to patients, such as cancelling or rescheduling appointments. These results seem to be consistent with recent studies indicating that

efforts made in preparing for accreditation are found to compromise patients' care (Ho et al., 2014; Engel & Andersen, 2016; Bogh et al., 2018). In light of this, rather than merely investigate general job demands, the next studies in this thesis attempt to evaluate such unique demands. Such demands influencing patients' care is set as a foundation when constructing a unique variable to accreditation demands.

In addition, HCPs exhibited a range of health issues before inspection visits, which were attributed to the preparation process. While some had medical issues, such as musculoskeletal and digestive problems, others had behavioural problems such as sleep disturbances and anger issues. In addition, a number of HCPs noticed changes in their psychological health and the need to take medication before the assessment. Furthermore, the study revealed a shared sense of fear and anxiety among HCPs during the inspection process. Given that HCPs experienced anxiety prior to the accreditation inspection, it is possible that HCPs' experienced not only anxiety but increased burnout throughout the accreditation process, an outcome which will be further explored in subsequent studies of this thesis. Previous studies have found a strong relationship between HCPs' mental health and reduced quality of care (Shirom et al., 2006; Angerer & Weigl, 2015; Salyers et al., 2016; Loerbroks et al., 2017), hence, acknowledging the unique job demands of accreditation and their potential effect on more chronic health outcomes, such as burnout.

The second research question in this study sought to identify the type of support provided to HCPs to mitigate the negative impact of accreditation. The measures adopted by managers to support HCPs during the accreditation process was not clear. According to participants, managers were subsumed in the accreditation demands themselves that they were not able to attend to the needs of the HCPs. However, many participants referred to teamwork and colleagues support

to ease the effect of work demands during the preparation phase. Findings also support the idea that social support from colleagues and supervisors are positively related to work engagement (Orgambídez-Ramos & de Almeida, 2017; Nasurdin et al., 2018). Going through challenging demands can bring teams together and promote cohesion through a sense of shared experience among workers. Such finding suggests the motivational aspect of the JD-R model in inspiring HCPs through social support.

In line with the literature, this research also found that HCPs who went through the accreditation process felt satisfied and confident after accreditation (Alyahya et al., 2018). HCPs felt they were knowledgeable and engaged in their workplace because accreditation focused on the overlooked training areas such as managing organisational safety and emergency codes. Further, accreditation was viewed to standardise the delivery of services to patients by creating a shared patient-safety language among HCPs. Similar views were found among a sample of Danish HCPs after mandatory accreditation (Bogh et al., 2018). Such findings suggest that HCPs value their work based on the effort they had put to achieve accreditation, known as the IKEA effect. Norton et al. (2012) explained how mutual contributions at work might result in an increased perception of ownership among employees and reduce the effect of hard work.

While managers supported their employees during the preparation phase, others experienced elevated stress. Therefore, HCPs could not seek psychological support from senior personnel. Ehlers et al. (2017) demonstrated that managers value positive external evaluations during accreditation, which might explain the level of tension in order to achieve such a positive assessment. Furthermore, a strict approach to management was deemed essential by managers. For example,

according to HCPs, management restricted any kind of leave or permissions during inspection visits. In addition, HCPs felt that they would be held responsible for the hospital failing to achieve accreditation as managers explicitly reminded workers to be prepared; otherwise, HCPs would be held accountable for not achieving accreditation.

This study did not intend to denounce healthcare accreditation programmes; instead, it aimed to raise awareness of the potential psychosocial hazards that could arise from such programmes. Findings showed that the process of accreditation increases work-related stress before the inspection visit. Some of the findings relate to the management of accreditation process, which could increase such risks. While implementing accreditation standards focuses on record-checking, training, and improving the quality of care, the bureaucracy of managing accreditation could have an adverse impact on workload and stress levels. Therefore, it is important to recognise the support and commitment from management to mitigate stress while preparing for accreditation. The support and commitment are viewed as an organisational resource which allows workers to utilise available resources when experiencing high work demands. In the psychological literature, the latter is known as psychosocial safety climate (PSC) (Dollard & Bakker, 2010).

Evidence suggests that the presence of psychosocial safety climate allows workers to feel comfortable seeking support to buffer the effects of job demands on burnout (Hall et al., 2013). These findings therefore consolidated the idea that appropriate systems and support for HCPs should be a priority when planning for accreditation. Furthermore, organisations should plan and inform HCPs for what to expect from the process of accreditation. While many healthcare organisations experience the challenging demands of accreditation, such organisations are

required to prepare in advance for such inspection. Further, healthcare facilities need to develop a structured process for healthcare professionals to balance between patients care and requirements of accreditation.

Further, some of the experienced hazards could ultimately come from the inadequate management within these facilities. With the early adoption of accreditation, a planned change programme is required which concludes in accreditation inspections to ensure appropriate implementations of standards. If the change for accreditation is managed appropriately then the risks to influence HCPs' mental health will be reduced. As discussed in Chapter 2, inspection is no longer required as the organisations need to enforce the development of learning organisations which are engaged in ongoing and continuous improvement.

According to this study, it can be inferred that the process of preparing for accreditation has a clear impact on the psychosocial risk factors in healthcare facilities before the inspection visit. These findings raise intriguing questions about the nature and extent of accreditation regarding high job demands, inconsistent job resources, and unclear management practices to prioritise HCPs' psychological health during the assessment. Future studies should consider a longitudinal design to investigate the job demands-resources model and highlight the role of healthcare facilities in improving the psychosocial safety climate as a supportive measure for workers during the accreditation process.

5.5.1 Strength and limitations

Within the context of the current study, data were collected in participants' workplaces hoping that they would feel comfortable and have control over the data collection process. The interviewer was a postgraduate researcher with prior

assumptions regarding the process of accreditation. The researcher had a previous experience working in MOHAP PHC, which went through the process of accreditation. Therefore, prior assumptions, such as high job demands, increase focus on documentation, and unclear policies that protect workers mental health, might have influenced the development of themes. It is essential to note that the interviewer's professional background and knowledge of accreditation could have impacted the findings and shaped conclusions drawn from this study. However, in line with previous studies, workload and stress level were reported as obstacles when implementing accreditation standards (Elkins et al., 2010; Ho et al., 2014; Bogh et al., 2018; Al-Faouri et al., 2019).

Further, the study was limited to healthcare organisations in the United Arab Emirates. The results might not be relevant to other settings because of the cultural differences, which include the perception of workload or management support. The study, however, aimed to capture HCPs' perceptions and experiences regarding accreditation, thereby adding to the existing literature, as there has been little evidence on the psychosocial hazards that arise during the process of accreditation. Another limitation is that the study relied on different recruitment methods that could have led to biased responses from participants. Therefore, the study could not rule out nonrandomized bias in the selected sample. However, the data provided rich information on the process of accreditation, which was consistent with previous literature (Ho et al., 2014; Bogh et al., 2018).

While the data collected in this study was comprehensive, a possible limitation of the interviews and focus groups might be the participants' overreporting of negative perceptions about management support. Such perceptions could be due to the unclear relationship between HCPs and their managers, which underestimated

the role of managers during accreditation. Further, the selected hospitals and PHCs were new to the process of such assessment; therefore, the recency of the accreditation might have influenced participants' negative perceptions. However, during interviews and focus group discussions, participants acknowledged the support provided by managers by means of simple words of encouragement, suggesting unclear support during the accreditation process.

5.5.2 Conclusion

The impact of healthcare accreditation has been investigated widely over the past decades; however, there have been few published qualitative studies that focus on the apparent psychosocial hazards in the context of healthcare accreditation processes. Most studies in this field have only focused on the outcome of accreditation as an opportunity to structure and organise the working environment. So far, however, there has been little discussion about the psychosocial hazards that go hand-in-hand with the process of accreditation. This study mainly focused on exploring the psychosocial hazards prior to healthcare accreditation. This study showed that the process of accreditation increases work-related risks before the inspection visit. Such risks were identified as increased job demands and work pace, conflicting information, and perceived strain. Furthermore, the supportive role of management was not clear or standardized during this process. These hazards was evident to increase the risks of poor well-being for HCPs.

These findings have significant implications for understanding how accreditation processes increase psychosocial risks; they also consolidate the idea that appropriate systems and support for HCPs should be a priority when planning for accreditation. A key policy priority should therefore be to plan for the long-term

impact of psychosocial hazards that may be associated with accreditation. Despite its limitations, this study adds to our understanding of the challenges and supports experienced by HCPs throughout the process of accreditation. These findings provide the following insights for future research. Further research using both qualitative and quantitative methods is needed to strengthen the findings related to the opportunities and threats accreditation poses to HCPs. Therefore, a greater focus on increasing the awareness of policy makers about the consequences of psychosocial hazards could be useful in sustaining improvement initiatives in the healthcare sector.

Findings of this study highlighted different aspects of work that have changed during accreditation and the resources provided to workers that mitigate the influence of work-related risks. Therefore, results of this chapter have significant implications for the development of an empirical model using quantitative methods. Indeed, some of the variables identified in this study are included in the measurement tool used in chapter 6. Examples of these variables include unique demands associated with the process of accreditation, social support form supervisors and colleagues, management practices to prioritise HCPs' mental health (PSC), perceived burnout, and work engagement. These variables constitute the foundation of the model tested in chapter 7.

Chapter 6 Psychometric properties of the survey measures: Accreditation demands; Social support; PSC; Personal burnout; and Work engagement.

6.1 Introduction

The previous chapter explored the psychosocial hazards emerged during the preparation for accreditation in public healthcare facilities in the UAE. The results demonstrated some implications for the quantitative studies that follow in this thesis. These studies include developing a measurement tool that reflects findings from the qualitative study and applying it to a different sample from the same population of healthcare professionals (HCPs) in the UAE. As discussed in Chapter 4, the purpose of the qualitative study was to help identify, develop, and select constructs and variables that reflect HCPs' experiences of hospital accreditation.

The qualitative study provided a rich understanding of the potential psychosocial hazards associated with the accreditation processes. For instance, interviews and focus group discussions suggested that accreditation had influenced HCPs' mental health and performance through the increased demands of specific tasks and the pace at which these demands need to be carried out. These results did not come to as a surprise, as participants viewed that their managers emphasised achieving a good review from the surveyors. Such emphasis was thought to increase stress among HCPs prior to the inspection visit. Indeed, previous studies found that accreditation programmes aimed to standardise work and to promote organisational changes (Greenfield et al., 2012; El-Jardali et al., 2014;

Brubakk et al., 2015), whilst, the impact of these programmes on HCPs' burnout and work engagement levels has hardly been investigated.

Further, studies on the effectiveness of accreditation highlighted some drawbacks of such programmes including increased workload and reduced patient care due to the administrative work burdening HCPs (Ho et al., 2014; Alyahya et al., 2018; Bogh et al., 2018; Kousgaard et al., 2019; Al Shawan, 2021). While these studies provided strong evidence of the work-related risks experienced by HCPs during the process of accreditation, they used qualitative methods to collect data. However, qualitative studies cannot test the correlations or the causation between these hazards and harm to HCPs' health.

The present study therefore attempts to contribute in the field of OHP through the development of a measure specific to the workload perceived by HCPs during the accreditation process (i.e., accreditation demands). This study aims to build, translate, and validate the psychometric properties of tools used in this research. This chapter provides details on the development and selection of the questionnaire items used to identify the perception of psychosocial hazards specific to hospital accreditation on the work environment and possible outcomes associated with such programmes. This chapter also assesses the cross-cultural validity of these items by identifying the latent structure of constructs used to examine the psychosocial hazards in hospital accreditation.

Chapter 3 explained the theoretical frameworks applied in this study. The Job Demands-Resources (JD-R) model (Demerouti et al., 2001) is presented as the main theoretical model used to examine the unique psychosocial hazards, including job demands and job resources, expressed by HCPs in the qualitative study (Chapter 5), and their related outcomes (i.e., burnout and work engagement). Also, the inclusion

of the Psychosocial Safety Climate (PSC) builds on the premise of the JD-R model by interacting with its constructs to moderate and buffer outcome variables.

Findings from chapter 5 provided critical details surrounding the constructs of the JD-R model and aided in the development of a scale for accreditation demands, which consists of four items. This new construct aims to measure the unique demands observed during the process of accreditation. Furthermore, additional existing constructs are included to complement the findings discussed in the qualitative study (i.e., Chapter 5), such as interpersonal relationships at work and the outcomes related to employees' health and positive behaviour, such as personal burnout and work engagement.

While the qualitative study discussed different aspects of the perceived psychosocial hazards, this chapter presents the development and inclusion of questionnaire items based on the cross-sectional data collected pre-accreditation from a sample of three public hospitals. The sample was used for the purposes of validation of measures, including Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) techniques. Items concluded from both factor analysis (i.e., EFA and CFA) became the foundation of the longitudinal assessment of the impact of hospital accreditation on HCPs' work environment, which follows in the next study (i.e., chapter 7).

6.1.1 Developing and selecting items of the measurement scale

The JD-R model offers a holistic contemporary approach in OHP that explains the process of health impairment and motivational pathways. As mentioned in Chapter 3, the JD-R model is flexible, allowing researchers to investigate different aspects of job demands and job resources. Indeed, the authors of the model

assumed that job demands and job resources vary across occupations (Demerouti et al., 2001), therefore, this study attempts to identify and specify aspects of job demands and job resources related to the accreditation process. Further, the current study aims to articulate findings from the qualitative study to the JD-R model to bridge the gap between models in healthcare quality to models in OHP.

Findings from the previous chapter suggested that HCPs experienced an exaggerated emphasis on documenting patients' medical records and attending training and meeting sessions. Moreover, common job demands including workload, role conflict, emotional demands, work-family conflicts were experienced during the preparation for accreditation. Although these demands seem important to predict HCPs' mental health, these demands have been studied extensively in studies involving the application of the JD-R model in healthcare settings. Therefore, this study contributes to the knowledge of the impact of accreditation by investigating the unique demands associated with such programmes. These demands include the focus on documenting patients' medical records and attending meetings or training sessions. These demands were perceived to reduce the time spent with patients and were stressful to HCPs. On the other hand, job resources that include teamwork and adequate support from supervisors, have the potential to be of great benefit during accreditation to increase work engagement and reduce the level of burnout.

A new construct (i.e., accreditation demands) was developed using four items to measure the unique work demands associated with accreditation. Various studies have assessed the unintended work consequences experienced during accreditation. For example, Alyahya et al. (2018) found that HCPs experienced increased coercive pressure associated with accreditation, as they were focusing more on administrative work and the quality of documentation in patients' medical

records. Ho et al. (2014) also found that patient care was affected by the amount of administrative work (see Chapter 2, Section 2.3). While previous research has been conducted to understand the nature of accreditation, no study has operationalised and investigated the effect of administrative work related to accreditation on HCPs' burnout level. Therefore, this study conceptualised administrative work as job demands associated with the process of accreditation.

Furthermore, most studies exploring the perceptions of HCPs regarding accreditation have found that the administrative demands of accreditation burden HCPs with additional responsibilities (Pomey et al., 2004; Alkhenizan & Shaw, 2011; Katoue et al., 2021). Despite the different types of demands HCPs could face, this study explicitly chose to study the administrative demands associated with accreditation. These administrative demands are unique to the process of accreditation. Although job demands, including workload, role conflict, emotional demands and work–family conflicts, are experienced during the preparation for accreditation, these demands have been studied extensively in studies involving the application of the JD-R model in healthcare settings. Therefore, this study contributes to the knowledge of the impact of accreditation by developing and investigating the unique demands (administrative demands) associated with such programmes.

Table 6-1 presents the primary domains of this study, the psychosocial factors discussed in the qualitative study, and the definitions of these factors. The psychosocial factors were linked to the sub-themes and codes that were identified from the qualitative study. The present study, however, chooses to include job demands that are unique to the process of accreditation, and job resources, such as interpersonal relationships between HCPs, to test their impact on burnout and work

engagement. Therefore, it is hypothesised that these unique job demands before accreditation were positively related to HCPs' burnout level and negatively related to work engagement. Furthermore, job resources were hypothesised to be positively related to work engagement and negatively related to burnout.

Table 6-1 Variables derived from the qualitative study.

Domain	Variable	Definition	Sub-themes and Codes
Job demands	Accreditation Demands	The unique tasks expected from employees to accomplish to achieve accreditation.	Focused efforts on administrative "work".
Job resources	Social Community at work	When employees work well together and in a group. It reflects the sense of teamwork.	Observed Collaboration and Teamwork.
	Social Support from Supervisor	When employees can obtain social support from their direct supervisor when needed	Support and Encouragement from Managers.
Organisational resources	Psychosocial safety climate	Shared perceptions about the presence of policies and procedures that protect workers psychological health.	Managements' role during accreditation.
Health impairment	Personal Burnout	general feeling of physical and psychological exhaustion or fatigue experienced by individuals.	Impact on Physical and Emotional Health.
Motivation	Work Engagement	Attachments of employees to their work despite their experience at workplace.	Meaningful work after accreditation.

Furthermore, PSC was included in the questionnaire as an organisational resource reflecting different aspects of organisational management. PSC, which

stems from the organisational safety climate (Zohar, 1980), is defined as shared perceptions of organisational policies and practices intended to protect workers from work-related risks (Dollard, 2012). PSC suggests the commitment management shows toward employees' psychological health and safety when faced by increased job demands and inadequate job resources (Dollard & Bakker, 2010). In this research, PSC is operationalised as an organisational resource allowing employees to utilise available resources when facing high demands during the process of accreditation. According to Dollard and Bakker (2010), PSC enables employees to make use of available resource to cope with experienced job demands.

This study considers the psychometric properties of other themes discussed in the qualitative study to choose the most appropriate measures of the JD-R model. Although psychosocial hazards in workplaces can affect the physical and psychological health of HCPs, two predictors are selected that are relevant to the quantitative studies conducted in this thesis. These predictors included unique accreditation demands and social support. In addition, PSC is included as a moderator of the relationships between accreditation demands and social support and burnout and work engagement.

This study utilized both main themes that reflects the challenging and enabling factors in accreditation, however it limited the addition of sub-themes and focused exclusively on aspects of work that reflected demands and resources. By selecting a fewer number of sub-themes to be investigated, this study provides a specific and focused evaluation of the hazards in healthcare accreditation. Indeed, other sub-themes can influence HCPs' burnout and work engagement levels. However, these themes do not apply in the context of the thesis as they are not

relevant (i.e., job insecurity). The use of such limited themes was also influenced by the time and resources available for the research.

Because the factor structure of the instruments commonly used to assess aspects of JDR and PSC models, as described in the following section, have not been explored in the UAE, this chapter contributes to the validation of these instruments in a sample of HCPs working in public hospitals. Items selected for this research were translated to Arabic language, which was not validated at the time of writing this thesis, in order to test the JD-R and PSC models in a different culture.

6.1.2 Questionnaires used to measure psychosocial hazards

With the help of self-reported questionnaires, researchers have been able to measure the effect of psychosocial hazards on employees. Although questionnaires are considered an effective way to measure work-related risks, they rely on employees' perceptions concerning their experiences in workplaces. Several large self-reported questionnaires assess the risks that occur in workplaces and their impact on workers. Examples of these questionnaire include the Job Content Questionnaire (JCQ) (Karasek et al., 1998), the Copenhagen Psychosocial Questionnaire (COPSOQ) (Pejtersen et al., 2009), and the Effort Reward Imbalance (ERI) questionnaire (Siegrist, 1996). While several questionnaires were designed to measure the impact of psychosocial hazards at workplaces, others were used to measure the outcome of these hazards, including: Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981), Job Stress survey (Vagg & Spielberger, 1998), and Copenhagen Burnout Inventory (CBI) (Kristensen et al., 2005).

One of the well proven instruments used in the field of OHP is the COPSOQ. The scale was developed by the Danish National Research Centre, as a research-

based questionnaire, to be used in research and workplaces (Pejtersen et al., 2009). Rather than being associated with a specific theory, the COPSOQ questionnaire covers different psychosocial factors in workplaces. In addition, the International Labour Organization (ILO) and the World Health Organization (WHO) recognised this tool as an international measure utilised for research or workplace proposes (Hanne et al., 2018). So far, the COPSOQ has been translated to 25 different languages and used in a range of occupations (www.copsoq-network.org). Two revised versions (i.e., COPSOQ-II and COPSOQ-III) were published in response to the changing nature of work (Pejtersen et al., 2009; Burr et al., 2019).

The items used for data collection in this study are taken form the second version of the Copenhagen Psychosocial Questionnaire (COPSOQ-II) (Pejtersen et al., 2009), the Psychosocial Safety Climate (PSC-12) (Garry Hall et al., 2010), the Copenhagen Burnout Inventory (CBI) (Kristensen et al., 2005), and the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2006). These instruments have been used to assess psychosocial hazards and work-related stress, mainly when testing the JD-R theoretical model (Berthelsen et al., 2018). These instruments were translated to different languages (Idris et al., 2011; Moncada et al., 2014; Jeon et al., 2019), and the validation of these instruments showed consistency in the reliability of measures. However, the demographic differences among these studies were found to be inconsistent (Dicke, Marsh, et al., 2018).

6.2 Aims

This study aims to construct a survey to assess the extent to which such models account for HCPs' burnout and work engagement after the process of accreditation. One of the specific objectives of the second study is to develop an

instrument (i.e., Accreditation Demands) that can substitute the job demand construct, in the JD-R model. The job resources construct, on the other hand, is measured using existing items on interpersonal relationships at work to enhance HCPs' sense of engagement. Also, PSC is included as an organisational resource that moderates the JD-R model and acts as a safety net allowing HCPs to utilise available resources when facing high demands during accreditation.

Furthermore, most studies have evaluated the JD-R model and the PSC in western cultures, this study, therefore, attempts to test and integrate these models in a non-western country (i.e., the UAE). The study follows a back-translation technique to translate items to the Arabic language and a cross-validates these items using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Factors confirmed in this study are used in the next study, which build and test a model using two-wave longitudinal design (i.e., Chapter 7).

6.3 Methods

6.3.1 Procedure and participants

The study took place in October 2019 and used a cross-sectional design. The study approached HCPs working in three public hospitals in the UAE. These hospitals were selected based on their accreditation status, as they were soon to experience surveyors' visit to assess the quality of their healthcare services. Only hospitals governed by the MOHAP were included in this study. Permission was obtained from leaders at the MOHAP to recruit participants. Ethics approval was granted by MOHAP (MOHP/REC-40/2018) and the University of Nottingham's' ethics committees (Reference Number - 0412).

6.3.1.1 Sampling procedure

Online survey platform (i.e., Qualtircs^{XM}) was used to build and host the survey items for HCPs to respond to. Invitations to participate in the study that include the survey links were sent to hospital staff group-emails, which facilitated recruitment without identifying participants. The study invitation targeted a range of HCPs including doctors, nurses, administrators, and allied health professionals, such as pharmacists, physiotherapists, and laboratory technicians. A reminder email was issued automatically by the online survey platform. An estimation of 1311 HCPs from the selected hospitals received the study invitation via emails, which included a link to the online survey, a study information sheet, and a consent form.

6.3.2 Constructs of the questionnaire

6.3.2.1 Job demands: Administrative work in accreditation.

In the previous chapter, HCPs voiced the unique demands experienced while preparing for accreditation. These demands included documenting patients' medical records, attending training sessions and meetings, and focusing on administrative tasks. Further, these demands influenced the time dedicated to patients. Although HCPs experienced a wide range of work-related demands, this study opted to include the unique accreditation demands to the final model. Certainly, previous literature showed how HCPs experienced the over-implementation of accreditation standards that emphasise documentation to achieve good results from surveyors (Engel & Andersen, 2016). Therefore, this research highlights these specific types of pressure using the demands construct of the JD-R model.

Although various studies have explored the effect of accreditation on the perceived stress levels of HCPs (Elkins et al., 2010; Al-Faouri et al., 2019), this study

employed items that describe the unique job demands associated with healthcare accreditation. Based on the JD-R framework, literature review and data from 28 interviews and four focus groups, four items of accreditation demands were developed to align with the wording of the Quantitative Demands scale of the COPSOQ survey (Pejtersen et al., 2009; Burr et al., 2019). As the job resource (i.e., social support) items were measured using the COPSOQ survey, similar wording was used to measure the job demands items. These items were constructed to consider the cognitive capacity of HCPs; hence, they were short and easy to complete. Furthermore, great care was taken to avoid complex statements or ambiguous terms, as McColl et al. (2001) suggest developing items with fewer than 20 words.

To assess accreditation demands, a new construct was formulated and obtained from the theme identified in the qualitative study: *Challenging Factors in The Process of Accreditation*. The construct was developed to reflect the unique workload experienced by HCPs and the way such workload was perceived to influence the quality of patient care during accreditation. An initial group of items was developed to include the work demands in accreditation (i.e., explored in Chapter 5). Items that described the demands associated with accreditation were based on the sub-themes ‘focused efforts on administrative work’ and ‘observed work-related hazards. These sub-themes were built on the statement made by participants reflecting the focus on how certain requirements influenced the delivery of care to patients.

Furthermore, items were developed to include the demands of documenting patients’ medical records, attending training and meeting sessions and completing administrative paperwork. Therefore, these statements were rephrased to make

them appropriate for a survey format. Four items were created and measured using a five-point Likert scale ranging from 1 (To a very small extent) to 5 (To a very large extent), and 0 for (Not Applicable). These items were:

1. Do you feel that additional activities such as attending training or meetings keep you away from patients?
2. Do you feel that your current work takes so much form your time that you cannot treat patients properly?
3. Do you feel that the required paperwork you are expected to complete keeps you away from patients?
4. Do you feel the documentation requirement keeps you away from patients?

The items of demands were designed to measure the explored aspects of challenges within the process of accreditation. The number of items was informed by the results of the earlier exploratory study (i.e., Chapter 5) about the challenging aspects of accreditation. According to Bollen (1989), a minimum of three indicators are required to estimate a latent factor. Therefore, an initial pool of four items was developed to reflect the administrative demands of accreditation. These items were derived from the sub-theme ‘focused efforts on administrative work’ that included four codes (see Table 5-3).

At an early stage of developing the accreditation demands construct, an attempt was made to produce an inclusive construct that covered all aspects of administrative work explained in the qualitative study. These items were further validated using Anna and Jason (2005) criteria, which suggest that a factor with more than three items is desirable. The authors also suggest that high item loading (0.5 or more) should be considered. The new construct met the criteria through the

development of four items to provide a good-quality measure of accreditation demands (see Section 6.4.2).

6.3.2.2 Job resources: interpersonal relationships during accreditation.

While demands can influence HCPs' mental health and well-being, a supportive environment at work is essential for both organisations and employees. As discussed in Chapter 3, employees can build relationships with colleagues, subordinates, and supervisors, which broadly referring to the interpersonal relations at work (Berthelsen et al., 2018; Jolly et al., 2021). The COPSOQ scale measures interpersonal relations and leadership measures through nine domains (Burr et al., 2019). Indeed, the broad nature and the varying impact of interpersonal relations at work have made social support one of the most researched constructs in OHP (Jolly et al., 2021). However, this research included the 'social support from supervisor' and 'social community at work' domains from the COPSOQ scale to measure two domains that covered the sub-themes explored in the Chapter 5 (Table 6-1).

In this study, social support involves the interpersonal relationships that are established to reflect the sub-themes *'observed collaboration and teamwork' and 'support and encouragement form managers'* found in the second theme E*nablers to achieving accreditation*. As discussed in Chapter 5, HCPs recognised the teamwork and support from their supervisors prior to the inspection visit, which influenced the decision of items to be included in the questionnaire tool. Although a structured support mechanism from managers and supervisors was not evident, HCPs felt that they could get the support needed to mitigate the negative effect from workload.

Therefore, the job resources construct was operationalised using two sub-constructs from the COPSOQ-II to measure interpersonal relationships at work

(Pejtersen et al., 2009). Given that the interpersonal relationships, described by HCPs, were relatively generic rather than specific to accreditation, generic items from COPSOQ-II were used to highlight these relationships. *Social Community at Work* is the first job resource and was measured by three items. This measure reflects the teamwork among HCPs prior to accreditation. The second job resource is *Social Support Superior,* which aims to measure the support from managers and supervisors prior to accreditation and was examined by three items. Items were measured using a five-point Likert scale ranging from a low score of 0 (Never/Hardly ever) to a high score of 100 (Always).

6.3.2.3 Psychosocial Safety Climate: A macro-level resources.

Psychosocial Safety Climate (PSC) measures employees perceptions of the presence of policies, procedures and practices that aims to protect works' psychological health (Dollard & Bakker, 2010). In the qualitative study, HCPs perceived an absence of a systematic approach for dealing with workers' health when faced by increased demands due to accreditation. Therefore, PSC was included to the model as an organisational resource enabling HCPs to utilise resources whenever they experience increased demands. In this case, PSC acts as a signal to HCPs when it is safe to utilise organisational resources (i.e., interpersonal resources) to reduce the negative effect of job demands (Dollard & Bakker, 2010; Law et al., 2011).

PSC was measured using four items (PSC-4) derived from PSC-12 (Garry Hall et al., 2010). PSC-4 was created as a parsimonious tool including the same four domains of PSC-12 (Dollard, 2019). The four domains included one item from each category: (1) management support and commitment, (2) management priority, (3)

organization communication, and (4) organizational participation and involvement. Five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used.

6.3.2.4 Health impairment: Personal burnout.

Because HCPs constantly referred to *Perceived pressure from accreditation demands*, burnout was included as a measure to capture the potential long-term consequences of these demands. Burnout was measured using the Copenhagen Burnout Inventory (CBI) (Kristensen et al., 2005). The CBI has three categories, including Personal Burnout, Work Related Burnout, and Client Related Burnout subscales. The present study, however, only included the personal burnout subscale (i.e., six items). Personal burnout is a generic sub-scale developed to assess aspects of burnout regardless of individual occupation (Kristensen et al., 2005).

Personal burnout evaluates the general psychological or physical exhaustion experienced by individuals (Jeon et al., 2019). Hence, it serves as a tool of overall burnout. Besides, Reardon et al. (2020) systematically reviewed the prevalence of burnout using the CBI scale among paramedics and found that the prevalence was highest in the ‘personal burnout’ sub-construct in all studies that have used CBI. Further, findings from the qualitative study showed that HCPs experienced psychological distress; however, their experience was accentuated by the demands prior to accreditation. Therefore, six items were measured using a five-point Likert scale ranging from a high score of 1 (Always) to a low score of 5 (Never/Hardly ever).

It is worth mentioning that CBI overcomes some of limitations in the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981). The MBI showed some

limitations in its psychometric properties as little agreement was found between the burnout concept and its' sub-constructs (Kristensen et al., 2005; Rotenstein et al., 2018). Further, some criticism have been raised regarding the wording of the sub-scales, which was found to influence the relationships between factors (Halbesleben & Demerouti, 2005). Although an Arabic version of the MBI is available, the measure has been patented and requires purchasing. In addition, the emotional exhaustion scale of the MBI, considers only the emotional aspects of burnout and ignores physical and cognitive exhaustion (Jeon et al., 2019). Furthermore, some items of the MBI questionnaire might not be understood in a different culture. An example of these items is: "I feel like I'm at the end of my rope". Given these limitations, personal burnout sub-construct from the CBI was utilised to test HCPs' burnout levels during the process of accreditation.

6.3.2.5 Motivational process: Work Engagement

Finally, in the qualitative study, HCPs reflected on their feelings regarding working in an accredited hospital. In the sub-theme *Meaningful Work after Accreditation,* HCPs described how their confidence and engagement level had increased after accreditation. Furthermore, work engagement is essential for HCPs to connect with organisational values and goals, especially when improving the quality of care, to ensure a successful and sustainable quality of care. As discussed in Chapter 1, work engagement is the opposite of burnout. It refers to the high energy employees have towards their workplaces. Since 2019, employees' engagement at work has decreased by 2% costing the global economy almost $8 trillion due to lost in productivity (Gallup, 2021). In this study, work engagement is a vital construct within the JD-R model that assesses workers' engagement to their organisational visions to improve and sustain quality of healthcare services.

Work engagement has been assessed using different measurement tools. The Gallup's Q^{12} (Harter et al., 2003) and the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002) are widely used to measure employees' positive organisational behaviours. As the superscript suggests, Gallup's Q^{12} consists of 12 items, whereas UWES consists of 17 items, which was shortened to include nine items (Schaufeli et al., 2006). Further, Schaufeli et al. (2017) introduced an ultra-short UWES including three items only. Although the Gallup's Q^{12} questionnaire was developed to assess the most relevant perceptions of management across different industries (Attridge, 2009), the scale was explicitly designed as a management tool. Therefore, this study utilised nine items from the UWES scale to assess HCPs' work engagement. Items are scored on a seven-point Likert scale ranging from 0 (never) to 6 (always).

6.3.2.6 Demographic information

Demographic data were included to the questionnaire. These questions included participants' gender, date of birth, and profession. An additional categorical question was added suggesting the role of participants, which include three choices: (1) a clinical role, (2) administrative role, or (3) clinical and administrative roles. This question was essential to account for unique demands incumbent on certain roles during accreditation, which may have in turn affected the delivery of care to patients. Furthermore, two questions were added to inquire whether participants have direct contact with patients and whether they have shift duties. These questions were scored using a dichotomous scoring system (1 = yes) and (0 = no). An example of the questionnaire is presented in Appendix 4.

6.3.3 Translation of measures

Section 1.2 described the population of the UAE as mainly expatriates. Therefore, it was essential to approach participants by presenting the survey items using official languages, including Arabic and English languages. Since the COPSOQ-II, the CBI, and the PSC tools have not been translated to Arabic, questionnaire items were translated through a forward and a back translation technique. Translating the measurement tool to Arabic was essential to increase the response rate. The study followed Brislin (1970) process of translation that includes a bilingual professional, whose mother tongue is the target language, reproduced the survey items into Arabic, followed by a proofreading by an independent translator. A third bilingual translator, without the knowledge of the original text, translated these items back from Arabic to English. Both translations were reviewed by the first author, a bilingual, who edited the translated text (i.e., Arabic) and compared it to the original (i.e., English). The translation was then re-evaluated to assess the reliability and validity of the scale items before it was emailed to the HCPs. From the online platform, participants were able to select the language that they prefer to complete the questionnaire. Certificate of the forward and the back translations are found in Appendix 8

6.3.4 Statistical analysis

Once the data was retrieved from the online platform, psychometric analyses were performed to examine the validity and internal consistency of the translated items. Since the questionnaire items were translated to Arabic language, a cross-cultural validation of the translated items was necessary to ensure the internal consistency and the factorial validity of the measures (Stone, 1974). The

psychometric properties of the developed and translated items were evaluated using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Such analyses are necessary to identify the underlying structure of the theoretical models employed in this research and to minimise the number of items while maintaining the original information as far as possible (Field, 2018).

EFA is often used as a first step to enable empirical development of the best measurement model, then followed by CFA to test the underlying dimensions of the constructs (Pett, 2003; Anna & Jason, 2005). Given that a new construct (i.e., accreditation demands) was formulated to test the unique psychosocial hazards of accreditation, validating such a construct was a necessary measure. Further, it was necessary to evaluate the relationship between the newly devised construct with those adopted from other measurement scales. The present study attempts to validate the modified JD-R model constructs through EFA and reliability analyses using SPSS Statistics software (version 26), followed by CFA using MPlus software (version 8.4).

To perform EFA and CFA on a single dataset, the dataset was divided into two halves to facilitate the cross-validation of the results from a single sample (Stone, 1974). Cross validation is one of the most commonly used techniques and involves splitting the data into a minimum of two sub-samples (Stone, 1974). One sub-sample is used to estimate the model, while the second sub-sample is used to assess and validate the relationship of the first sub-sample (Kline, 2016). The process of cross-validation avoids issues related to over-estimating the model-fit indices and allows the testing of the estimated model on a different data set (Fokkema & Greiff, 2017; Xu & Goodacre, 2018). Details of the split sampling

technique are further discussed in the statistical analysis section of this chapter (section 6.5.1).

6.3.4.1 Testing the assumptions of normality

Assumptions were tested using SPSS software (version 26) to check the distributions and frequency of items. To test the assumptions of normality, boxplot diagrams were used to look for outliers that lied below or above the whiskers. Descriptive statistics were also performed to identify the percentage of outliers lying above the predefined percentages. Linearity and homoscedasticity were assessed using scatterplots. To assess the independence of errors, the Durbin-Watson test was performed with the rule of thumb to look for values less than 2.0. Durbin-Watson scores range from 1.92 to 2.04, suggesting that the errors are uncorrelated.

Additionally, skewness and Kurtosis were used to assess the normality of distribution. The statistical numbers were divided by its' standard errors to calculate the z-score, and results should fall between $\mp$ 1.96 for skewness and kurtosis (Field, 2018). Table 6-2 shows the range of skewness and kurtosis for scale items. The results of skewness and kurtosis deviated significantly from zero, which indicate that responses to questionnaire' items were not normally distributed. Tabachnick and Fidell (2013) suggested that distribution is normal when skewness and kurtosis values are zero, however, such distribution is not important in large samples (Field, 2018). Further, Lumley et al. (2002, p. 166) suggested that research in healthcare is considered "sufficiently large" when the sample size is over 100.

Tabachnick and Fidell (2013) indicated that skewness and kurtosis tend to matter less in samples above 300. Moreover, the central limit theorem concept suggests normality of distribution regardless of the shape of the sample. Considering

the sample size of the study (n = 419), the distribution of data was concluded to be normal. Data were then cleaned and outliers were removed using z-score criteria. Field (2018) suggested to keep 5 % of z-scores when their values are above 1.96, and 1% if the z-scores scored above 2.58.

Table 6-2 Normality distribution of the study indicators.

Scale (items)	**Skewness Range**	**Kurtosis Range**	**Skewness z-score Range**	**Kurtosis z-score Range**
Accreditation Demands (4)	(-0.200, 0.030)	(-1.495, -1.149)	(-1.681, 0.252)	(-6.282, -4.828)
Social Community at work (3)	(-1.377, -0.972)	(0.594, 2.306)	(-11.287, -7.967)	(2.444, 9.490)
Social Support Superior (3)	(-0.985, -0.695)	(-0.037, 0.824)	(-8.074, -5.697)	(-0.152,3.391)
Psychosocial Safety Climate (4)	(-0.701, -0.477)	(-0.427, -0.023)	(-5.746, -3.910)	(-1.750, -0.094)
Personal Burnout (6)	(-0.075, 0.421)	(-0.733, 0.213)	(-0.615, 3.451)	(-3.004, 0.973)
Work Engagement (9)	(-1.454, -0.185)	(-0.440, 1.818)	(-11.821, -1.504)	(-1.796, 7.420)

6.3.4.2 Exploring underlying Factors using EFA

The psychometric assessments of constructs in applied research are usually performed to evaluate instruments with multiple items (Brown, 2015). Most assessment tools in applied psychology use multiple items to measure latent constructs. Since latent constructs are unobserved constructs, researchers have used observed measures (i.e., indicators) to understand the relationship between indicators and to reduce the number of items to a smaller number of constructs,

known as factors. Therefore, the underlying structure of items used in this study were explored through factor analysis methods.

Factor analysis was performed to assess the unique and developed construct related to healthcare accreditation and to integrate the new construct with the JD-R model, including the outcome variables. Although the relationship between constructs of the JD-R models have been previously explored, EFA in this research allows the initial examination of the hypothesised structure after adding new items related to accreditation demands. Before examining the latent structure of the study model, a set of assumption tests were examined, which influenced the decision to select the appropriate method for factor analysis. These assumptions are discussed in the next section.

6.3.4.2.1 Assumptions for factor analysis

Prior to EFA, assumptions were checked to produce reliable and strong factor structure using principles suggested by Anna and Jason (2005). The first principle states that dataset should have an adequate sample size of 150 cases or more, with the ratio between participants and items of at least 5 cases per item. The second principle states that the correlation between items should be greater than 0.3 in the intercorrelation matrix. The third principle recommends that the Kaiser-Meyer-Olkin (KMO) and the Bartlett's test of sphericity should be above 0.6 and $p < .05$, respectively. The fourth principle assumes a linear relationship between items and factor. And finally, the fifth principle explains how dataset should be free from outliers because factor analysis is sensitive to outliers.

Further, strict rules have been applied to extract strong and reliable factors. These rules included values of factor loading between indicators and factors to be equal or greater than 0.4 (Field, 2018). Also, when indicators loaded on multiple

factors, the difference between both loadings should have a minimum value of 0.2. These criteria influenced the decision of whether to keep or remove items loaded on multiple factors. For example, if one indicator has a factor loading equal to 0.45 on one construct and 0.38 on another construct, the difference between the two loadings is less than 0.2, indicating that such item is closely related to both factors and should be removed.

6.3.4.2.2 Choosing a method for factor extraction

Factor analysis is not a one-step approach, rather, it is an iterative process that requires multiple decisions to be made. It begins with selecting an appropriate extraction method to identify latent factors, followed by choosing a rotational method to discriminate between those extracted factors (Finch, 2019). Nevertheless, deciding on the type of extraction or rotation methods depends largely on the researcher's intention to either explore their data or generalise their results to a wider population (Field, 2018). The process of factor extraction determines the minimum number of factors that can be used to show the relationship between variables. With regard to the extraction method, the commonly used methods are maximum likelihood (ML), principal axis factoring (PAF), and principal component analysis (PCA).

Given its high efficacy in extracting factors, the ML approach is a widely used method because it maximises the likelihood of fitting the observed variables to a certain factor. However, such a method is sensitive to multivariate normality and assumes variables are normally distributed (Jöreskog, 1966; Finch, 2019). PAF is another commonly used extraction method because it does not relay on the assumptions of normality. Anna and Jason (2005) have recommended using ML when variables are normally distributed and PAF when they are not. PCA, on the

other hand, is also commonly used statistical method to extract factors. PCA extracts factors in a manner similar to PAF; however, PAF accounts for the shared variance among items loaded in a given factor, whereas PCA attempts to extract as many factors as possible (Finch, 2019). PCA assumes that measurement items are developed without errors and it works by categorising indicators to a set of linear variates (Field, 2018). Therefore, PCA is thought to work best as a data reduction method instead of exploring latent factors (Anna & Jason, 2005; An Gie & Sean, 2013).

According to Field (2018), PCA and PAF generate similar results, yet recommends that conclusions of such analysis should to be restricted only to the study population and not to be generalised. He also added that researchers need to cross-validate their results in a different sample if they wish to generalise their results. Therefore, this study opted to select ML as an extraction method to undercover the latent structure of the studied model, which further studied in Chapter 7. Furthermore, cross-validation of the results, which were generated from the EFA, was performed using a different sample. Cross-validation is discussed in the next section.

It is advised that researchers interpret the relationship between factors using rotational methods (An Gie & Sean, 2013). Factor rotations consist of two main approaches: orthogonal (uncorrelated) and oblique (correlated). Factor rotations transform the initial factor loadings to relate each observed indicator with its most suitable latent factor (Finch, 2019). When performing factor analysis, indicators load differently on different factors. Therefore, factor rotation discriminates between factors by allowing indicators to have higher loadings on one factor and smaller loadings on the others. Tabachnick and Fidell (2013) suggest that orthogonal

rotations are easier to interpret, although, they assume that constructs are unrelated. They also suggest that both rotational approaches have similar results. Since factors are expected to correlate, oblique rotation was applied allowing factors to correlate.

6.3.4.3 Confirmatory Factor Analysis

To cross-validate findings from EFA, CFA was performed using the other half of the sample. CFA is considered the measurement part of structural equation modelling (SEM), which specifies the number of observed variables (i.e., items) related to the unobserved or latent variables (i.e., factors) (van der Eijk & Rose, 2015). SEM is simply consists of a measurement model and a path model (Lei & Wu, 2007). Thus, CFA was performed to validate the measurement scales prior to testing paths of model in the longitudinal study (i.e., Chapter 7).

Constructs, in the study involved latent variables tested through observed items or indicators. In most applications of CFA, latent variables are assumed to cause or predict indicators. Items used in this research were either developed or translated to examine the psychosocial hazards experienced by HCPs during accreditation, validating these items was essential to identify the ability of the selected items to measure risks and outcomes variables related to accreditation. Therefore, CFA was performed after EFA to cross-validate and develop an empirical measurement tool aimed to test the hypothesised JD-R and PSC models in healthcare accreditation.

To perform CFA, five steps were followed to test the validity of these measures. These steps include model specification, mode identification, model estimation, testing the fit of the model, and re-specification (Bollen & Long, 1993; Lei & Wu, 2007; Brown, 2015).

6.3.4.3.1 Model specification

Model specification refers to specifying the hypothesised relationships between indicators and factors. Specifications occur by adding all aspects of factors including the number of indicators in the model and the relationship between factors and indicators (i.e., factor loading or covariances). Specifying the relationships between indicators and factors is vital, otherwise these relationships are assumed to be equal to zero (Weston & Gore, 2006). By model specification, CFA attempts to produce a parsimonious model because it restricts indicators from loading on multiple factors. Therefore, the relationships between items and factors, in this study, were specified in advance based on the results of the EFA.

6.3.4.3.2 Model identification

While model specification explains the relationship between factors and indicators, model identification estimates the parameters of such relationships including factor loadings. Identification occurs when a model can estimate the unique paths between variables. Models are defined as over-, under-, or just identified models through estimating the degrees of freedom. A model is considered overidentified when the degree of freedom is greater than zero allowing for multiple estimations (Weston & Gore, 2006). Under-identified models, however, are problematic because parameters are unknown and cannot be estimated (Kline, 2016). Just-identified models, however, gives one solution where a perfect fit is always achieved.

In applied research, an over-identified model is preferred that produces different solutions and allows researchers to test and falsify these solutions (Brown, 2015). Since over-identified models allow for an infinite number of possible solutions, estimation of models occur through iterative processes. Bollen (1989) suggested that

models can be identified when each factor has at least three indicators, or when factors have two indicators but are allowed to correlate. In this study, factors consist of four or more indicators.

6.3.4.3.3 Model estimation

Given a model is over-identified, it is possible to estimate an infinite number of potential parameters (Kelloway, 2015). Researchers can then estimate models using different software, such as STATA, AMOS, LISREL, and MPlus. In this study, MPlus was used to estimate parameters and factor loadings of the observed indicators. MPlus chooses the correct estimator for the type of analysis specified. Although there are various estimators to be used, the most popular is maximum likelihood (ML), which is known to be consistent and efficient in large samples. In a large sample size, the distributions of observed variables are assumed to be normal. MLM is maximum likelihood parameter estimates with standard errors and a mean-adjusted chi-square test statistic, MLM stems from ML and is considered a robust estimator of fit indices in a non-normal samples (Muthén & Muthén, 2017).

The objective of the MLM estimator is to estimate mean-adjusted chi-square statistics and standard errors (Kelloway, 2015). Furthermore, it is asymptotically efficient and consistent, assuming violation of normality of the observed variables in large sample sizes. Indeed, ML can minimise the difference between variance and covariance matrix and maximise the probability of finding true parameter values. However, certain assumptions need to be met, including that indicators should be measured on a continuous scale and be normally distributed. Kelloway (2015) suggested estimating models using ML and MLM estimators and comparing the results when researchers doubt the normality of distributions. He also stated that fit

indices might have little difference; however, if those differences were substantial, especially in a sample that violated normality, researchers should report MLM.

6.3.4.3.4 Testing the fit of the model

Brown (2015) has addressed the classical fit indices to be assessed when reporting CFA results, where at least two traditional assessments should be reported. Fit indices provide useful information that can be used to determine the appropriate number of factors. These assessments include the absolute fit and the comparative fit (Brown, 2015). Chi-square (X^2) is one of the most and widely used forms of absolute fit, which aims to reproduce the correlation matrix of the model. Insignificant value of X^2 is preferred, which suggest a model is not significantly different form a perfect model. Standardised root mean square residual (SRMR) is another fit index that falls in the absolute fit category. The smaller the value of SRMR the better the fit (Brown, 2015).

The comparative fit indices, on the other hand, assess the fit of two competing models. Comparative fit index (CFI) and Tucker-Lewis index (TLI) are forms of comparative indices ranging from 0 to 1. The higher the value of CFI and TLI the better the fit of the model (Hu & Bentler, 1999). Root mean square error of approximation (RMSEA) is a widely reported fit index that estimates models parsimony, Hu and Bentler (1999) recommended reporting lower values of RMSEA.

For an adequate fit, the study followed Hu and Bentler (1999) ‘rules of thumb’ approach which presented a combination of fit indices for ML estimation method, where SRMR < .08, RMSEA < .06, CFI > .90, and a minimum value of AIC and χ2. this combination was concluded to be relatively good fit when comparing hypothesised models and the observed dataset. Further, Hu and Bentler (1999) suggested that TLI and RMSEA are can give unsatisfactory values in a small

sample, which leads to rejection of the true population model, hence, they are less preferable. Finally, models were re-specified to enhance the fit of the model. Modification of estimates occurs either by adding or removing paths to enhance the fit of the model. However, decisions to modify the relationship among variables need to be theoretically justified (MacCallum, 1986).

6.4 Results

6.4.1 Descriptive statistics

Of the 1311 emails sent to HCPs in the three selected hospitals, 566 responses were received, corresponding to a response rate of 43.2%. From the 566 responses received, 21 (3.7%) respondents did not consent to complete the survey and 113 (19.9%) were duplicate entries. After deleting responses of participants who did not consent or with duplicate entries, 419 responses were used to explore and validate the constructs, accounting for 74% of the received responses.

To cross-validate items from a single dataset, a new dichotomous variable was created to split the dataset into two random halves, which was labelled as “0 = validation half” with 194 responses, and “1 = construction half” with 225 responses. EFA was performed on the construction half while CFA was conducted on the validation half. The sample size of the construction half was greater than the validation half because Field (2018) recommended having a large sample consisting of 200 or more when exploring factors with more than 20 indicators.

Table 6-3 shows the descriptive data of respondents. All participants were above 18 years in age (M = 39.37, SD = 8.1). The proportion between males and females was not equal; 79.2% of responses were female workers (n = 332) and 20.8% of responses were male workers (n = 87). The unequal ratio between males

and females was expected as in the healthcare sector females occupy nursing jobs more than males. Moreover, the proportion between English and Arabic entries was not equal; 68.3% of responses were in English (n = 286) and 31.7% of responses were in Arabic (n = 133). An initial validation of the translated questionnaire included measuring the internal consistency of the English and the Arabic. Given that the scores of Cronbach's alphas were not substantially different (as appeared in Appendix 6), the analysis was performed on data after combining Arabic and English data.

Table 6-4 shows the results that displayed high values of Cronbach's alpha; most of the scales showed high internal consistency values ($\alpha > 0.7$) (Kline, 2016; Field, 2018). Kline (2016) suggested that α scores around 0.90 are excellent, α scores between 0.80 are very good, and α scores around 0.70 are adequate. Internal consistency results supported those in previous studies, suggesting that the translated items in the questionnaire are reliable for the study population (Siny et al., 2017).

Table 6-3 Demographic data of participants.

Category	Description	Percentage
Hospitals	Hospital 1	40.3
	Hospital 2	25.8
	Hospital 3	33.9
Gender	Males	20.8
	Females	79.2
Age group	≤29	7.6
	30-39	46.5
	40-49	33.9
	50-59	9.8
	≥60	1.4
Occupation	Doctors	10.5
	Nurses & Nurse Assistants	63.7
	Allied Health Professionals	3.6
	Administrators	14.3
	Others	7.9
Role	Administrative role only	16.2
	Administrative and clinical roles	40.1
	Clinical role	43.7
Contact with patients	Yes	84.7
	No	15.3
Have a shift duty	Yes	59.9
	No	39.4

Table 6-4 Means, standard deviations (SD), and internal consistencies for all scales used in the study (n = 419).

Scale (items)	Results from the current study			Reported in published articles		
	Cronbach's alpha.	Mean	SD	Cronbach's alpha.	Mean	SD
Accreditation Demands [a] (4)	0.80	2.4	1.4	-	-	-
Social Support from Superior [b] (3)	0.91	76.5	21.9	0.85	78.7	18.9
Social Community at Work [b] (3)	0.88	81.4	19.1	0.79	61.6	22.4
Psychosocial Safety Climate [c] (4)	0.94	12.6	3.8	0.93	11.5	4.1
Personal Burnout (6)	0.91	45.5	21.8	0.87	35.9	16.5
Work Engagement [e] (9)	0.93	4.30	1.1	0.93	3.74	1.17

Note: [a] Item developed from qualitative study; [b] Items adopted from COPSOQ-II (Pejtersen et al., 2009); [c] Items adopted from PSC-4 (Berthelsen et al., 2020); [d] Items adopted from CBI (Kristensen et al., 2005); and [e] Items adopted from UWES (Schaufeli et al., 2006).

Although all items of the scale were presented in both English and Arabic languages, it is worth noting that COPSOQ-II, CBI, and PSC-4 scales have not been translated to Arabic before this study was conducted. The mean scores for the scales were higher in this study compared to the reported means in the published articles (Table 6-4). Therefore, it was essential to explore the latent structure of items developed and translated in this study to evaluate and test the consistency of these items. The next sections describe the results of the two main approaches used for factor analysis.

6.4.2 Exploratory factor analysis: Maximum Likelihood

Maximum likelihood (ML) was performed using the oblique rotation technique (i.e., Direct obliman). Since the results of the distribution was considered normal, ML was used to extract factors. Using SPSS, EFA was performed on the construction half (n = 225) to explore the latent construct of the JD-R and PSC models. The sample size was considered suitable to perform EFA. EFA was performed on 29 items of the questionnaire. All variables were included in an initial analysis.

The Kaiser-Meyer-Olkin, which verifies the sampling adequacy for EFA analysis, was equal to 0.869, and Bartlett's test of sphericity showed a value of $\chi 2$ (406) = 4543.2, $p < 0.001$, suggesting that the correlation structure is sufficient for factor analysis. The initial analysis showed six factors with eigenvalues over the Kaiser's criterion of one (Kaiser, 1974) and explained 73.7% of the variance. However, the first item of UWES measure showed a factor loading below the recommended value of 0.3. The second and third items from the UWES cross-loaded on different factors. Therefore, the constructs were tested individually to explore how items correlated to their attributed factors. Results from the individual factor analysis were then tested in one final model.

When tested separately, factors showed satisfactory KMO, and Bartlett's statistics as presented in Table 6-5. The accreditation demands construct, which includes four items, showed moderate correlations between items, with an average factor loading of 0.72. Similarly, six items that test the social support construct, including Social Community at Work and Social Support Superior, showed that one factor had eigenvalues over Kaiser's criterion of one, and in combination, explained 70.1% of the variance. The factor was named 'Social Support' to reflect the

interpersonal relationship aspects of job resources during healthcare accreditation. Four items of PSC loaded on a single factor and explained 82.7% of the variance.

In addition, six items from the personal burnout measure loaded on a single factor that had eigenvalues over Kaiser's criterion of one and explained 71.9%. Finally, 9 items of work engagement showed two factors that had an eigenvalue over Kaiser's criterion of one and in combination explained 71.7% of variances. However, the first item of the measure showed an unacceptable communality value below 0.3. Furthermore, the first and second items loaded on a different factor and had low facto loading below 0.4. Therefore, these two items were deleted for better stability of the constructs. Seven items from the UWES scale were tested again using ML, as items loaded on one factor and the average value of factor loading for items was 0.79.

Table 6-5 Measures of the sampling adequacy.

Scale	**Number of items**	**KMO**	**Bartlett's Test of Sphericity**	**df**	**P-value**	**Cumulative Explained Variances**
Accreditation Demands	4	0.79	301.6	6	0	63.97
Social Support	6	0.84	951.5	15	0	70.1
Psychosocial Safety Climate	4	0.86	695.7	6	0	82.7
Personal Burnout	6	0.88	929.7	15	0	71.9
Work Engagement	7	0.89	1045.2	21	0	68.01

Note: KMO: Kaiser-Meyer-Olkin.

Indeed, analysing latent factors is an iterative process. Therefore, once the model constructs were individually explored, factors were tested again as one model using the remaining 27 items. ML and oblique rotation (i.e., direct oblimin) methods

were used to confirm the final number of factors and the correlation between those factors. All items showed a commonality value above 0.3. Further, the KMO measure verified the sampling adequacy for the analysis, showing a value of 0.869. The eigenvalues revealed five factors that explained 72.5% of variances.

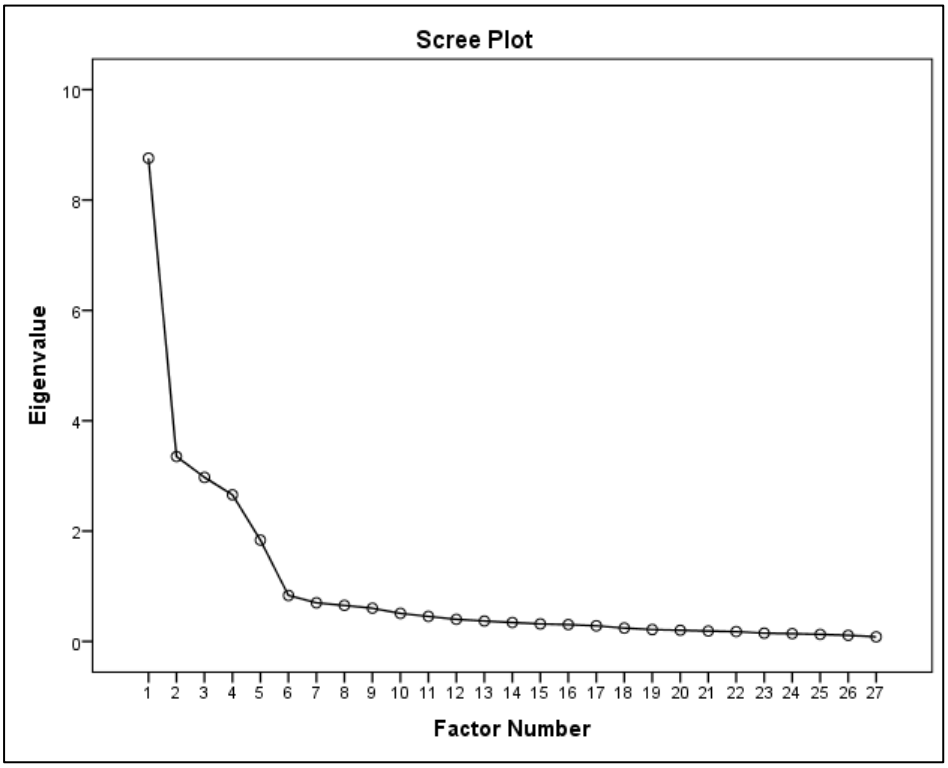


Figure 6-1 Scree plot diagram of extracted factors.

Although the scree plot showed two points of inflection (Figure 6-1), factors with low eigenvalues were aligned on a straight line just after the fifth factor. Cattell (1966) suggests to select factors with the highest eigenvalues plotted on the left side of the scree plot. Further, a parallel test was performed using Monte Carlo to confirm the number of extracted factors (Watkins, 2000). The total eigenvalues from the 27 items were compared to a set of 100 sets of random simulated data from Monte Carlo. Factors were retained when the total eigenvalues exceeded the value from the simulated analysis. The results supported the initial findings from the EFA and the shape of the scree plot suggesting five factors to be retained.

Moreover, direct oblimin rotation was performed because it was expected that factors would correlate. Table 6-6 shows moderate correlation between the extracted factors. For instance, PSC was significantly related to Personal Burnout (r = -0.39), Social Support (r = 0.28), and Work Engagement (r = 0.27). Furthermore, Personal Burnout and Work Engagement were negatively correlated (r = -0.42). Small to moderate correlations were found between Social Support and Personal Burnout (r = -0.34) and Social Support and Work Engagement (r=0.34). Surprisingly, Accreditation Demands showed non-significant correlations with the other constructs, and a negative relationship with personal burnout (r= -0.02). Table 6-7 shows five extracted factors with factor loadings of items after rotation, which consist of: Work engagement (WEng); PSC; Social support (SoP); Personal burnout (PBrn); and Accreditation demands (AcD).

Table 6-6 Correlation between extracted factors.

	Constructs	**Mean**	**SD**	**1**	**2**	**3**	**4**	**5**
1	Accreditation Demands	2.40	1.43	1				
2	Social Support	78.94	18.81	.02	1			
3	Personal Burnout	45.51	21.77	-.02	-.34**	1		
4	Work Engagement	4.49	1.24	.05	.34**	-.42**	1	
5	Psychosocial Safety Climate	12.58	3.84	.06	.28**	-.39**	.27**	1

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 6-7 Results of Exploratory Factor Analysis for JD-R and PSC Construct (N = 220).

Pattern Matrix		**Factors**				
No.	**Variables**	**WEng**	**PSC**	**SoP**	**PBrn**	**AcD**
1	I am proud on the work that I do	**0.861**	0.017	0.057	0.056	0.088
2	My job inspires me	**0.847**	-0.033	0.075	-0.059	0.066
3	I am immersed in my work	**0.736**	-0.008	-0.018	-0.048	0.055
4	I am enthusiastic about my job	**0.733**	0.016	0.034	-0.088	-0.035
5	When I get up in the morning, I feel like going to work	**0.721**	-0.057	0.127	-0.132	0.061
6	I feel happy when I am working intensely	**0.695**	-0.015	0.022	-0.197	0.002
7	I get carried away when I'm working	**0.690**	-0.034	-0.091	0.108	-0.139
8	There is good communication here about psychological safety issues which affect me	0.059	**-0.920**	0.019	0.03	-0.041
9	Senior management considers employees' psychological health to be as important as productivity	0.083	**-0.916**	-0.014	0.026	0.009
10	Senior management show support for stress prevention through involvement and commitment	-0.063	**-0.818**	0.004	-0.091	0.08
11	In my organisation, the prevention of stress involves all levels of the organisation	-0.034	**-0.810**	0.029	-0.047	-0.047
12	How often is your nearest superior willing to listen to your problems at work?	0.005	-0.04	**0.896**	0.019	0.003
13	How often do you get help and support from your nearest superior?	-0.094	0.033	**0.867**	-0.042	-0.052
14	Do you feel part of a community at your place of work?	0.154	-0.036	**0.790**	0.123	0.01
15	Is there good co-operation between the colleagues at work?	0.073	0.005	**0.772**	0.009	0.026
16	Is there a good atmosphere between you and your colleagues?	-0.006	0.025	**0.771**	-0.043	-0.037

Pattern Matrix		Factors				
No.	**Variables**	**WEng**	**PSC**	**SoP**	**PBrn**	**AcD**
17	How often does your nearest superior talk with you about how well you carry out your work?	-0.07	-0.043	**0.745**	-0.032	0.023
18	How often do you feel worn out?	-0.01	-0.004	-0.011	**0.899**	-0.052
19	How often are you physically exhausted?	0.105	0.066	-0.01	**0.837**	0.041
20	How often do you feel tired?	0.026	0.064	0.017	**0.803**	-0.029
21	How often do you think “I can’t take it anymore”?	-0.099	0.024	-0.025	**0.771**	-0.062
22	How often are you emotionally exhausted?	-0.093	0.064	0.012	**0.712**	0.058
23	How often do you feel weak and susceptible to illness?	-0.1	-0.053	-0.006	**0.710**	0.08
24	Do you feel that the required paperwork you are expected to complete keeps you away from patients?	0.026	0.004	0.007	-0.053	**0.807**
25	Do you feel the documentation requirements keeps you away from patients?	-0.009	0.023	0.064	-0.057	**0.787**
26	Do you feel that your current work takes so much form your time that you cannot treat patients properly	0.074	0.076	-0.054	0.021	**0.785**
27	Do you feel that additional activities such as attending training or meetings keeps you away from patients?	-0.065	-0.088	-0.038	0.103	**0.524**
	Percentage of Variance Explained	32.44	12.42	11.01	9.84	6.800
	Eigen Value	8.758	3.352	2.974	2.657	1.836
	Cronbach Alpha	0.926	0.939	0.914	0.922	0.799

Note: Factor loadings above .40 are shown in bold. Extraction Method: Maximum Likelihood. Rotation Method: Direct Obliman with Kaiser Normalization. KMO = 0.869, Bartlett’s X2 = 4260.442, $p < 0.001$, Rotation converged in 6 iterations.

6.4.3 Confirmatory factor analysis

The results from EFA analysis identified five factors that were essential to examine the hypothesised JD-R model. To cross-validate these factors, CFA was performed to assess the structure of factors and their relationships. The first step taken to perform CFA was model specification, which operationalises the model and clarifies the relationships between observed variables and latent factors.

In order to identify the study model, Bollen (1989) suggested three rules. First, the number of estimated parameters should be less than the number of unknown elements in the covariance matrix. Second, three indicators are required to estimate a latent factor. Third, two indicators are allowed to estimate factors, however, these factors need to be correlated. As suggested by Bollen (1989), each factor in the estimated model had more than three indicators. Further, correlations between factors were allowed to reflect the rotation method selected when extracting those factors (i.e., direct oblimin).

The validation sample of the study (n =194) was used to perform CFA analyses and to assess the goodness of fit of the model. Five factors of the model were examined using ML which did not provide a satisfactory fit to the data, $\chi 2$ (314) = 704.3, $p < 0.001$, CFI = 0.897, RMSEA = 0.084, and SRMR = 0.073. Although $\chi 2$ was significant, indicating that the sample variance cannot be reproduced by the model estimates, this test is sensitive to large sample size. The CFI and RMSEA however, indicated poor fit to the model and were below the recommended values as discussed earlier in this chapter (see Testing the fit of the model).

To improve the fit of the model, modification fit indices (MI), calculated by MPlus, were estimated and showed improvement after adding error covariances

between the first and the second items from the personal burnout measure (MI = 71.774). Jeon et al. (2019) found similar recommended error covariances between those items from the personal burnout construct that improved the goodness of fit. Furthermore, an error covariance between the first and the second items from the social community at work construct was suggested to improve the fit of the model (MI = 65.216). The model improved after adding error covariances and was evident through the goodness of fit indices: $\chi 2$ (312) = 533.9, $p < 0.001$, CFI = 0.942, RMSEA = 0.064, and SRMR = 0.071.

To eliminate uncertainty in the results, a post-hoc analysis was performed using MLM (Yuan & Bentler, 2000). As suggested by Kelloway (2015), constructs were estimated using ML and MLM estimators and the results of fit indices were compared. The results showed minimal differences between ML and MLM estimators. Table 6-8 displays a comparison between indices of goodness of fit for the CFA using ML and MLM. Although indices showed a better fit when using MLM, I decided to report findings from the ML estimation that pairs the extraction method used in EFA.

Table 6-8 Comparison goodness of fit indices using ML and MLM as estimators.

Models	Estimator	AIC	X^2	df	P-Value > 0.05	CFI > 0.95	TLI > 0.95	RMSEA < 0.06	SRMR < 0.08
M0	Maximum Likelihood (ML)	25646.86	704.29	314	0.000	0.897	0.885	0.084	0.073
M1		25565.41	620.845	313	0.000	0.919	0.909	0.075	0.071
M2		25480.46	533.888	312	0.000	0.942	0.934	0.064	0.071
M0	MLM	25646.86	637.925	314	0.000	0.905	0.894	0.077	0.073
M1		25565.41	562.542	313	0.000	0.927	0.918	0.067	0.071
M2		25480.46	484.111	312	0.000	0.950	0.943	0.056	0.071

Note: M0 is the nested model; M1 is similar to M0 but with addition of error covariance between PB1 and PB2; M2 is similar to M1 but with addition of error covariance between SW1 and SW2; MLM is maximum likelihood parameter estimates with standard errors and a mean-adjusted chi-square test statistic.

Further, table 6-9 presents the standardized estimates of factor loadings between items and their related factors. The final analysis resulted in the identification of a model with five factors that consisted of Accreditation Demands, Social Support, Psychosocial Safety Climate, Personal Burnout, and Work Engagement latent variables (Figure 6-3).

Table 6-9 Standardised factor loadings of the CFA. (n = 176).

Factors	Items	b	S.E.	Est./S.E.	P-Value
Accreditation Demands	ACCD1	.67	.05	13.59	0.000
	ACCD2	.81	.04	20.63	0.000
	ACCD3	.87	.04	23.33	0.000
	ACCD4	.48	.07	7.30	0.000
Social Support	SW1	.58	.05	10.95	0.000
	SW2	.65	.05	13.97	0.000
	SW3	.72	.04	18.77	0.000
	SS1	.93	.01	66.82	0.000
	SS2	.94	.01	70.16	0.000
	SS3	.84	.03	34.10	0.000
Psychosocial Safety Climate	MSC3	.86	.02	38.93	0.000
	MP3	.94	.01	77.89	0.000
	OC1	.93	.01	71.75	0.000
	OPI3	.89	.02	47.72	0.000
Personal Burnout	PB1	.74	.04	20.00	0.000
	PB2	.75	.04	20.93	0.000
	PB3	.80	.03	26.00	0.000
	PB4	.88	.02	42.76	0.000
	PB5	.92	.02	54.78	0.000
	PB6	.75	.04	21.04	0.000
Work Engagement	WE3	.90	.02	49.90	0.000
	WE4	.86	.02	36.87	0.000
	WE5	.78	.03	23.94	0.000
	WE6	.88	.02	43.59	0.000
	WE7	.85	.02	36.06	0.000
	WE8	.79	.03	25.85	0.000
	WE9	.64	.05	13.85	0.000

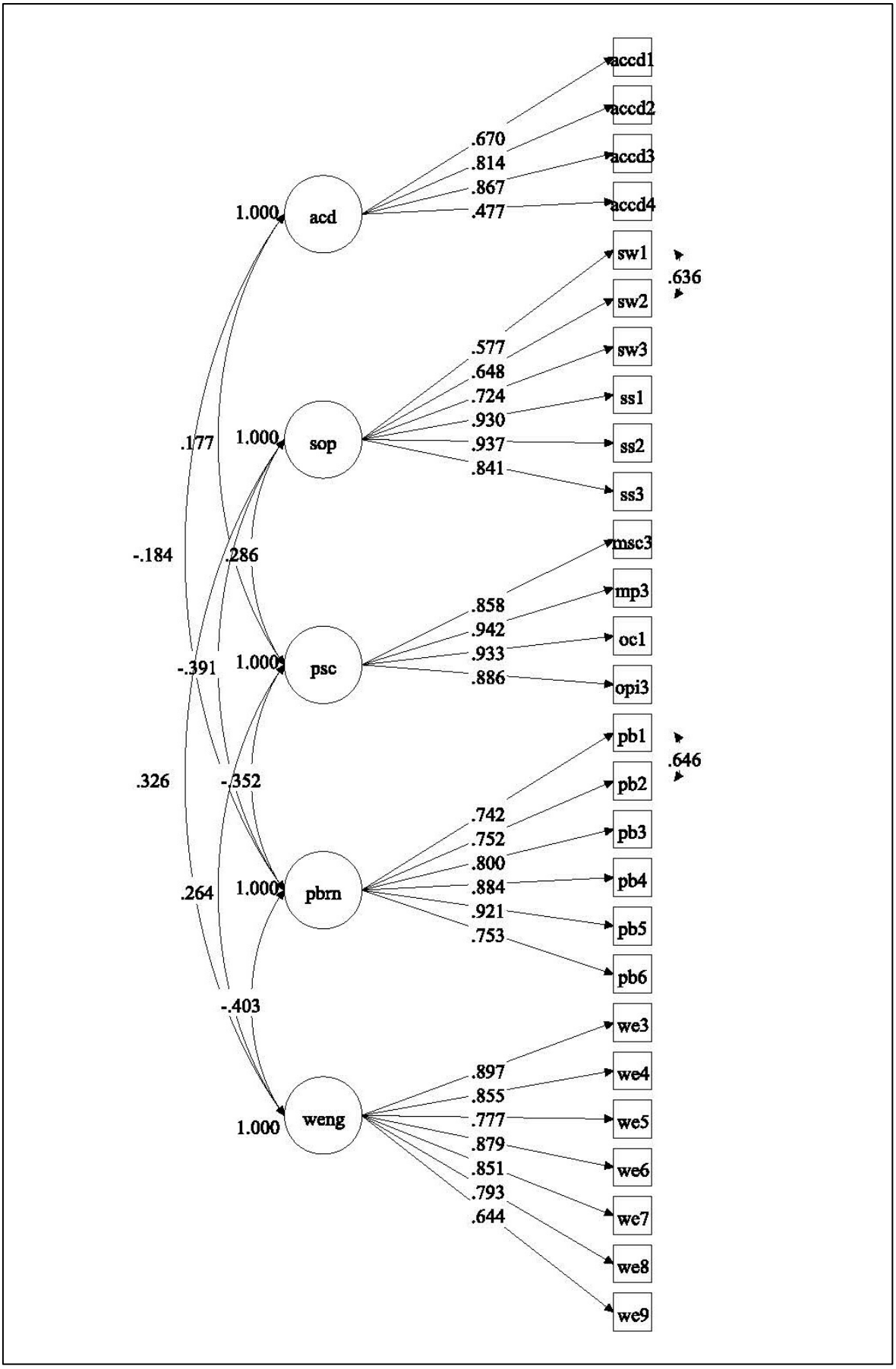


Figure 6-2 The final 27 items of the validated JD-R model.

6.5 Discussion

The aim of this study was to develop and cross validate instruments for a quantitative study by integrating findings from the qualitative study with existing measures related to the JDR and PSC models. As mentioned in Chapter 4, the approach of this thesis followed an exploratory sequential mixed method approach. Therefore, it was essential to develop constructs, which measure psychosocial hazards observed in the process of accreditation; and validate them before applying them to the third study (i.e., Chapter 7). Previous studies have observed the psychosocial hazards associated with the process of healthcare accreditation. While several studies have explored the unintended effect of accreditation on workplaces and HCPs' mental health (Greenfield & Braithwaite, 2008; El-Jardali et al., 2014; Ehlers et al., 2017; Bogh et al., 2018), none have attempted to construct a model to test these effects using OHP frameworks.

Therefore, the main purpose of this study was to develop a construct that reflects the unique job demands experienced by HCPs during accreditation. Further, the study set out to validate the theoretical models underpinning the present study utilising the JD-R and PSC concepts, in relation to healthcare accreditation demands. This research evaluated the psychometric properties of the COPSOQ-II, CBI, PSC, and UWES using a sample of employees working in hospitals in the UAE. The analysis was conducted cross-sectionally using data collected from three hospitals that were preparing for accreditation assessment.

Given that some of the selected items of the scale have not been translated into Arabic before conducting this research, it was necessary to translate and assess the quality of these items. This research not only evaluated the impact of

accreditation on workplaces, but also assessed the cross-cultural aspects of conducting this research in the UAE. The study contributes to the literature by showing satisfactory psychometric properties of wide range of scales including accreditation demands, social support, PSC, personal burnout, and work engagement, supporting their use in a range of samples and cultures (Pejtersen et al., 2009; Berthelsen et al., 2020).

The results of the current study indicated strong evidence of the structure of the new developed construct and how it fits with the JD-R and PSC models. Findings supported the concept of the JD-R model as a flexible model assuming any job demands and job resources can influence workers' health (Taris & Schaufeli, 2015). The analysis (i.e., EFA and CFA) evaluated the psychometric properties of the five constructs that include: two predictors, a moderator, and two outcome variables. The predictors are accreditation demands and social support constructs, while the moderator is the PSC construct. Finally, the outcome variables are personal burnout and work engagement. These constructs were necessary to build and test a model based on findings from the qualitative study. EFA showed good construct validity through high Cronbach's alpha, which indicate high internal consistency, while CFA demonstrated acceptable fit indices.

Exploratory factor analysis (EFA) was performed to determine the number of indicators measuring the latent factors and produced a parsimonious model, which supports the application of the JD-R in the context of accreditation. Since EFA is a data-driven approach (Brown, 2015), the analysis was able to extract five factors that includes accreditation demand, social support, PSC, personal burnout, and work engagement. These factors were then cross validated by specifying the same relationships between indicators and constructs. Furthermore, the results showed

high internal consistency through high Cronbach's alphas. In addition, the model showed good construct validity through good fit indices.

Although the translated constructs exhibited acceptable fit to the data, this study revealed several important aspects of the translated COPSOQ-II, CBI, and UWES as applied to HCPs working in the UAE. First, items form COPSOQ-II sub-constructs of 'Social community at work' and 'Social Support from Supervisors' loaded on a single factor. Although COPSOQ-II constructs represent second-order factors (Pejtersen et al., 2009), the result from the EFA suggested a one factor solution (i.e., social support). Furthermore, inter-correlations were allowed between the error terms of the first and second items from the social community at work sub-construct. Such a correlation might be due to the similarity in wordings of both items (figure 6-2). For example, the first item suggests a good atmosphere between participants and their colleagues, and the second item suggests good co-operation between colleagues at work. Indeed, the modification showed improvement in the fit of the model, after a post-hoc addition to the model.

In this sense, combining items from supervisors' support with those from the social community at work domain was designed to help the study address the research question related to the impact of job resources during accreditation. While the integrated measures showed a better model fit, it should be noted that such an integration could have come from the limited sample size. It was decided to integrate both measures to maximise the model fit. Although integrating both measures was statistically favourable, future studies should aim to test them separately.

The integrated construct also outlined insights from the social support experienced by HCPs. It emphasised the importance of interpersonal relations and

leadership in linking social support to work engagement during accreditation. Furthermore, the study showed a positive relationship between social support and PSC, suggesting that social support can have advantages, promoting a better understanding of the potential role of job resources in employees' well-being, particularly during accreditation.

Second, two items from the personal burnout construct were also allowed to correlate based on the modification indices calculated by MPlus. These items have similar wording as both items questioned the frequency of being tiered or physically exhausted. The results also showed that the personal burnout construct of the CBI is a reliable and valid measure to assess the physical and psychological exhaustion experienced by HCPs. According to Kristensen et al. (2005), personal burnout construct is a general dimension of burnout, which does not distinguish between the physical and psychological exhaustion. Further, findings in this study supported the work of Jeon et al. (2019), who found similar correlations between the first and second items when translating CBI to Korean language.

Third, two items of the UWES showed weak correlation with the other items and indicated low factor loading on the work engagement construct. As these items state the level of energy individuals have toward their work, HCPs may have not understood the meaning of these items. Hence, they were dropped during the analysis. Further, the analysis showed that one factor had a better fit than three factors. Although the UWES scale was developed to test three sub-constructs, such as vigor, dedication, and absorption (Schaufeli et al., 2006), the use of a single factor work engagement in this study is consistent with other studies (Shimazu et al., 2008; Idris et al., 2015). To achieve a more parsimonious model, UWES items were added together in the final analysis.

Interestingly, it was clear that HCPs in UAE hospitals, and who were preparing for accreditation, had higher values of personal burnout (M = 45.5, SD = 21.8) than did HCPs in Denmark (M = 36.6) (Kristensen et al., 2005). These findings are important in order to emphasize the level of burnout among HCPs triggered by accreditation processes. The UAE government has mandated the evaluation of all public healthcare organisations using accreditation standards to ensure adequate quality of services provided to patients. Yet, such mandatory evaluations come with inevitable consequences, such as increased workload and burnout. It is worth mentioning that social support and PSC were positively related to work engagement and negatively related to personal burnout. Suggesting a clear impact of job resources, prior to accreditation inspection, on HCPs' mental health and positive organizational behaviors.

6.5.1 Strength and limitations

This study contributed to the development of JD-R and PSC models in two ways. First, it created a construct that is unique to the demands of hospital accreditation and integrated that construct into a set of factors necessary to test the theoretical models in this research. Second, the study evaluated the psychometric properties of the COPSOQ-II, CBI, PSC, and UWES among HCPs working in the UAE. The scale items were concluded as reliable to evaluate challenges and opportunities associated with the process of accreditation using a longitudinal design. At the time of writing this thesis, this study was the first in applying Arabic and English versions of the aforementioned scales to a sample of HCPs during hospital accreditation in the UAE.

This study however has some limitations. The study used a cross-sectional design with a total sample of 419 participants. Thus, findings only apply to HCPs

working in hospitals selected for this study. Therefore, further assessment of the reliability and validity of the Arabic version of the measures on a wider population could enhance the validity of such measures. Despites these limitations, the consistency of findings from the translated scales with those in published literature confirms the reliability and validity of those scales. The results support using these items to test the hypothesized model (figure 6-3). Future studies should attempt to include themes related to role conflict, work pace and emotional demands in order to explore different psychosocial hazards associated with accreditation. Furthermore, future studies should shed light on the interaction between job demands and job resources and the impact on HCPs' mental health and well-being.

6.5.2 Conclusion

In conclusion, the current study sought to explore the underlying factor structure of the JD-R and PSC models in a sample of HCPs working in public hospital in the UAE. The study examined the validity and psychometric properties of 27 items selected from different scales. The subsequent chapter tests the constructs concluded form this study using a model that examine these factors in a two-wave longitudinal design (i.e., before and after accreditation).

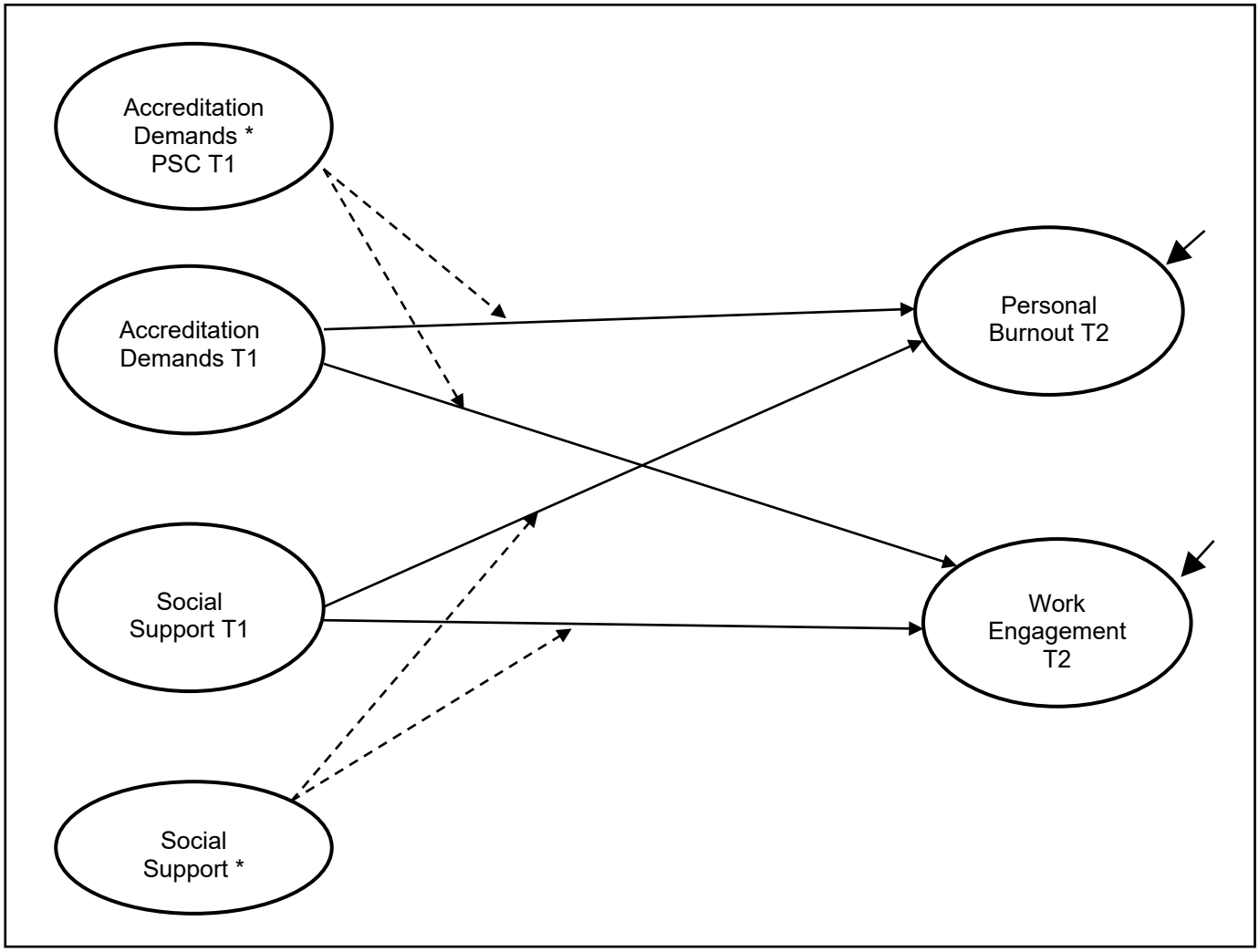


Figure 6-3 Theoretical model for the quantitative study. Note: solid black lines suggest a direct effect; dash black lines suggest a moderating effect.

Chapter 7 Psychosocial safety climate moderates the effect of demands of hospital accreditation on healthcare professionals: a longitudinal study

7.1 Introduction

The current chapter examines the attributes of accreditation processes and their effects on healthcare professionals (HCPs) using a longitudinal design. As shown in chapter 6, five factors were identified to examine the Job Demand-Resource (JD-R) model as well as the Psychosocial Safety Climate (PSC) construct in public hospitals in the UAE. This study aims to examine the impact of job demands and resources experienced by HCPs during the period of external hospital accreditation. Specifically, this chapter uses variables extracted from factor analyses (i.e., EFA and CFA) in time 1 (i.e., three months before accreditation) to assess health and work-related outcomes to the process of accreditation in time 2 (i.e., three months after accreditation). These variables include accreditation demands, social support, psychosocial safety climate, personal burnout, and work engagement.

In this chapter, the relationships between variables were tested using cross-lagged panel design. Cross-lagged designs are widely used in structural equation modelling (SEM) when analysing longitudinal data (Selig & Little, 2012). The importance of applying cross-lagged design in hospital accreditation is that it measures the impact of the JD-R constructs on one occasion on other constructs in the following occasion. For instance, if a predictor variable at time 1 (T1) has a significant direct relation with an outcome variable at time 2 (T2), a cross-lagged

effect is expected to occur after controlling for the variable being predicted at T1 (Liu et al., 2016). Further, cross-lagged designs add autoregressive effects to control for variances of the outcome variables in T1 and allows predictor variables in T1 to relate to outcome variables at T2 (Selig & Little, 2012). Indeed, cross-lagged designs allow assessing the reverse relationship of outcome variables. For example, outcome variables in T1 are tested to assess their direct effect on predictor variables in T2.

As discussed in chapter 6, the quantitative study utilised three public hospitals going through the accreditation process. However, only two hospitals completed T2 questionnaires, as the onset of global COVID-19 pandemic delayed the accreditation process for the third hospital. T2 investigation therefore included data from 220 participants working in two hospitals, hospital 1 (n= 155) and hospital 2 (n = 65). The data is made up of 17 doctors, 186 nurses and nurse assistants, 6 allied health professionals, 6 administrators, and 5 with other jobs. Again, the main area of investigation is focused on the unique accreditation demands and social support as a form of job resource, before the accreditation inspection, and their effect on HCPs' personal burnout and work engagement after accreditation inspection. Participants were matched in T1 and T2 using a unique code that was developed from the demographic items in the questionnaire. These items include gender, year of birth, and the last three digit of participants' file number. The final matched respondents in T1 and T2 was 121 participants.

As discussed in chapter 5, participants mentioned that managers desired positive evaluation outcomes from inspectors, which might increase the stress levels among HCPs to achieve such positive evaluation (Ehlers et al., 2017). Furthermore, the management team had imposed strict rules, during the preparation phase, which

were viewed as important to engaging HCPs in the accreditation process. However, such rules were likely to influence HCP's decisions of when to use appropriate resources, such as support form supervisors or colleagues, to mitigate the effects of job demands. Therefore, it was essential in this study to test psychosocial safety climate (PSC) as an organizational resource allowing HCPs to utilize available resources. PSC was included in the model as a moderator of the job demands (i.e., accreditation demands) burnout pathway. Further, PSC was expected to boost the effect of job resource (i.e., social support) on work engagement pathway.

The present study seeks to build on the findings of the qualitative study discussed in Chapter 5, which explored the psychosocial hazards experienced by HCPs prior to hospital accreditation. As noted in the qualitative study, HCPs experienced specific psychosocial demands while preparing for hospital accreditation, which included focusing on paperwork and attending additional training or meetings sessions. These demands were perceived to influence HCP's psychological health and the continuity of patient care. HCPs perceived that in order to attain positive feedbacks from accreditors, they were required to focus on different types of administrative work that led to the reduction in the quality of patient care and the time spent with them. Also, HCPs reported that their involvement in different roles and responsibilities was perceived to influence the quality of patient care (Bogh et al., 2018; Alshamsi et al., 2020).

On the other hand, the qualitative study found that HCPs sought social support that included perceived assistance from supervisors and colleagues, in order to offset the effects of increased demands prior to accreditation. Furthermore, teamwork and collaboration among individuals was perceived to improve HCPs' engagement at work during the preparation phase. Therefore, the current study

aimed to quantitively assess psychosocial working conditions and their relationship with HCPs' psychological health and positive organisational behaviour, namely personal burnout and work engagement, during hospital accreditation. The main contribution of this chapter is to examine the direct and moderating effects of two theoretical concepts, namely the Job Demands-Resources (JD-R) model and the Psychosocial Safety Climate (PSC) construct, on HCPs during hospital accreditation using a two-wave longitudinal design. The study utilises constructs extracted and validated in the previous chapter (i.e., Chapter 6).

Although Demerouti (2018) acknowledges that job demands and job resources play different roles in the development of health and motivation, demands and resources have a joint effect on reducing burnout (Bakker et al., 2005). Job resources in the JD-R model have been shown to buffer the impact of job demands when predicting workers' health. However, job resources are also defined as a job characteristic that helps workers to achieve their goals and stimulate their personal development (Arnold Bakker, Evangelia Demerouti, Elpine de Boer, et al., 2003). The JD-R model suggests that employees experience burnout mainly due to high demands, whereas disengagement can result from a lack of resources (Taris & Schaufeli, 2015).

This study included job resources at the interpersonal level (i.e., support from supervisors and colleagues); therefore, the study argued that social support is a type of job resource that can lead to high work engagement. As mentioned in Chapter 3, social support poses two effects: a buffering effect and a main effect. In this thesis, social support is conceptualised as a job resource that influences work engagement and acts as an intrinsic factor that helps HCPs achieve and maintain their accreditation goals.

Psychosocial safety climate (PSC), however, is derived from employees' perceptions of their workplace regarding the availability of policies and procedures that protect their psychological health (Dollard et al., 2012). Therefore, this study utilised PSC as a construct that signals HCPs about the presence of supportive resources that reduce the effect of accreditation demands. For instance, in high-PSC hospitals, HCPs know that when they experience accreditation demands (e.g., maintaining a high quality of medical documentation), they will be supported to cope with such demands. In addition, PSC can be considered a type of resource that emerges from leaders and management (Dollard & McTernan, 2011; Garrick et al., 2014). Hence, this study conceptualised PSC to have an interaction effect on the health and motivational pathways of the JD-R model.

7.1.1 Aim and hypotheses

The current study aims to contribute to this growing area of research through its novel examination of the role of accreditation demands, social support and psychosocial safety climate, in predicting personal burnout and work engagement amongst HCPs in the UAE during the period of hospital accreditation. Furthermore, an alternative analytical approach was taken to test the moderating effects of PSC by modelling all the relationships of the JD-R model and their interactions. While previous studies have provided evidence on the moderating effect of PSC within the JD-R model, majority of these studies have examined either health impairment or motivational paths separately and have rarely included both paths in one model. However, the present study attempts to test both paths in a single, more parsimonious model that combines job demands and job resources constructs as well as their interactions in predicting outcome variables.

While recent studies have shown the moderating effect of PSC on JD-R using aggregated data (Dollard et al., 2012; Garrick et al., 2014), the present study examines the effect of PSC at an individual level using structural equation modelling and a shorter version of the PSC tool, the PSC-4. The majority of PSC studies have measured psychosocial safety climate using the PSC-12 scale (Garry Hall et al., 2010), which includes 12 items. However, a recent study introduced PSC-4, a shorter version of the PSC tool that uses four items only aiming to create a parsimonious measure (Dollard, 2019). These four items reflect the four subscales of PSC: management commitment, management priority, organisational communication, and organisation participation.

The primary contribution of this study is to examine the lagged effect of a specific type of job demands construct (i.e., Accreditation Demands), which reflects the unique demands during hospital accreditation, on burnout among HCPs (i.e., Personal Burnout). The second contribution is to test the lagged effect of psychosocial resources, namely Social Support, on Work Engagement. To date, there are few empirical studies that have tested the JD-R model and the PSC in the Middle Eastern region (Afsharian et al., 2016). Therefore, the second contribution to this growing area of research is to examine the effect of PSC in a Middle Eastern country, the UAE. Further, testing moderation hypothesis in structural equation modelling (SEM) is challenging due to the interaction between latent variables. Therefore, the final contribution of the current study is to test the moderating role of PSC using Structural Equation Modelling (SEM) at an individual level. Therefore, this study attempted to test the following hypotheses presented in Figure 7-1:

1. Hypothesis 1: Accreditation Demands are positively related to personal burnout through health impairment pathway (H1a), and negatively related to the work engagement, i.e., motivational pathway (H1b).
2. Hypothesis 2: Social Support is positively related to work engagement i.e., motivational path (H2a) and negatively related to personal burnout i.e., health impairment path (H2b).
3. Hypothesis 3: Psychosocial Safety Climate interacts with accreditation demands to moderate the health impairment path (H3a) and motivational path (H3b).
4. Hypothesis 4: Psychosocial Safety Climate interacts with social support to moderate the health impairment path (H4a) and motivational path (H4b).

5. Hypothesis 5: Adding interaction paths will improve the fit of the model.

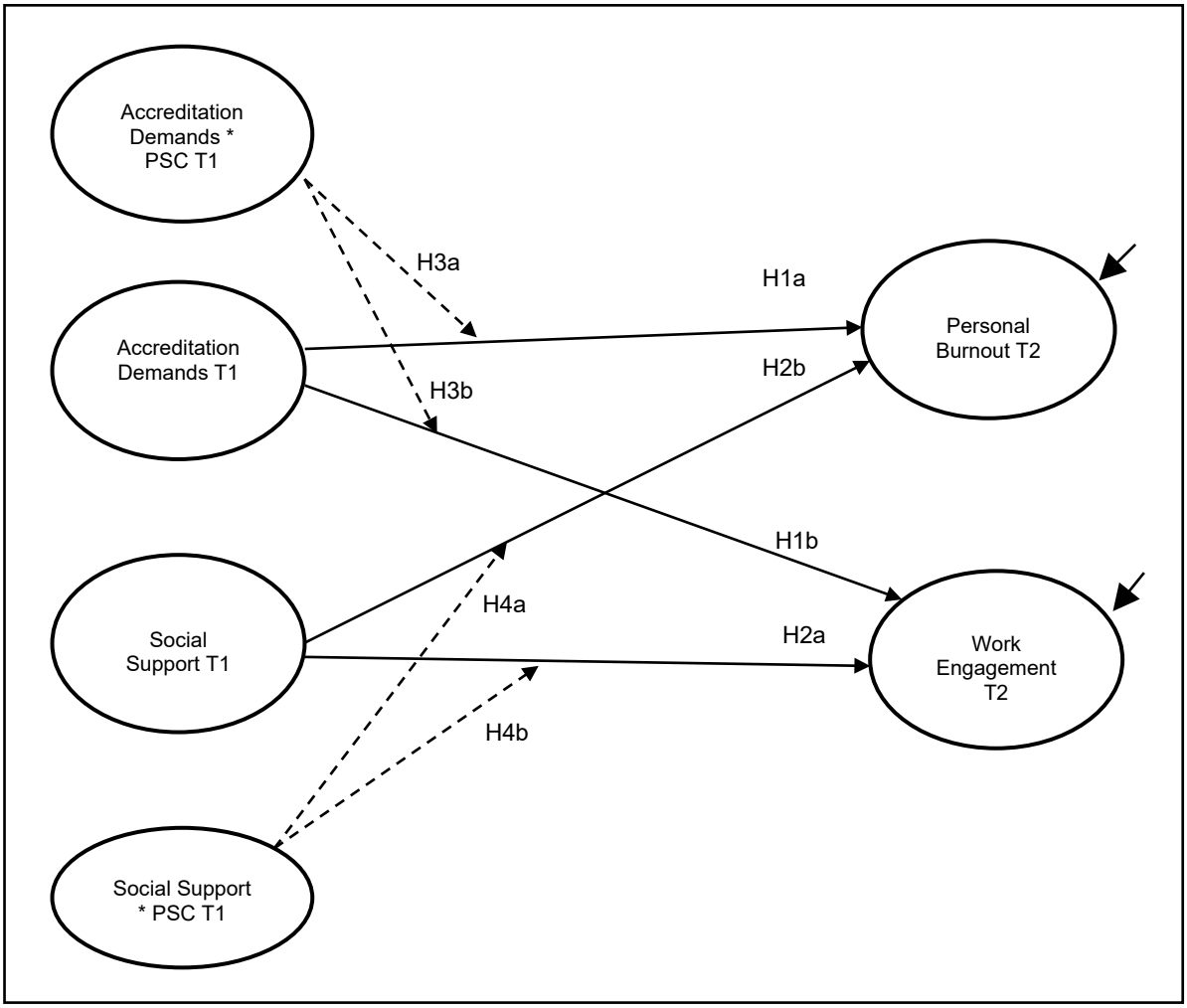


Figure 7-1 Research model and hypotheses.

7.2 Method

The study was conducted from September 2019 to March 2020 with employees working in two public hospitals in the UAE, and data collection was ceased days before the announcement of a national lockdown due to the COVID-19 pandemic. HCPs working in government hospitals regulated by the Ministry of Health and Prevention (MOHAP) took part in the study. These hospitals were selected based on their accreditation status, as inspection visits to assess the quality of their services were scheduled within three months of the start of the study. Ethics

approval was granted by the Ministry of Health and Prevention (MOHAP) (i.e., Reference Number – MOHAP/DXB-SU BC-No-40/2018) and the University of Nottingham, Division of Psychiatry and Applied Psychology (DPAP) ethics committees (i.e., Reference Number – 0412).

7.2.1 Study population

The data were collected at two time points, six months apart: three months before the surveyors' visit (T1) and three months after their visit (T2). Data were collected through self-completion online surveys. Invitations to participate in the study were sent to all HCPs working in the two hospitals (n=911). The total response rate in both hospitals was 289 (31.7%) in T1 and 220 (24.1%) in T2. Participants who had responded to both T1 and T2 surveys were identified using a unique coding system (n=121). Codes were developed to include demographic questions such as participants' gender, year of birth, and last three digits from their occupational number. Participants were not aggregated, and a simpler non-hierarchical model was used to estimate the parameters (further details are provided in the Statistical Analysis section). Of the 121 matched responses, 68.6% (n=83) were from the first hospital and 31.4% (n=38) were from the second hospital.

All participants were above the age of 25 years, and the average age of respondents was 39.25 years (SD = 7.6), with 45.5% of participants aged between 36 and 45 years. Of the participants, 80.2% (n=97) were females and 19.8% (n=24) were males. Since females occupy nursing jobs more than males, it is expected to have unequal number of responses between males and females in the healthcare sector. The sample consisted of doctors (7.4%), nurses (85.1%), allied health professionals (1.7%), administrative workers (2.5%), and workers from other

professions (3.3%). Further, 47.1% of participants had a clinical role and 46.3% had both clinical and administrative roles. Measuring the role of participants was important as HCPs might experience conflicting needs to balance between their role to care for patients and their role to prepare for hospital accreditation.

7.2.2 Measures

As discussed in the previous chapter (Chapter 6), survey items were presented in the two main official languages of UAE, Arabic and English. Since the measurement tools had not been translated to Arabic, the study adopted a forward and back translation technique to convert the questionnaire items into Arabic to increase the response rate. Confirmatory Factor Analysis (CFA) and Cronbach's alpha (α) were performed to the items of the variables in the model. As discussed in chapter 6, the results of CFA model demonstrated a good fit with X2 (312) = 533.9, $p < .05$, CFI = .942, RMSEA = .064, and SRMR = .071. Observed factors were presented as manifest variables that were included in Time 1 (T1) and Time 2 (T2).

7.2.2.1 Accreditation Demands (T1 and T2)

As discussed in chapter 6, the accreditation demand construct, comprising four items, was developed to measure the unique demands of hospital accreditation. These items reflected findings from the qualitative study (Chapter 5) that explored the psychosocial hazards experienced by HCPs due to hospital accreditation. Four items of the accreditation demand construct were measured using a five-point Likert scale ranging from 1 (always) to 5 (never or hardly ever), and a score of 0 was assigned to the option of 'not applicable'. The reliability of the accreditation demand scale was 0.79. Items were discussed in section 6.3.2.1.

7.2.2.2 Social Support (T1 and T2)

The job resource construct was measured using six items from the COPSOQ II scale (Pejtersen et al., 2009). This construct involves three items of *Social Community at Work* and three items of *Social Support Superior*, which were examined using a five-point Likert scale ranging from a high score of 100 (Always) to a low score of 0 (never or hardly ever). The reliability of the social support scale was 0.91. Although interpersonal relations and leadership were reflected in the COPSOQ scale as different types of social support, the results from both the EFA and CFA had explicitly integrated these measures into one construct.

7.2.2.3 Psychosocial Safety Climate (T1 and T2)

The current study used the four item PSC-4 derived from the PSC-12 (Dollard, 2019). Responses are made on a five-point Likert scale ranging from 5 (strongly agree) to 1 (strongly disagree). Berthelsen et al. (2020) have established a benchmark to identify levels of PSC-4 in organisations. The study followed their suggested benchmark of considering a score greater than 12 to be a good level, while a score below 8 is a poor level. A moderate level will have a score between 12 and 8 (Berthelsen et al., 2020). The reliability of the scale was 0.93.

7.2.2.4 Personal Burnout (T1 and T2)

Burnout was measured using the Copenhagen Burnout Inventory (CBI) (Kristensen et al., 2005). The study included a personal burnout construct (six items). Personal burnout aims to measure the general psychological exhaustion experienced by individuals without a specific cause. Items were measured using a five-point Likert scale ranging from a high score of 100 (always) to a low score of 0 (never or hardly ever). The reliability of the personal burnout scale was 0.92.

7.2.2.5 Work Engagement (T1 and T2)

Work engagement, which refers to the high energy employees display in their workplaces, was measured using the shortened version of the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2006). This version of the UWES has nine items and is scored on a seven-point Likert scale ranging from 0 (never) to 6 (always). However, the EFA analysis in chapter 5 found that only seven items were included in the study due to low factor loadings for Items 1 and 2. The reliability of the work engagement scale (seven items) was 0.93.

7.2.2.6 Control Variables (T1)

The study controlled for two variables: age (numeric variable) and clinical role (1 = clinical role only, 0 = other roles). These variables were reported in T1 and T2 and were considered stable variables; hence, they were included as T1 variables only in the analysis. Appendix 4 presents the questionnaire items.

7.2.3 Statistical analysis

MPlus version 8.4 (Muthén & Muthén, 2017) was used to analyse the data using the maximum likelihood estimator to evaluate the covariance matrix. A confirmatory Factor Analysis (CFA) was performed to the items of the variables included in the model at T1, such as: accreditation demands, social support, PSC-4, personal burnout, and work engagement (Chapter 6). Further, a Cronbach's alpha (α) was tested to measure the reliability of each factor (n=5) using ML parameter estimates with standard errors and a mean-adjusted chi-square test statistic. Observed factors were presented as manifest variables that were included in Time 1 (T1) and Time 2 (T2).

Instead of multilevel modelling analysis (MLM), Structural Equation Modelling (SEM) and a cross-lagged panel design were applied to test the hypotheses regarding the moderating role of PSC in the JD-R model. SEM and cross-lagged panel designs were selected to estimate the fit indices of the model. Further, PSC was measured at the individual level representing a wider organisational resource. However, considering the multilevel nature of PSC and the small sample size (i.e. individuals nested within two public hospitals), a vital step was taken to assess whether the data can be aggregated to the hospital level.

To assess the variance component of variables, an intraclass correlation coefficient (ICC) was calculated for every dependent variable at T2, that is, personal burnout and work engagement. It was recommended that the statistical independence of groups should be ignored if the attributed variance is less than 5% (Hox, 2010). The ICC showed that 0.1% of the variance in personal burnout and 0% of variance in work engagement might be attributed to hospital level. The ICC showed almost no variation when grouping variables according to the hospital level. Furthermore, the study tested the differences in mean scores for personal burnout and work engagement in both hospitals using one-way ANOVA, which includes Levene's test to assess the homogeneity of variances. The results of Levene's tests were not significant, indicating equal variances among the outcome variables in both hospitals.

Total mean scores were utilised in subsequent statistical analysis for Accreditation Demands, Social Support, Personal Burnout, and Work Engagement. A total score of PSC-4, ranging from to 4-20, was obtained to assess the benchmark level of PSC-4 (Berthelsen et al., 2020). To perform SEM, direct paths were tested between independent variables, that is, Accreditation Demands and Social Support,

and PSC-4 and outcome variables, that is, Personal Burnout and Work Engagement. PSC-4 was included as a moderator of health impairment and motivational paths. the moderating effect of PSC was tested using two interaction variables (Kline, 2016). The first interaction was the product of multiplying accreditation demands by PSC-4. The second interaction was the product of multiplying social support by PSC-4. The significant interactions were plotted using the techniques and excel sheet proposed by Dawson and Richter (2006). A Microsoft Excel sheet, prepared by Dawson and available online, facilitated the presentation of the interaction effects of PSC-4. To test the model, all variables were standardised to account for the different scoring techniques and were allowed to correlated to account for the assumptions of cross-lagged models (Hox, 2010).

Two models were tested and compared. Model 0 (M0) is a simpler model, which includes direct paths from predictor variables to outcome variables. Model 1 (M1) included paths similar to M0 and the two direct paths from the interaction products between Accreditation Demands and PSC-4, and Social Support and PSC-4. To assess the moderation effects, the paths from the interaction coefficients to dependent variables should be statistically significant. Furthermore, the tested model (M1) needs to show a better fit when compared to the simpler model (M0). Such an approach is considered effective for testing the differences in Chi-square (χ^2) results in competing models. For an adequate fit, I followed Hu and Bentler's (1999) recommendation of a combination of fit indices where SRMR < .08, RMSEA < .06, CFI > .95, and a minimum value of AIC, log-likelihood, and χ^2.

7.3 Results

Table 7-1 presents the means, standard deviations, and reliability of the measures to improve the understanding of constructs change over time. The mean score for PSC-4 was 12.6 for T1 and 13.6 for T2, suggesting a good level of PSC (Berthelsen et al., 2020). The internal consistencies of all measures were acceptable having Cronbach's alpha above .75, except for Accreditation Demands measures, which showed alpha values of .64 and .68 in T1 and T2, respectively. While some authors have suggested that a Cronbach value between 0.6 – 0.7 indicates a moderate to acceptable values (Taber, 2018), it was vital to keep the Accreditation Demands construct because it was developed for this study and has never been measured before.

The study selected participants with matching codes to continue with the cross-lagged moderation analysis. Independent sample t-tests were performed at T1 to reduce a systematic bias between participants with matching codes (n= 121) and excluded participants (n = 168). All variables were included in the independent sample t-tests analysis to exclude differences between both groups. The results showed a non-significant difference in Accreditation Demands variable (t(287)= 0.24, *ns* ; Social Support (t(276)= 0.30, *ns*); PSC-4 (t(271)= 0.10, *ns*); Personal Burnout (t(269)= -1.4, *ns*); and Work Engagement (t(271)= 0.20, *ns*). Similar results were found in T2 when compared between included and excluded cases. Therefore, any indication of selection bias among participants was dismissed.

Table 7-1 Comparative means, standard deviations (SD), and internal consistencies before and after accreditation.

Factor (Number of items)	Time 1	Time 2

	(n=289)	**(n=220)**
Accreditation Demands (4)		
Mean.	2.65	2.64
SD	1.20	1.22
Cronbach's α.	0.64	0.68
Social Support Superior (6)		
Mean.	78.40	76.67
SD	20.46	20.69
Cronbach's α.	0.94	0.93
Psychosocial Safety Climate (4)		
Mean.	12.68	13.67
SD	3.86	4.00
Cronbach's α.	0.93	0.97
Personal Burnout (6)		
Mean.	46.32	42.94
SD	20.19	22.31
Cronbach's α.	0.91	0.93
Work Engagement (7)		
Mean.	4.54	4.48
SD	1.20	1.23
Cronbach's α.	0.93	0.93

Table 7-2 Pearson's correlation among variables with means, standard deviations (SD), and internal consistencies (n=121).

	Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	AGE	39.2	7.6	1															
2	Clinical Role	0.78	0.5	-.08	1														
3	Accreditation Demands T1	2.65	1.2	-.01	.05	(.64)													
4	Social Support T1	78.4	21.	-.14	-.06	.14	(.94)												
5	Psychosocial Safety Climate T1	12.7	3.9	-.04	.03	.14	.21*	(.93)											
6	PSC-4 * Accreditation Demands T1	0	1	-.05	-.003	.82**	.20*	.61**	(-)										
7	PSC-4 * Social Support T1	0	1	-.11	-.04	.18*	.67**	.84**	.57**	(-)									
8	Personal Burnout T1	46.3	20.	-.07	-.02	.01	-.37**	-.28**	-.14	-.39**	(.91)								

9	Work Engagement T1	4.54	1.2	.08	-.09	.10	.41**	.17	.08	.33**	-.27**	(.93)						
10	Accreditation Demands T2	2.64	1.2	.09	.17	.24**	.03	.17	.20*	.14	.07	.13	(.68)					
11	Social Support T2	76.7	21.	-.05	.05	.02	.45**	.12	.05	.29**	-.24**	.11	-.16	(.93)				
12	Psychosocial Safety Climate T2	13.7	4.0	-.03	.01	.01	.14	.37**	.13	.31**	-.11	.21*	.08	.19*	(.97)			
13	PSC-4 * Accreditation Demands T2	0	1	.03	.13	.16	.12	.27**	.20*	.26**	-.03	.17	.86**	-.03	.51**	(-)		
14	PSC-4 * Social Support T2	0	1	-.04	.04	-.02	.33**	.30**	.08	.36**	-.21*	.22*	-.04	.74**	.78**	.31**	(-)	
15	Personal Burnout T2	42.9	22.3	-.21*	.14	.07	-.18	-.13	-.04	-.18	.41**	-.23*	.02	-.33**	-.43**	-.19*	-.48**	(.93)
16	Work Engagement T2	4.5	1.2	.08	-.15	.18*	.28**	.05	.16	.14	-.23*	.37**	-.08	.55**	.11	-.02	.39**	-.50**

Note. *$p < 0.05$ (2-tailed), **$p < 0.01$ (2-tailed).

Pairwise t-tests were performed to assess the mean differences of variables over time, i.e., T1 and T2. The average score of Accreditation Demands had hardly decreased, and showed a non-significant mean difference between T1 and T2 ($t(120) = -.004$, *ns*). Likewise, Social Support had not changed significantly ($t(117) = -1.6$, *ns*); however, the mean differences showed a negative value indicating a reduction in perceived Social Support. Personal Burnout and Work Engagement also showed non-significant changes over time, ($t(116) = -3.8$, *ns*) and ($t(115) = -.05$, *ns*), respectively. It is worth noting that both Personal Burnout and Work Engagement means decreased after accreditation. Finally, PSC-4 had significantly increased between T1 and T2 ($t(116) = 1.0$, $p < .05$).

Pearson's correlations are shown in Table 7-2. The correlation analysis were consistent with those of previous studies. In T1, PSC-4 was negatively related to T2 Personal Burnout and positively related to T2 Work Engagement. Accreditation Demands construct was positively related to Personal Burnout after accreditation. Social Support, on the other hand, was negatively related to Personal Burnout and positively related to Work Engagement. Finally, both interaction products were negatively related to Personal Burnout and positively related to Work Engagement.

7.3.1 Main effects

The stability of constructs from T1 to T2 was assessed in an a-priori model that included only autoregressive paths, which were significantly not equal to zero (Table 7-3). Both models included paths of the a-priori model and cross-lagged paths between variables in T1 and T2. Furthermore, these models controlled for the age of participants and their involvement in clinical roles. The two model fits are presented in Table 7-4, comparing M0 with M1 using the minimum values of AIC, log-likelihood,

and χ^2. M1, including the moderation effects, indicated good fit compared to M0, and had a minimum value of -2LL and AIC: X^2 (33) = 41.37, *ns*, CFI = .991, RMSEA = .048, and SRMR = .062.

Table 7-3 Autoregressive paths between variables.

	Autoregression paths Time 1 → Time 2	β	b	S.E.	P-Value
1	Accreditation Demands T1 → T2	.39	.36	.05	0.000
2	Social Support T1 → T2	.34	.35	.05	0.000
3	Psychosocial Safety Climate T1 → T2	.42	.41	.05	0.000
4	Personal Burnout T1 → T2	.46	.41	.07	0.000
5	Work Engagement T1 → T2	.39	.37	.07	0.000
6	PSC-4 * Accreditation Demands T1 → T2	.36	.33	.05	0.000
7	PSC-4 * Social Support T1 → T2	.38	.35	.05	0.000

Note: β: unstandardised path coefficients; *b*: standardised path coefficients

The results of the cross-lagged effects are presented in table 7-5. Accreditation Demands variable was positively related to Personal Burnout and negatively related to Work Engagement in both models (i.e., M0 and M1). Furthermore, Social Support variable was negatively related to Personal Burnout and positively related to Work Engagement. However, these results were not statistically significant. After controlling for age and clinical role, there was a statistically significant direct relationship between Accreditation Demands at T1 and Personal Burnout at T2 (b = .54, $p < .01$).

Furthermore, a significant direct effect was found between Social Support at T1 and Work Engagement at T2 (b = .47, $p < .05$) after controlling for clinical role

only. These results support H1a and H2a. Although clinical role had a relatively small effect on Personal Burnout T2 (*b* = .17, p < .05) and Work Engagement T2 (*b* = -.19, p < .01), such effects were statistically significant. Surprisingly, age was negatively related to Personal Burnout T2 (*b* = -.16, p < .05), indicating that with age, HCPs experience less burnout.

Table 7-4 Fit Statistics for the study models (n=121).

Model	X^2	df	P-Value	CFI	RMSEA	SRMR	LL	AIC	Model Comparisons	Δ X^2	Δ df	Δ LL
M0	13.3	14	0.50	1.00	0.00	0.05	1531	3143				
M1	41.4	33	0.15	0.99	0.048	0.06	1457	3043	M0 vs M1	28.1	19	148.27**

Note: df: Degrees of Freedom; CFI: Comparative fit Indices; RMSEA: Root Mean Square Error of Approximation; SRMR: Standardised Root Mean Square Residual; AIC: Akaike Information Criterion; LL: Log-Likelihood; Δ: differences in estimations; X^2: Chi-Square. *p < 0.05 (2-tailed), **p < 0.01 (2-tailed).

7.3.2 Interaction effects

Figure 7-2 presents the paths from the final model. Out of the four possible moderation effects of PSC-4 on outcome variables, only two interactions had a lagged effect on Personal Burnout and Work Engagement in T2. As shown in Table 7-5, the result of the interaction between Accreditation Demands and PSC-4 supports the first part of the third hypothesis (H3a). A significant negative effect was found between the interaction and Personal Burnout in T2 (*b* = -.64, p < .01). The graphical presentation of interaction effect is indicated by non-parallel lines (Jaccard, 2003). Figure 7-2 shows that personal burnout increased as accreditation demands increased; however, high levels of PSC reduced the level of burnout. Although the

interaction between Accreditation Demands and PSC-4 had a positive relationship with Work engagement, the path was not significant (*b* = .49, *ns*).

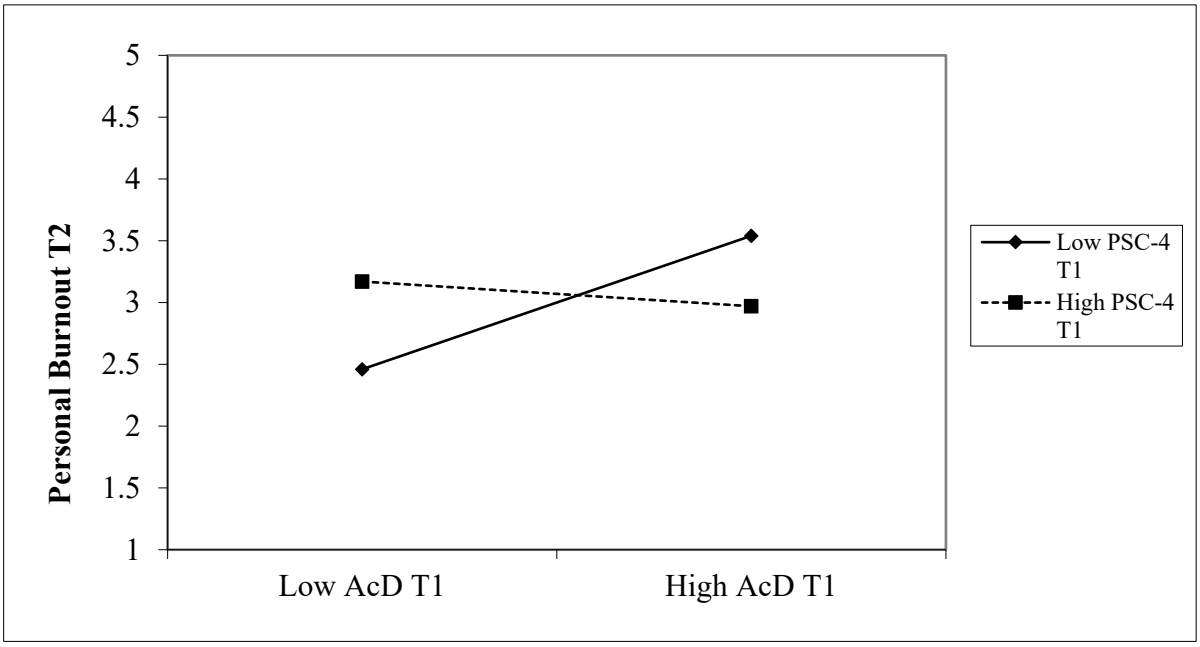


Figure 7-2 This plot shows a significant moderating effect of PSC on the relationship between Accreditation Demands and Personal Burnout.

On the other hand, the interaction between Social Support and PSC-4 showed a statistically significant effect on Work Engagement in T2 (*b* = -.75, p < .05), supporting the second part of the fourth hypothesis H4b (Figure 7-3), however, this effect was in the opposite direction, suggesting a suppression effect. The interaction between PSC-4 and Social Support in T1, and Personal Burnout T2 (b = .25, ns); however, the sign of the effect was in the opposite direction.

Surprisingly, the direct paths from PSC-4 in T1 to the outcome variables, Personal Burnout and Work Engagement, were not significant (*b* = .10, *ns*) and (*b* = .23, *ns*). It is worth noting that the lagged direct effects of PSC-4 on the outcome variables were smaller than the lagged effects for the interaction effects, suggesting that the moderating effect of PSC-4 was more prominent than its direct effects.

Further, the addition of interaction paths had improved the fit of the model. M1, the moderation model, showed better fit when compared to M0, which contained the direct effect only. Estimation of log-likelihood (LL) deviance of M1 had significantly decrease when compared to M0 (Δ -2LL (19) = 148.3, $p < 0.01$). Moreover, the Akaike Information Criterion (AIC) in M1 had a minimum value compared to M0, suggesting that M1, with the interaction paths, had a better fit to the data and supporting H5.

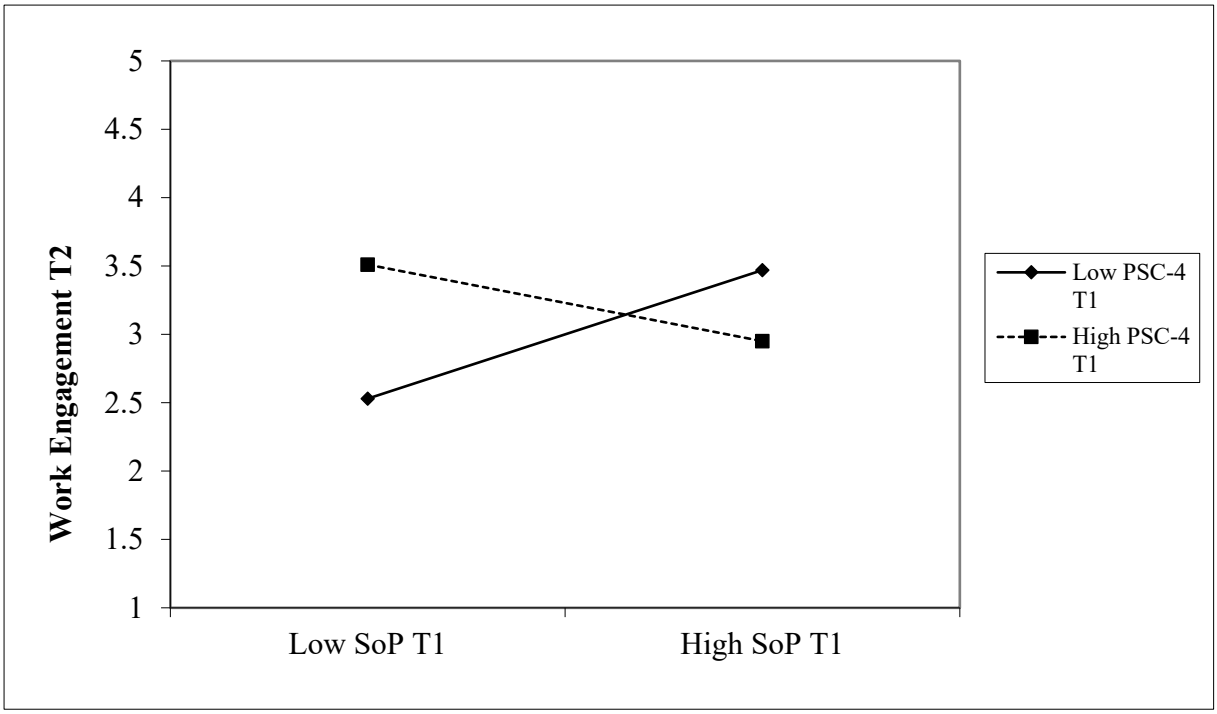


Figure 7-3 This plot shows a significant moderating effect of PSC on the relationship between Social Support and Work Engagement.

Table 7-5 Results of the moderated structural equation models: interactions of Accreditation Demands and Social Support with PSC-4

Model	Predictors	Personal Burnout at Time 2			Work Engagement Time 2		
		β	*b*	*95% CI*	*β*	*b*	*95% CI*
M0	Accreditation Demands T1	1.02	.05	(-0.092,0.199)	.20	.20**	(0.055,0.334)
	Social Support T1	-.06	-.06	(-0.22,0.107)	.01	.15	(-0.033,0.332)
	PSC-4 T1	-.25	-.04	(-0.21,0.126)	-.02	-.07	(-0.213,0.075)
	Age	-.58	-.19**	(-0.338, -0.05)	.01	.06	(-0.078,0.204)
	Clinical Role	8.47	.19*	(0.044,0.332)	-.47	-.19**	(-0.328, -0.05)
M1	Accreditation Demands T1	10.50	.54**	(0.162,0.925)	-.20	-.19	(-0.604,0.218)
	Social Support T1	-.23	-.21	(-0.598,0.186)	.03	.47*	(0.053,0.877)
	PSC-4 T1	.40	.07	(-0.482,0.617)	.07	.23	(-0.332,0.793)
	PSC-4 * Accreditation Demands T1	-14.70	-.64*	(-1.121, -0.161)	.60	.49	(-0.029,1.011)
	PSC-4 * Social Support T1	5.79	.25	(-0.442,0.948)	-.92	-.75*	(-1.478, -0.023)
	Age	-.48	-.16*	(-0.284, -0.035)	-	-	(-,-)
	Clinical Role	7.78	.17*	(0.036,0.303)	-.46	-.19**	(-0.327, -0.05)

Note: M0: model 0; M1: model 1; PSC-4: psychosocial safety climate 4 items; β: unstandardised path coefficients; *b*: standardised path coefficients. *p < 0.05 (2-tailed), **p < 0.01 (2-tailed).

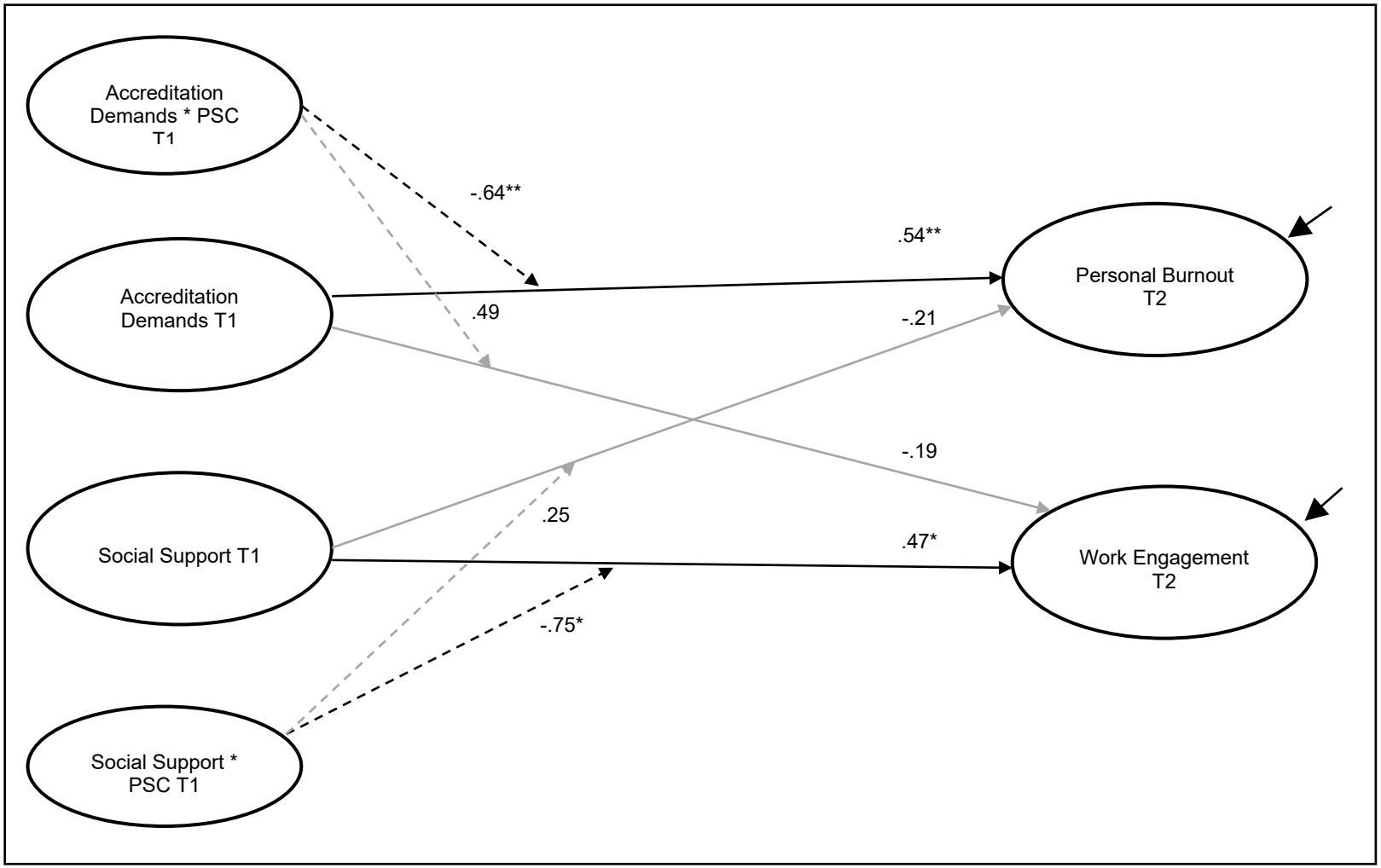


Figure 7-4 The final model that includes the final paths.

Note: Black solid lines represent direct effect; dashed lines represent interactions; grey lines represent insignificant effect, PSC: Psychosocial Safety Climate. $\chi 2$ (33) = 41.37, p = ns, CFI = 0.991, RMSEA = 0.048, and SRMR = 0.062. *p < 0.05, **p < 0.01.

7.4 Discussion

Many countries have employed hospital accreditation as a tool to monitor the performance of healthcare sector and to ensure a safer environment for patients. This study aimed to introduce a novel type of job demands specific to the accreditation process, that is, accreditation demands, and examine their effect on HCPs' burnout level. In addition, the study showed the role of job demands and job resources as leading indicators of burnout and work engagement in healthcare accreditation. It was found that the main effect of accreditation demands in T1 had predicted personal burnout in T2. Job resources in T1 however, that is, social support, was found to increase work engagement in T2.

The results showed that PSC moderated the unique aspects of job demands during accreditation. Levels of PSC prior to the accreditation visit were high (mean = 12.6); nevertheless, the findings demonstrate that perceived PSC can buffer the relationship between accreditation demands and negative psychological health outcomes and lower the relationship between social support and positive organisational behaviour. The results of the current study showed significant effects of the interaction between accreditation demands and PSC-4 on reducing burnout levels, supporting previous literature (Dollard & Bakker, 2010; Hall et al., 2013; Garrick et al., 2014). Surprisingly, the analysis found a more prominent moderating effect for PSC than its direct effects. In this study,

PSC acted as an organisational resource for HCPs to mitigate the negative effects of accreditation demands.

The study found a positive association between PSC and perceived social support, which suggests that PSC can be advantageous in explaining the potential role of job resources in relation to employees' well-being, particularly during accreditation. However, it is worth noting that PSC did not enhance the relationship between social support and work engagement; rather, the interaction suppressed the effect of this relationship. One explanation for this may be that the interaction effect of PSC is increased when job demands are high or when job resources are inadequate. For instance, Figure 7-3 suggests that a high level of PSC is more effective in low social support contexts. Supporting this finding, Bronkhorst (2015) did not find a significant interaction effect between PSC and job resources in enhancing psychosocial safety behaviours.

Given that the PSC construct was operationalised as an organisational resource that influences HCPs' decisions of when to use appropriate resources, it seems that the effect of PSC is more evident in situations with high job demands and low job resources. Previous literature has established the importance of resources in determining employees' perceptions of stressful events. The study proposed that increased job demands (i.e., accreditation demands) influence HCPs' psychological health; however, PSC acts as a resource that helps HCPs deal with such demands and reduce the negative psychological outcomes associated with it (Hall et al., 2013).

These findings broadly support the work of other studies in this area linking PSC with the JD-R framework (Hu et al., 2017; Orgambídez-Ramos & de

Almeida, 2017). For example, Hu et al. (2017) found a positive relationship between increased job demands and burnout among a group of Chinses nurses. Furthermore, they suggested that inadequate exposure to job resources associated with increased burnout. Orgambídez-Ramos and de Almeida (2017), however, found a positive relationship between job resources, such as social support, and work engagement among nurses from Portugal. However, previous studies did not account for the role of regulatory mechanisms in influencing the mental health of HCPs, such as healthcare accreditation.

Furthermore, participants with a clinical role in T1 experienced higher levels of burnout and lower levels of work engagement in T2. Such findings might be explained by the conflicting demands of accreditation and the need to maintain quality of care exerted on HCPs and their role to maintain good quality of patients' care, which broadly supports the work of other studies in the area of examining burnout among HCPs (Rotenstein et al., 2018). This finding broadly supports a recent review which showed that HCPs experienced burnout and work-related stress as a result of increasing demands and inadequate resources at work (Kinman et al., 2020). Discussion of the results related to previous literature is presented in the following chapter (Chapter 8).

The theoretical contribution of the current study is the application of PSC and JD-R models in a Middle Eastern context. The advancement of such theoretical models was achieved by the addition of a new construct that is unique to hospital accreditation. This study aligns with evidence from previous observations that confirm the moderating role of PSC in the JD-R model (Dollard & Bakker, 2010). The impact of job demands on burnout is well established

(Demerouti et al., 2001; Schaufeli & Bakker, 2004); however, there is a growing body of literature that recognises the importance of PSC in moderating such an impact in certain transitory settings, such as that of hospital accreditation. These findings raise intriguing questions regarding the nature and extent of the unintended consequences of hospital accreditation on HCPs' health and well-being. Therefore, the concept of PSC provides a practical measurement tool in articulating the relationship between job demands, job resources, and their outcomes.

7.4.1 Strength and limitations

Despite these findings, this study has some limitations. The most important limitation lies in the fact that the current study collected data at the individual level rather than at the organisational level. PSC was originally theorised to be a distinct feature of organisations; therefore, studies in this field tended to aggregate data in order to understand the relationship between organisational climate and relevant outcomes (Schneider & Reichers, 1983). However, this study assessed PSC at the individual level as a result of the limited number of public hospitals that had gone through accreditation during the data collection period. Moreover, the analyses of intraclass coefficients revealed almost no variation when grouping variables, according to hospital level, observations were treated as statistically independent. Nevertheless, the study utilised four items of the existing PSC-12 instrument (Dollard, 2019; Berthelsen et al., 2020), which was tested previously at an individual level, and the psychometric properties of the scale did not change. Besides, having a sample

size with most respondents being females and nurses, might have contributed gender imbalance imposing a further limitation.

Furthermore, the study measured social support as a macro level variable and integrated two different types of social support. In this sense, integrating items from supervisors' support with those from the social community at work was intended to help address the research question related to the impact of job resources during accreditation. Therefore, this study applied the social support domain as a macro-level variable suggested by the results from the previous chapter, which validated the instruments used in this study (Chapter 6). While the integrated measure showed a better model fit, it should be noted that the statistical basis for integrating them could be due to the limited sample size.

Furthermore, the integration between different types of social support may be due to the similarity in wording of both domains. For example, the first item suggests a good atmosphere between participants and their colleagues, and the second item suggests good cooperation between colleagues at work. Indeed, the modification showed improvement in the fit of the model after a post-hoc addition to the model. In addition, the integrated construct outlined insights from the social support experienced by HCPs. It also emphasised the importance of interpersonal relations and leadership in linking social support to work engagement during accreditation. Given that the COPSOQ instrument covers a broad range of domains, including interpersonal relations and leadership at work, the integration between sub-domains of the instrument could be relevant for future studies based on the JD-R framework.

Due to the pandemic, it was difficult to recruit more hospitals or to conduct a three-wave panel study. Therefore, it was essential to stop collecting data in March 2020. Future research should aim for data to be collected at multiple time points to enhance the understanding of the possible effects of hospital accreditation on work health and organisational behaviour and whether such effects fade away with time. However, most research on PSC has been carried out in two-wave longitudinal designs and supports the moderating role of climate on work conditions (Dollard et al., 2012). The final limitation of the study is the use of a self-report questionnaire. Despite its limitations, the study adds to the understanding of the buffering aspects of the PSC to the effect of JD-R model attributed to the process of quality inspection programmes. In addition, the study was able to examine the role of PSC and within the JD-R framework in a Middle Eastern context, that of the UAE, and therefore responds to the calls for much needed research in field of occupational health and psychology in non-Western contexts.

7.4.2 Conclusion

In conclusion, the study identified unique demands of work that could predict personal burnout among HCPs while preparing for accreditation. The most obvious finding to emerge from this study is the moderation and suppression effects of PSC-4 on JD-R and organisational outcomes. Overall, this study strengthens the idea that PSC is an important construct that reduces psychological problems among HCPs. Further, the importance and originality of this study is that it investigated the JD-R model and its health impairment and motivational processes during hospital accreditation. This study found that job

demands and job resources prior to the inspection visit predicted psychological health and positive organisational behaviour. The research also showed that the clinical roles of participants predicted burnout and work engagement. The next chapter brings together findings from the three studies to discuss and triangulate those findings.

Chapter 8 Discussion and conclusion

This chapter integrates the findings from qualitative and quantitative studies presented in previous chapters and discusses them in relation to the research questions underlying this thesis. Chapter 4 has explained that this thesis aims to explore the nature of accreditation and psychosocial hazards associated with it, particularly accreditation demands, examine how accreditation fits into the job demands-resources (JD-R) model and psychosocial safety climate (PSC) framework to affect HCPs' wellbeing, and test the applicability of these models and methods in the United Arab Emirates' (UAE) healthcare context. First, this chapter discusses the results presented in previous chapters and integrates them using the triangulation protocol suggested by Farmer et al. (2006). Second, the results are incorporated with previous literature to assess if the findings support or contradict past studies. Third, limitations and a critical evaluation of the studies presented in this thesis are discussed and rationalised. Finally, implications are advanced on the appropriateness of organisational climate and the usage of resources that enhance HCPs' mental health throughout the process of accreditation.

8.1 Summarising the results

Although the impact and outcome of accreditation in healthcare organisations remain debatable, the UAE mandates such assessments to regulate the quality of healthcare services. The first study presented in Chapter 5 provided a robust understanding of the potential psychosocial hazards associated with accreditation processes that take place in public healthcare

organisations. The analysis of the first study generated two main themes: *Challenging factors in the process of accreditation* and *Enablers to achieving accreditation*. In general, the results suggested that the accreditation process is demanding. Although HCPs were motivated to work in organisations that achieved accreditation certificates, it seems that this motivation enhanced HCPs' engagement in their workplaces. Furthermore, the results suggested a variation in the measures adopted by managers to support HCPs during the accreditation process.

According to the qualitative study, it can be assumed that the process of accreditation has a clear impact on the working environment in healthcare facilities before an inspection visit. These findings raise intriguing questions about the nature and extent of accreditation regarding high job demands, inconsistent job resources and unclear management practices to prioritise HCPs' psychological health during accreditation assessments, which need to be further elucidated. Therefore, the second study aimed to develop a questionnaire to examine the psychosocial hazards using quantitative methods.

The second study contributed to the field of occupational health psychology (OHP) by developing a measure specific to the psychosocial hazards experienced by HCPs during hospital accreditation (see Chapter 6). Findings from the qualitative study provided critical details related to the construct of the JD-R model and facilitated the development of a scale (i.e., accreditation demands) that measures the unique requirements expected of HCPs during the process of accreditation. Additional items were included to account for findings discussed in the qualitative study, such as interpersonal relationships at work,

organisational resources and outcomes related to employees' health and positive organisational behaviours. Therefore, the second study explored and validated the latent structure of both JD-R and PSC models using exploratory and confirmatory factor analysis (EFA and CFA). The analysis extracted five factors, including accreditation demand, social support, PSC, personal burnout, and work engagement. These factors were then cross-validated by specifying the same relationship between indicators and constructs. The model showed good construct validity through acceptable goodness of fit indices. The results also showed high internal consistency through high Cronbach's alphas and acceptable model fit.

Finally, the longitudinal analysis of the third and final study (see Chapter 7) provided further evidence of the moderating role of PSC on the JD-R model using proposed variables from the second study (Chapter 6). Over time, accreditation demands were observed to be significantly and positively related to personal burnout, while social support from colleagues and supervisors was significantly and positively related to work engagement. These observations were expected and aligned with the hypotheses (section 7.1.1). Although the relationship between accreditation demands and work engagement and social support and personal burnout were not significant, such relationships were in the hypotheses' direction, i.e., negative associations.

Importantly, the results of the cross-lagged design showed that perceived PSC can buffer the relationship between accreditation demands and negative psychological health outcomes and the relationship between social support and positive organisational behaviour. Interestingly, the interaction product between

PSC and social support was negatively associated with work engagement. A possible explanation for this might be that PSC is more effective in influencing the health impairment pathway. It is important to note that while PSC could moderate these relationships, it did not directly influence personal burnout or work engagement.

8.1.1 Triangulation protocol

By triangulating findings from different methodological studies using both qualitative and quantitative designs, this thesis can achieve a clearer perspective of healthcare accreditation. Although the studies in this thesis used data from the same population (i.e., MOHAP's employees), the sources of data and data collection methods were different (Figure 4-1). Therefore, findings were synthesised following the triangulation protocol described by Farmer et al. (2006). As discussed in Chapter 4 (section 4.2.1.2), the protocol includes four steps to converge findings from different methods and sources, such as sorting, coding, convergence assessment and completeness assessment. Table 8-1 presents the combined findings and levels of agreement.

Table 8-1Triangulating qualitative with quantitative studies

No.	Research themes	Qualitative findings	Quantitative findings	Convergence coding	Convergence assessment
1	Job demands (i.e., accreditation demands)	Participants thought that the accreditation process involved working with additional demands that were placed on HCPs, including documentation and attending meetings and training sessions, which were perceived to reduce the time spent with patients.	A new construct was developed to reflect the demands for documentation and attending meetings and training sessions related to accreditation. The construct was tested on a group of HCPs. The mean score for the accreditation demands variable did not change between T1 and T2. The paired t-test showed an insignificant change in the mean score. However, there was a significant direct relationship with personal burnout (Chapter 7).	Partial agreement between the results.	Due to the design of the two-wave study, one cannot indicate if the demands increased before accreditation; however, it is worth noting that such demands were positively related to personal burnout after accreditation.

No.	Research themes	Qualitative findings	Quantitative findings	Convergence coding	Convergence assessment
2	Job resources (i.e., social support)	Participants referred to teamwork and colleagues' support to ease the effect of work demands during the preparation phase. Managers supported their employees during the preparation for accreditation, but other mangers experienced elevated stress.	The mean score for the social support variable decreased, but not significantly, after accreditation. Yet, social support was found to predict work engagement significantly and positively.	Partial agreement between the results.	Although the results of the paired t-test were not significant, the mean scores were higher in T1 compared to T2, suggesting an increased level of support from supervisors and colleagues before accreditation.
3	Organisational resources (i.e. PSC)	Participants had mixed views regarding the support and commitment shown by management to prevent stress while preparing for accreditation.	The paired t-test showed a significant increase in the mean difference of PSC in T2 compared to T1. Results also found that the construct had a moderating effect to mitigate the effect of demands in burnout.	Partial agreement between the results.	Participants in the qualitative study did not perceive clear management support.

No.	Research themes	Qualitative findings	Quantitative findings	Convergence coding	Convergence assessment
4	Health impairment (i.e. personal burnout)	Participants experienced anxiety and higher stress levels before an accreditation inspection. HCPs also exhibited a range of health issues before inspectors' visits, which were attributed to the preparation process.	The mean score for the personal burnout variable decreased, but not significantly, between T1 and T2. Accreditation demands in T1 were significantly and positively related to personal burnout in T2.	Agreement between the results.	Results from the quantitative study showed a positive linear effect of demands on burnout.
5	Motivation (i.e. work engagement)	Participants who went through the accreditation process felt satisfied and confident after accreditation. Participants also felt they were knowledgeable and engaged in their workplace because accreditation focused on overlooked training areas.	The work engagement mean score did not change after accreditation. However, work engagement in T2 was positively related with social support in T1.	Agreement between the results.	The quantitative study showed a positive relationship between social support and work engagement.

8.2 Comparing the results with previous findings

The findings in this thesis have broadly supported the work of other studies relating specifically to hospital accreditation literature or testing the theoretical frameworks of the JD-R and PSC models, which are central to organisational psychology. Accreditation programmes have been found to promote change, standardise work and limit potential errors triggered by different practices (Greenfield et al., 2012). In line with the literature, the qualitative study found that HCPs who went through the process of accreditation were proud and confident (Alyahya et al., 2018). The results in this thesis suggested that HCPs felt more knowledgeable and engaged at work because accreditation standards focused on some overlooked training areas, such as managing the safety of healthcare facilities. Accreditation was also perceived to standardise the delivery of services to patients by creating a shared patient-safety language among HCPs (Bogh et al., 2018).

However, as the inspection date approached, HCPs experienced unique demands to meet the requirements for the accreditation survey and to achieve good inspection feedback. Engel and Andersen (2016) demonstrated how hospitals can exaggerate the emphasis on certain standards, i.e., documentation, which might not be meaningful to HCPs. Therefore, instead of viewing accreditation evaluation as an opportunity for improvement, it was a burden for HCPs to balance their clinical roles and accreditation demands. As a result, many HCPs in this research experienced increased stress related to accreditation demands, which also agree with the study of Al-Faouri et al. (2019). Furthermore, Deming (2000) explained how inspection might be ineffective and might increase costs rather than improve a particular

process. Therefore, this thesis argues that healthcare organisations need to adhere to quality and learning rather than regular inspections of facilities.

Previous research suggests that organisational change is perceived as a traumatic event that could cause distress among workers. Houdmont and Leka (2010) explained how changes in organisations can create role ambiguity for individuals and the future of their organisations. Therefore, the accreditation process can be viewed as a change process as most of the hospitals in this study had only experienced the first cycle of accreditation. Previous observations on the process of accreditation suggest some unintended consequences, including increased workload (Touati & Pomey, 2009; El-Jardali et al., 2014), increased stress levels (Kousgaard et al., 2019), and increased use of resources (Brubakk et al., 2015). However, it is uncertain whether work-related stress is caused by the accreditation inspection or by the enforced change it places on the organisation.

In addition to these findings, the qualitative study suggested that attending frequent meetings and training sessions, which are related to the accreditation process, was perceived to delay the delivery of services to patients; for example, by cancelling or rescheduling appointments. These results seem to be consistent with recent studies indicating that efforts put into preparing for accreditation were found to compromise patients' care (Ho et al., 2014; Bogh et al., 2018). Given the unintended consequences accreditation might have on patients' care, it is important to measure these consequences and their relationship with HCPs' psychological health. For instance, a recent study in Jordan found a significant association between accreditation processes and stress levels among HCPs (Al-Faouri et al., 2019).

The quantitative analysis reaffirmed the health impairment and motivational pathways of the JD-R model. In their JD-R model, Demerouti et al. (2001) suggested

that workers develop burnout when subjected to increased job demands, irrespective of the type of occupation they have. The construct of accreditation demands before an inspection visit was found to be positively related to personal burnout three months after the visit. Additionally, social support was found to be positively related to work engagement. As the JD-R model is argued to be flexible and can be used in different work contexts (Bakker & Demerouti, 2007), the results of this research support the findings from previous studies suggesting that job demands and job resources directly affect HCPs' health and wellbeing, such as burnout and work engagement (Arnold. Bakker et al., 2003).

Previous research defined PSC as a leading construct to job demands and resources; however, the longitudinal analysis showed that PSC can moderate the relationship between JD-R and the outcome variable. Findings demonstrated how PSC can buffer the relationship between accreditation demands and personal burnout. However, PSC could not boost the relationship between social support and work engagement, instead it reduces this relationship. The results were also consistent with previous literature supporting the moderating role of PSC on the effect of job demands on workers' health outcomes (Law et al., 2011; Dollard et al., 2012).

Most of the PSC studies utilised the model to explain a higher-level organisational construct. However, in this thesis, PSC was argued to be a form of organisational resource allowing HCPs to seek available support and overcome burnout caused by job demands. Hall et al. (2013) tested PSC as an organisational resource within the JD-R model that allowed workers to utilise available resources. Their findings suggested that PSC can buffer the relationship between depression experienced by workers from different organisations and positive organisational

behaviours. The findings in this thesis confirmed the interaction effect of PSC with both constructs of the JD-R model at an individual level to moderate outcome variables, such as personal burnout and work engagement. Furthermore, previous studies have shown the moderating effect of PSC on JD-R using aggregated data (Dollard et al., 2012; Garrick et al., 2014). The present study, however, did not provide evidence for aggregating PSC at hospitals' level.

It is worth mentioning that the results from the longitudinal study revealed that participants with clinical roles experienced personal burnout and less work engagement. It seems possible that these results are due to the additional demands felt by HCPs when preparing for accreditation. These results support other research that found the experience of burnout to be high among HCPs around the world (Lemaire & Wallace, 2017). Although a recent systematic review showed a lack of consensus among published studies on HCPs' exposure to burnout due to occupational stress, these published papers could estimate the overall burnout level among HCPs (Rotenstein et al., 2018). The literature has suggested that HCPs commonly experience burnout because they develop intense relationships with patients. Furthermore, Loerbroks et al. (2017) suggested an association between burnout and a self-perceived decrease in the quality of patients' care.

This research concluded that certain demands of the accreditation process were positively associated with burnout among HCPs working in public hospitals. Adequate social support was also positively related to work engagement. The presence of organisational resources, i.e., PSC, moderated the effect between these relationships. Therefore, findings from this research open a discussion about the psychosocial hazards facing workers during healthcare accreditation and the significance of HCPs' mental health, which challenges the continuity of care.

It is acknowledged that this research cannot answer all of the questions related to the role of regulatory mechanisms in influencing the mental health of HCPs, such as healthcare accreditation. However, results from this thesis suggest that further investigation is needed to understand the impact of accreditation on HCPs' mental health and the quality of care. Furthermore, the results draw attention to the need to focus on the public health sector as it is one of the highest risks of developing work-related stress (Loerbroks et al., 2017).

Therefore, findings suggest that the government should explore further mechanisms for support and incentives for healthcare organisations to form robust standards aiming to reduce burnout among HCPs. Furthermore, management needs to engage HCPs by setting clear expectations for mandating healthcare accreditation and considering and supporting HCPs with mental health problems during the accreditation process to help prevent mental health problems, namely burnout. By acknowledging the relationship between mental health and the quality of care, the UAE government and healthcare organisations can sustain quality improvement initiatives by improving the health and wellbeing of HCPs.

Whilst accreditation aims to acknowledge healthcare organisations publicly and encourage them to improve the quality of care provided to patients, it has been repeatedly indicated that the process is bureaucratic, cumbersome, and negatively affecting HCPs' mental health and well-being. Therefore, the accreditation process needs to apply quality improvement aspects in a way that minimises workload and levels of stress and maximise work engagement and positive behaviours among HCPs.

The qualitative study suggested better planning by senior managers to minimise workload by allocating resources and engaging HCPs in advance.

Adequate planning for accreditation allows HCPs to engage with the change process without risking care delivery. From the quantitative study, findings indicated that proper social support enhanced engagement among workers. Furthermore, a high PSC level was essential to signal HCPs to use available resources to minimise the effect of increased accreditation demands before the inspection visit.

Additionally, findings support the idea that external accrediting bodies should establish standards that support and enable healthcare organisations to implement accreditation standards without distressing HCPs. Therefore, healthcare organisations are recommended to use the most suitable accrediting body that encourages quality of care while considering the mental health of HCPs.

8.3 Strength and limitations

The studies used in this research utilised a range of analytical techniques that added to the strength and originality of this thesis. Starting with the exploration of psychosocial hazards before the accreditation process, this research identified some of the unintended consequences of accreditation and highlighted consequences that were overlooked in previous studies. To examine these risks, a new construct was developed and operationalised, reflecting the unique demands associated with the process of accreditation. Other constructs were also examined in the model to account for the perceived social support that motivated HCPs during the accreditation process. These factors tested the JD-R model and the moderating effect of PSC. Given that PSC was presented as a job resource, no assumptions were made to assess PSC as a multi-level construct. Although current studies showed strong evidence of the psychosocial hazards associated with the process of

accreditation, these studies have some weaknesses that centre around their design and sample sizes.

The main limitation of this research involves the selection of samples, which were limited to healthcare organisations in the UAE. Therefore, the results may not be relevant to other settings because of cultural differences, which may include different working conditions and access to various stress management programmes that may influence workers' perceptions of psychosocial hazards. However, the research aimed to capture HCPs' perceptions of accreditation and test these perceptions using a theoretical model, thereby adding to the existing literature on OHP. In the qualitative study, the recruitment process relied on different methods that could have led to biased responses from participants. However, due to the large sample size (n = 49) and mixed data collection approach (i.e. interviews and focus group discussions), it can be argued that the data provided rich information about the process of accreditation that was consistent with other studies (Ho et al., 2014; Brubakk et al., 2015; Bogh et al., 2018).

Although the data collected in the qualitative study were comprehensive, another possible limitation of the interviews and focus groups may be that participants underreported their negative perceptions about management support. Such perceptions could be due to the unclear relationship between HCPs and their managers, which underestimates the role of managers during accreditation. In focus groups, people may feel pressured to disclose their perceptions in front of their colleagues. There is also potentially biased input from HCPs due to memory effects. For example, HCPs could have recollected their experience with the accreditation process differently. One methodology that could overcome recalling events would be the use of a diary, whereby participants are asked to keep a journal of their

experiences of accreditation daily in a concurrent way. However, during the interviews and focus group discussions, participants acknowledged the support provided by managers using simple words of encouragement, suggesting that support was ambiguous during the accreditation process.

The qualitative study used a combination of interviews and focus groups, which are considered independent data collection methods, to generate in-depth views of accreditation. Researchers are encouraged to combine different qualitative methods to enrich data, yet unskilful mixing of data and assuming that the data are equal could threaten the trustworthiness of data (Morse et al., 2002; Lambert & Loiselle, 2008). Therefore, researchers must explicitly acknowledge their motivations for combining qualitative methods (Morse, 2003). In this thesis, interviews and focus groups were combined for pragmatic reasons and to complete and confirm data generated from interviews.

The focus of combining both methods then became verifying and assessing the similarity of HCPs' views about the accreditation process. When combining interviews and focus groups, it was noted that interviews reflected the general idea of accreditation and contributed to the development of the initial codes. Interviews supplied detailed descriptions of the psychosocial hazards before the inspectors' visits, and focus groups were used to confirm these findings. Furthermore, interviews helped to determine the most relevant questions to explore further in focus groups, while focus groups allowed HCPs to share similar views and elaborate upon interview responses. However, it may have been more beneficial to use only interviews to explore HCPs' perceptions of accreditation.

Despite the benefit of qualitative methods for exploring data, researchers should identify and understand their position in relation to participants by engaging in

critical reflexivity (Kornbluh, 2015). Participants usually consider researchers as experts and may think that their opinion is less valid. As a researcher and an interpreter, I assessed the existing barriers that could hinder the effectiveness of conveying HCPs' perceptions of accreditation. Therefore, before ending interviews or focus group sessions, I ensured that I summarised participants' input and obtained their approval of the interviews.

In addition, I visited the facilities and took the time to establish a transparent setting for the participants to feel comfortable and engage with the questions. Participants were assured that their lived experiences with accreditation were valued through open dialogues and discussions. These dialogues opened a rapport that allowed for honest discussions of findings. Finally, to interpret the qualitative data, it was not possible to develop a set of assumptions without linking them to my previous experience within the UAE healthcare system and the accreditation process.

In the quantitative studies, data collection relied on online surveys, which might influence the sampling approach of participants. Sampling error occurs when the sample does not include all members of a particular population (Couper, 2000). Although survey links were sent to all employees using their email addresses, some supervisors preferred to share the link via WhatsApp, which omits those employees who do not have a WhatsApp account. Furthermore, the second quantitative study was designed as a repeated measure; therefore, participants who responded in the first survey might not respond in the second one. Besides, as the HCPs were working in facilities that were soon to be inspected, it is unlikely that all of them had time to respond to the survey. These issues represent some of the challenges that were faced when administering the online surveys.

The longitudinal study had a distinct weakness that centred around collecting data using a two-wave cross-lagged panel design. Full-panel data comprising a three-wave design is recommended to test the reciprocal effect of outcome variables and uncover the causal effect between PSC and outcome variables (Dormann & Zapf, 1999). Although the study used a cross-lagged design to strengthen the claims that accreditation demands before an inspection visit is positively associated with burnout, the study only collected data at two time points. Due to the pandemic, it was difficult to recruit more hospitals or to conduct a three-wave panel study; therefore, it was essential to stop collecting data in March 2020.

Future research should aim for data to be collected at multiple time points to enhance the understanding of the possible effects of hospital accreditation on work health and organisational behaviour and whether such effects fade with time. However, most research on PSCs has been conducted using two-wave longitudinal designs and supports the moderating role of such a climate on work conditions (Dollard et al., 2012; Loh et al., 2018).

Another limitation lies in the fact that the current study analysed the PSC construct at an individual level rather than an organisational level. By adopting such a strategy, the relationships involving PSC could be attributed to personal bias or common method problems. PSC is theorised to be a distinct feature of organisations; therefore, studies in this field need to aggregate data to understand the relationship between organisational climate and relevant outcomes (Schneider & Reichers, 1983). However, this study assessed PSC at the individual level due to the limited number of public hospitals that had gone through accreditation during the data collection period, which restricted the application of certain analytical techniques, i.e., multi-level modelling.

It is worth mentioning that intraclass correlation coefficient (ICC) analyses showed almost no variation when grouping outcome variables according to hospitals' level; therefore, PSC should be interpreted with caution as an organisational resource (Bakker et al., 2010b; Hall et al., 2013). This research used four items from the existing PSC-12 instrument (Berthelsen et al., 2020; Dollard, 2019), which was tested previously at an individual level, and the psychometric properties of the scale were consistent.

An additional limitation is that the quantitative studies utilised a self-reported questionnaire that could have led to an explanation of the relationship between variables through common understandings of the survey items. Therefore, the perception of personal burnout and work engagement rely heavily on HCPs' experience of demands and resources during accreditation. Other factors might also have influenced the relationship between job demands and job resources constructs and outcome variables. Findings in the qualitative study showed that HCPs experienced different psychosocial hazards including workload, work pace, and work-family conflict. However, these hazards were not included in the longitudinal study, as mentioned in Chapter 6. Therefore, these hazards might have explained more the influence of job demands on HCPs mental health. Additionally, having a sample size with mainly females and nurses as respondents might have contributed to gender imbalance. The limited sample size and the gender imbalance of this study also impose further limitations.

8.4 Practical implications

Global interest in improving the quality of healthcare services has been observed over the past two decades. Many countries have used accreditation to

evaluate and control the quality of healthcare settings. Although accreditation was voluntary in the UAE in 2009, the country now has the highest number of accredited healthcare organisations (Chapter 1). However, more information is needed about the impact of accreditation on HCPs and the quality of services in the UAE. Therefore, this research has implications for the work of psychology in relation to healthcare accreditation.

Recognising the influences of accreditation helps identify areas to improve its process and efficacy. Therefore, obtaining feedback from HCPs is essential in evaluating the effectiveness of such programmes. HCPs represent the first line in implementing the standards of accreditation; therefore, leaders must acknowledge the unintended consequences of accreditation programmes. The results are essential for informing leaders about the impact of the increased demands associated with accreditation programmes on the mental health and well-being of HCPs. As HCPs are continually faced with work demands, the mechanism by which healthcare organisations can increase the perceptions of social support among HCPs is vital. Findings suggest a positive association between social support and work engagement, in which management can improve motivational and support programmes before inspectors' visits to estimate the resources needed to implement the accreditation standards.

Additionally, the findings from this study suggest that the PSC serves as a signal that allows HCPs to use available resources to moderate the negative impact of accreditation demands on their burnout levels. Healthcare organisations should promote a good PSC by increasing awareness about HCPs' psychological health as well as assessing the level of PSC and corporate policies and practices that protect workers' mental health.

This research does not intend to denounce healthcare accreditation programmes; instead, it aims to raise awareness of the consequences of the psychosocial hazards in these programmes. Therefore, it can be argued that the process of accreditation increases work-related risks before the inspection visit. These findings strengthen the idea that appropriate systems and support for HCPs should be a priority when planning for accreditation. Furthermore, organisations should plan and inform HCPs of what to expect in the accreditation process. While many healthcare organisations experience the challenging demands of accreditation, these organisations are required to prepare in advance for the inspections.

The results might be subjected to HCPs working in hospitals governed by MOHAP and their perceptions of job demands and job resources before accreditation. Despite the discussed limitations, this research contributes to the field of occupational psychology by attempting to present and explain the buffering aspects of PSC to the effect of the JD-R model attributed to the process of quality inspection programmes. Additionally, the study assesses the PSC and JD-R models in a Middle Eastern country, i.e. the UAE, which adds to the growing body of research in the field of OHP.

Organisations need to develop a structured process for HCPs to balance patient care and the requirements of accreditation. According to this study, it can be implied that the accreditation process has a clear impact on the working environment and health of HCPs in healthcare facilities before and after the inspection visit. These findings raise intriguing questions about the nature and extent of accreditation regarding high job demands, inconsistent job resources and unclear management practices to prioritise HCPs' psychological health during the assessment. Future studies should consider a longitudinal design to investigate a different construct of

the JD-R model and highlight the role of healthcare facilities in improving the safety climate as a supportive measure for workers during the accreditation process.

The process of accreditation has been speculated upon and it has been suggested that hospital performance showed an immediate drop after accreditation. Devkaran and O'Farrell (2015) argued that the impact of accreditation decreases after the accreditation visit and the impact has a limited life expectancy. They showed a sharp increase in hospital compliance with quality measures and a direct decrease in such measures after the inspection visit. It can be argued that to sustain the quality of services after accreditation, adequate preparation time and frequent assessments are needed. Allowing adequate time for accreditation reduces concentrated work demands and allows HCPs to comply with the standards without compromising their mental health or patients' health. It will also increase HCPs' engagement and motivation, which sustains the impact of accreditation. It is important to consider HCPs' mental health throughout the process of hospital accreditation. To this end, accreditation surveys assess the performance of hospitals by drawing conclusions about the overall quality of services hospitals provide. Such assessments need to focus on their impact on HCPs working in hospitals and account for the developed knowledge about the unintended consequences attributed to them.

8.5 Future Studies

Future research should focus on the work environment and on supporting hospital systems prior to accreditation in order to mitigate the impact of such processes on frontline HCPs. Furthermore, managers and policy makers need to acknowledge such an impact by developing robust legislation that aims for healthy

HCPs and continuity of patients' safety. By establishing a positive relationship between accreditation demands and personal burnout, future research should aim on the relationship between accreditation demands and the quality of healthcare services, mainly before the inspection visit. Furthermore, more work will need to be done to determine the mediating effect of PSC on burnout and patient safety.

Furthermore, the process of accreditation needs to examine other critical avenues that assess HCPs' health and motivation to ensure continuity of the quality and safety of healthcare services. Future studies could focus on the relationship between HCPs' health and the quality of patient care during the preparation process of accreditation. Studies also need to test the mediating and moderating effects of PSC on the perceived psychosocial hazards that arise during such a process.

Frequent assessment and comparison of HCPs' mental health status should go hand-in-hand with accreditation inspection visits. For example, PSC potentially had an indirect effect on outcome variables, including burnout and work engagement. Previous studies attributed PSC as the 'cause of the cause' of the JD-R model; therefore, such a climate could predict demands and resources. Outcome variables, i.e., burnout, could also be associated with the quality of patients' services and safety outcomes. Such assessments of the quality of services provided by hospitals would be advantageous and provide a deeper understating to promote sustainable accreditation outcomes.

In the future, qualitative research should explore supervisors' and managers' perceptions regarding the relationship between psychosocial hazards and burnout among HPCs. Unfortunately, it was unfeasible to explore such an effect due to limited time and the onset of the pandemic (i.e., COVID-19). Therefore, there is a need to develop a better understanding of the management role in overseeing

accreditation. Given the investment of the UAE government in accrediting public healthcare facilities, a more cautious approach to mandate accreditation and ensure patient safety may be needed.

Future research should also investigate the relationship between patient safety and burnout before and after accreditation. While previous studies found a correlation between burnout and the quality of care, the relationship should be investigated using regulatory mechanisms that include accreditation, licensing and certification. Studies should also aim to investigate accident reporting and underreporting during the preparation of accreditation. Although this thesis established the pressure of job demands of accreditation on HCPs, this work pressure can increase work-related accidents and injuries to HCPs. For instance, Probst and Graso (2013) found a relationship between work pressure and accident underreporting; therefore, there is a need to investigate accident occurrence and underreporting before inspection visits.

Finally, future research should address the cost-effectiveness of accreditation inspections. These should be explored in a larger research area, including developed countries that utilise international accreditation organisations. Many countries in the Middle East have developed strategies to utilise accreditation to ensure best practices are being followed in healthcare organisations. Therefore, it is expected that these organisations might experience increased demands before an inspection. However, before embarking on this route, further study should focus on the cost-effectiveness of these programs and their effects on HCPs.

8.6 Conclusion

In conclusion, the findings in this thesis have bridged the gap between hospital accreditation and the theoretical frameworks of OHP, i.e., the JD-R and PSC models. The results of this research indicate that psychosocial hazards associated with accreditation influence HCPs' health and wellbeing. Given that burnout among HCPs can reduce the quality of care, it is essential to acknowledge such an impact by developing robust regulations and guidelines to promote a healthy working environment for HCPs during accreditation. Furthermore, the findings from these studies raise intriguing questions regarding the role of organisational resources in mitigating the effect of unintended consequences of hospital accreditation, such as accreditation demands, on HCPs' health and the quality of care.

References

Abdulla, L., Al-Qahtani, D. M., & Al-Kuwari, M. G. (2011). Prevalence and determinants of burnout syndrome among primary healthcare physicians in Qatar. *South African family practice, 53*(4), 380-383. https://doi.org/10.1080/20786204.2011.10874118

AbuAlRub, R. F. (2004). Job Stress, Job Performance, and Social Support Among Hospital Nurses. *Journal of nursing scholarship, 36*(1), 73-78. https://doi.org/https://doi.org/10.1111/j.1547-5069.2004.04016.x

Afsharian, A., Dollard, M., Miller, E., Puvimanasinghe, T., Esterman, A., De Anstiss, H., & Ziaian, T. (2021). Refugees at work: The preventative role of psychosocial safety climate against workplace harassment, discrimination and psychological distress. *International journal of environmental research and public health, 18*(20), 10696. https://doi.org/10.3390/ijerph182010696

Afsharian, A., Zadow, A., & Dollard, M. F. (2016). Psychosocial Safety Climate from Two Different Cultural Perspectives in the Asia Pacific: Iran and Australia Hospitals. In A. Shimazu, R. Bin Nordin, M. Dollard, & J. Oakman (Eds.), *Psychosocial Factors at Work in the Asia Pacific: From Theory to Practice* (pp. 187-201). Springer International Publishing. https://doi.org/10.1007/978-3-319-44400-0_10

Afsharian, A., Zadow, A., Dollard, M. F., Dormann, C., & Ziaian, T. (2018). Should Psychosocial Safety Climate Theory Be Extended to Include Climate Strength? *Journal of Occupational Health Psychology, 23*(4), 496-507. https://doi.org/10.1037/ocp0000101

Al-Faouri, I., Al-Dmour, A., Al-Ali, N., AbuAlrub, R., & Abu Moghli, F. (2019, 2019/01/01). Effect of Health Care Accreditation Council survey site visit on perceived stress level among Jordanian healthcare providers [https://doi.org/10.1111/nuf.12294]. *Nursing Forum, 54*(1), 30-37. https://doi.org/https://doi.org/10.1111/nuf.12294

Al Attal, Z. Z. (2009). *Factors Affecting the Implementation of Joint Commission International Standards in United Arab Emirates Hospitals* University of Salford, UK].

Al Shawan, D. (2021). The Effectiveness of the Joint Commission International Accreditation in Improving Quality at King Fahd University Hospital, Saudi Arabia: A Mixed Methods Approach. *Journal of healthcare leadership, 13*, 47-61. https://doi.org/10.2147/JHL.S288966

AlJhani, S., AlHarbi, H., AlJameli, S., Hameed, L., AlAql, K., & Alsulaimi, M. (2021). Burnout and coping among healthcare providers working in Saudi Arabia during the COVID-19 pandemic. *Middle East current psychiatry (Cairo), 28*(1), 1-14. https://doi.org/10.1186/s43045-021-00108-6

Alkhenizan, A., & Shaw, C. (2011). Impact of accreditation on the quality of healthcare services: a systematic review of the literature. *Annals of Saudi medicine, 31*(4), 407. https://doi.org/10.4103/0256-4947.83204

Allen, M. (2017). Control Variables In *The SAGE Encyclopedia of Communication Research Methods*. https://doi.org/10.4135/9781483381411

Alshamsi, A. I., Thomson, L., & Santos, A. (2020). What Impact Does Accreditation Have on Workplaces? A Qualitative Study to Explore the Perceptions of Healthcare

Professionals About the Process of Accreditation [Original Research]. *Frontiers in Psychology, 11*(1614). https://doi.org/10.3389/fpsyg.2020.01614

Alyahya, M., Hijazi, H., & Harvey, H. (2018). Explaining the accreditation process from the institutional isomorphism perspective: a case study of Jordanian primary healthcare centers. *The International Journal of Health Planning and Management, 33*(1), 102-120. https://doi.org/doi:10.1002/hpm.2397

Alzoubi, M. M., Hayati, K. S., Rosliza, A. M., Ahmad, A. A., & Al-Hamdan, Z. M. (2019). Total quality management in the health-care context: Integrating the literature and directing future research. *Risk management and healthcare policy, 12*, 167-177. https://doi.org/10.2147/RMHP.S197038

An Gie, Y., & Sean, P. (2013). A Beginners Guide to Factor Analysis: Focusing on Exploratory Factor Analysis. *Tutorials in Quantitative Methods for Psychology, 9*(2), 79-94.

Andersen, L. L., Vinstrup, J., Villadsen, E., Jay, K., & Jakobsen, M. D. (2019). Physical and Psychosocial Work Environmental Risk Factors for Back Injury among Healthcare Workers: Prospective Cohort Study. *International journal of environmental research and public health, 16*(22).

Angerer, P., & Weigl, M. (2015). Physicians' Psychosocial Work Conditions and Quality of Care: A Literature Review. *Professions and professionalism, 5*(1). https://doi.org/10.7577/pp.960

Anna, B. C., & Jason, O. (2005). Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation, 10*(7), 1-9.

Arnold, S. (2021, 06/07/2021). *The healthcare system in the United Arab Emirates*. https://www.expatica.com/ae/healthcare/healthcare-basics/the-healthcare-system-in-the-united-arab-emirates-71767/

Atkinson, S., Ingham, J., Cheshire, M., & Went, S. (2010, Dec 2010). Defining quality and quality improvement. *Clinical Medicine, 10*(6), 537-539. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4951855/pdf/537.pdf

Attridge, M. (2009, 2009/11/30). Measuring and Managing Employee Work Engagement: A Review of the Research and Business Literature. *Journal of Workplace Behavioral Health, 24*(4), 383-398. https://doi.org/10.1080/15555240903188398

Bagheri Hosseinabadi, M., Khanjani, N., Etemadinezhad, S., Samaei, S. E., Raadabadi, M., & Mostafaee, M. (2019). The associations of workload, individual and organisational factors on nurses' occupational injuries. *Journal of Clinical Nursing, 28*(5-6), 902-911. https://doi.org/10.1111/jocn.14699

Bailey, T. S., Dollard, M. F., McLinton, S. S., & Richards, P. A. M. (2015, 2015/04/03). Psychosocial safety climate, psychosocial and physical factors in the aetiology of musculoskeletal disorder symptoms and workplace injury compensation claims. *Work & Stress, 29*(2), 190-211. https://doi.org/10.1080/02678373.2015.1031855

Bailey, T. S., Dollard, M. F., & Richards, P. A. M. (2015). A national standard for psychosocial safety climate (PSC): PSC 41 as the benchmark for low risk of job strain and depressive symptoms. *Journal of Occupational Health Psychology, 20*(1), 15-26. https://doi.org/10.1037/a0038166

Bakker, A., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology, 22*(3), 309-328. https://doi.org/10.1108/02683940710733115

Bakker, A., Demerouti, E., de Boer, E., & Schaufeli, W. (2003, 2003/04/01/). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior, 62*(2), 341-356. https://doi.org/https://doi.org/10.1016/S0001-8791(02)00030-1

Bakker, A., Demerouti, E., & Schaufeli, W. (2003). Dual processes at work in a call centre: An application of the job demands–resources model. *European Journal of Work and Organizational Psychology, 12*(4), 393-417. https://doi.org/10.1080/13594320344000165

Bakker, A., Demerouti, E., Taris, T. W., Schaufeli, W. B., & Schreurs, P. J. G. (2003). A Multigroup Analysis of the Job Demands-Resources Model in Four Home Care Organizations. *International Journal of Stress Management, 10*(1), 16-38. https://doi.org/10.1037/1072-5245.10.1.16

Bakker, A., & Leiter, M. (2010). *Work engagement [electronic resource] : a handbook of essential theory and research / edited by Arnold B. Bakker and Michael P. Leiter*. New York : Psychology Press.

Bakker, A., van Veldhoven, M., & Xanthopoulou, D. (2010). Beyond the Demand-Control Model: Thriving on High Job Demands and Resources. *Journal of personnel psychology, 9*(1), 3-16. https://doi.org/10.1027/1866-5888/a000006

Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job Resources Buffer the Impact of Job Demands on Burnout. *Journal of Occupational Health Psychology, 10*(2), 170-180. https://doi.org/10.1037/1076-8998.10.2.170

Bamberger, S. G., Vinding, A. L., Larsen, A., Nielsen, P., Fonager, K., Nielsen, R. N., Ryom, P., & Omland, Ø. (2012a). Impact of organisational change on mental health: a systematic review. *Occupational and Environmental Medicine, 69*(8), 592. https://doi.org/10.1136/oemed-2011-100381

Bamberger, S. G., Vinding, A. L., Larsen, A., Nielsen, P., Fonager, K., Nielsen, R. N., Ryom, P., & Omland, Ø. (2012b). Impact of organisational change on mental health: a systematic review. *Occupational and environmental medicine (London, England), 69*(8), 592-116. https://doi.org/10.1136/oemed-2011-100381

Bartelson, J. (2000). Three Concepts of Globalization. *International sociology, 15*(2), 180-196. https://doi.org/10.1177/0268580900015002003

Baruch-Feldman, C., Brondolo, E., Ben-Dayan, D., & Schwartz, J. (2002). Sources of Social Support and Burnout, Job Satisfaction, and Productivity. *Journal of Occupational Health Psychology, 7*(1), 84-93. https://doi.org/10.1037/1076-8998.7.1.84

Berkman, L. F., & Syme, S. L. (1979). SOCIAL NETWORKS, HOST RESISTANCE, AND MORTALITY: A NINE-YEAR FOLLOW-UP STUDY OF ALAMEDA COUNTY RESIDENTS. *American journal of epidemiology, 109*(2), 186-204. https://doi.org/10.1093/oxfordjournals.aje.a112674

Berthelsen, H., Hakanen, J. J., & Westerlund, H. (2018). Copenhagen Psychosocial Questionnaire - A validation study using the Job Demand-Resources model. *PloS one, 13*(4), e0196450-e0196450. https://doi.org/DOI:10.1371/journal.pone.0196450

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Best, M., & Neuhauser, D. (2005). W Edwards Deming: father of quality management, patient and composer. *Quality and Safety in Health Care, 14*(4), 310. https://doi.org/10.1136/qshc.2005.015289

Biggs, A., Brough, P., & Barbour, J. P. (2014). Relationships of individual and organizational support with engagement: Examining various types of causality in a three-wave

study. *Work and stress, 28*(3), 236-254. https://doi.org/10.1080/02678373.2014.934316

Biron, C., Karanika-Murray, M., Ivers, H., Salvoni, S., & Fernet, C. (2021, 2021-October-28). Teleworking While Sick: A Three-Wave Study of Psychosocial Safety Climate, Psychological Demands, and Presenteeism [Original Research]. *Frontiers in Psychology, 12*(4104). https://doi.org/10.3389/fpsyg.2021.734245

Boelen, C., & Woollard, B. (2009). Social accountability and accreditation: a new frontier for educational institutions: Social accountability and accreditation. *Medical education, 43*(9), 887-894. https://doi.org/10.1111/j.1365-2923.2009.03413.x

Bogh, S. B., Blom, A., Raben, D. C., Braithwaite, J., Thude, B., Hollnagel, E., & Plessen, C. v. (2018). Hospital accreditation: staff experiences and perceptions. *International Journal of Health Care Quality Assurance, 31*(5), 420-427. https://doi.org/10.1108/IJHCQA-06-2017-0115

Bogh, S. B., Falstie-Jensen, A. M., Hollnagel, E., Holst, R., Braithwaite, J., & Johnsen, S. P. (2016). Improvement in quality of hospital care during accreditation: A nationwide stepped-wedge study. *International Journal for Quality in Health Care, 28*(6), 715-720. https://doi.org/10.1093/intqhc/mzw099

Bogh, S. B., Falstie-Jensen, A. M., Hollnagel, E., Holst, R., Braithwaite, J., Raben, D. C., & Johnsen, S. P. (2017). Predictors of the effectiveness of accreditation on hospital performance: A nationwide stepped-wedge study. *International Journal for Quality in Health Care, 29*(4), 477-483. https://doi.org/10.1093/intqhc/mzx052

Bollen, K. A. (1989). Structural Equation Models with Observed Variables. In *Structural Equations with Latent Variables* (pp. 80-150). https://doi.org/https://doi.org/10.1002/9781118619179.ch4

Bollen, K. A., & Long, J. S. (1993). *Testing structural equation models*. Sage Publications, Inc.

Bookman, M., & Bookman, K. (2007). *Medical Tourism in Developing Countries*. https://doi.org/10.1057/9780230605657

Boonzaier, B., Ficker, B., & Rust, B. (2001). A review of research on the Job Characteristics Model and the attendant job diagnostic survey. *South African journal of business management, 32*(1), 11-34. https://doi.org/10.4102/sajbm.v32i1.712

Bowen, K. S., Birmingham, W., Uchino, B. N., Carlisle, M., Smith, T. W., & Light, K. C. (2013). Specific dimensions of perceived support and ambulatory blood pressure: Which support functions appear most beneficial and for whom? *International journal of psychophysiology, 88*(3), 317-324. https://doi.org/10.1016/j.ijpsycho.2012.03.004

Braun, V. (2013). *Successful qualitative research : a practical guide for beginners / Virginia Braun, Victoria Clarke*. London : SAGE.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2013). *Successful qualitative research : a practical guide for beginners / Virginia Braun & Victoria Clarke*. Los Angeles : SAGE.

Breakwell, G. M., Wright, D. B., & Barnett, J. (2020). *Research methods in psychology / [edited by] Glynis M. Breakwell, Daniel B. Wright & Julie Barnett* (Fifth edition. ed.). London : Sage Publications.

Brislin, R. W. (1970, 1970/09/01). Back-Translation for Cross-Cultural Research. *Journal of Cross-Cultural Psychology, 1*(3), 185-216. https://doi.org/10.1177/135910457000100301

Bronkhorst, B. (2015). Behaving safely under pressure: The effects of job demands, resources, and safety climate on employee physical and psychosocial safety behavior. *Journal of Safety Research, 55*, 63-72. https://doi.org/10.1016/j.jsr.2015.09.002

Brough, P. (2009). *Workplace psychological health : current research and practice*. Cheltenham : Edward Elgar.

Brough, P., Timms, C., Siu, O.-l., Kalliath, T., O'Driscoll, M. P., Sit, C. H. P., Lo, D., & Lu, C.-q. (2013, 2013/10/01). Validation of the Job Demands-Resources model in cross-national samples: Cross-sectional and longitudinal predictions of psychological strain and work engagement. *Human Relations, 66*(10), 1311-1335. https://doi.org/10.1177/0018726712472915

Brown, A. (2013). Quality: where have we come from and what can we expect? *The TQM Journal, 25*(6), 585-596. https://doi.org/10.1108/TQM-04-2013-0045

Brown, T. A. (2015). *Confirmatory Factor Analysis for Applied Research, Second Edition*. Guilford Publications. http://ebookcentral.proquest.com/lib/nottingham/detail.action?docID=1768752

[Record #2450 is using a reference type undefined in this output style.]

Brunetto, Y., Saheli, N., Dick, T., & Nelson, S. (2021). Psychosocial Safety Climate, Psychological Capital, Healthcare SLBs' Wellbeing and Innovative Behaviour During the COVID 19 Pandemic. *Public Performance & Management Review*, 1-22. https://doi.org/10.1080/15309576.2021.1918189

Burr, H., Berthelsen, H., Moncada, S., Nübling, M., Dupret, E., Demiral, Y., Oudyk, J., Kristensen, T. S., Llorens, C., Navarro, A., Lincke, H.-J., Bocéréan, C., Sahan, C., Smith, P., & Pohrt, A. (2019). The Third Version of the Copenhagen Psychosocial Questionnaire. *Safety and health at work, 10*(4), 482-503. https://doi.org/10.1016/j.shaw.2019.10.002

Campbell, A. M., Lighter, D. E., & Mueller, B. U. (2021). Creation of Quality Management Systems: Frameworks for Performance Excellence. In R. K. Shah & S. A. Godambe (Eds.), *Patient Safety and Quality Improvement in Healthcare: A Case-Based Approach* (pp. 37-53). Springer International Publishing. https://doi.org/10.1007/978-3-030-55829-1_3

Campbell, D. T. (1963). *Experimental and quasi-experimental designs for research / Donald T. Campbell, Julian C. Stanley*. Boston, Mass.

London : Houghton Mifflin Company.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin, 56*(2), 81-105. https://doi.org/http://dx.doi.org/10.1037/h0046016

Carrera, P. M., & Bridges, J. F. P. (2006). Globalization and healthcare: understanding health and medical tourism. *Expert Review of Pharmacoeconomics & Outcomes Research, 6*(4), 447-454. https://doi.org/http://dx.doi.org/10.1586/14737167.6.4.447

Cattell, R. B. (1966, 1966/04/01). The Scree Test For The Number Of Factors. *Multivariate Behavioral Research, 1*(2), 245-276. https://doi.org/10.1207/s15327906mbr0102_10

Cavanagh, N., Cockett, G., Heinrich, C., Doig, L., Fiest, K., Guichon, J. R., Page, S., Mitchell, I., & Doig, C. J. (2020). Compassion fatigue in healthcare providers: A systematic review and meta-analysis. *Nursing ethics, 27*(3), 639-665. https://doi.org/10.1177/0969733019889400

Chemali, Z., Ezzeddine, F. L., Gelaye, B., Dossett, M. L., Salameh, J., Bizri, M., Dubale, B., & Fricchione, G. (2019). Burnout among healthcare providers in the complex

environment of the Middle East: a systematic review. *BMC public health, 19*(1), 1337-1337. https://doi.org/10.1186/s12889-019-7713-1

Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). WORK ENGAGEMENT: A QUANTITATIVE REVIEW AND TEST OF ITS RELATIONS WITH TASK AND CONTEXTUAL PERFORMANCE. *Personnel Psychology, 64*(1), 89-136. https://doi.org/10.1111/j.1744-6570.2010.01203.x

Cieslak, R., Knoll, N., & Luszczynska, A. (2007). Reciprocal relations among job demands, job control, and social support are moderated by neuroticism: A cross-lagged analysis. *Journal of Vocational Behavior, 71*(1), 84-96. https://doi.org/10.1016/j.jvb.2007.03.001

Clarke, S., Probst, T. M., Guldenmund, F., & Passmore, J. (2015). The Psychology of Occupational Safety and Workplace health. In *The Wiley Blackwell Handbook of the Psychology of Occupational Safety and Workplace Health* (pp. 1-11). https://doi.org/https://doi.org/10.1002/9781118979013.ch1

Cohen, S., & Syme, S. L. (1985). Issues in the study and application of social support. In *Social support and health.* (pp. 3-22). Academic Press.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*(2), 310-357. https://doi.org/10.1037//0033-2909.98.2.310

Collins, C. S., & Stockton, C. M. (2018, 2018/12/01). The Central Role of Theory in Qualitative Research. *International Journal of Qualitative Methods, 17*(1), 1609406918797475. https://doi.org/10.1177/1609406918797475

Connell, J. (2011). *Medical tourism [electronic resource] / John Connell*. Wallingford, Oxfordshire

Cambridge, MA : CABI.

Connell, J. (2013, 2013/02/01/). Contemporary medical tourism: Conceptualisation, culture and commodification. *Tourism Management, 34*, 1-13. https://doi.org/https://doi.org/10.1016/j.tourman.2012.05.009

Consumers, E. A. f. H. a. (2013). *Economic analysis of workplace mental health promotion and mental disorder prevention programmes and of their potential contribution to EU health, social and economic policy objectives*. https://ec.europa.eu/health//sites/health/files/mental_health/docs/matrix_economic_analysis_mh_promotion_ en.pdf

Cooper, J. (2019). *How does UK healthcare spending compare with other countries? An analysis of UK healthcare spending relative to comparable countries, using data produced to the international definitions of the System of Health Accounts (SHA 2011).* Retrieved 10/11/2021 from https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthcaresystem/articles/howdoesukhealthcarespendingcomparewithothercountries/2019-08-29

Cooper, S., Parkes, C., & Blewitt, J. (2014). Can accreditation help a leopard change its spots?: Social accountability and stakeholder engagement in business schools. *Accounting, auditing, & accountability, 27*(2), 234-258. https://doi.org/10.1108/AAAJ-07-2012-01062

Couper, M. P. (2000). Web surveys: A review of issues and approaches. *Public opinion quarterly, 64*(4), 464-494. https://doi.org/10.1086/318641

Cousins, R., MacKay, C. J., Clarke, S. D., Kelly, C., Kelly, P. J., & McCaig, R. H. (2004). 'Management Standards' work-related stress in the UK: practical development. *Work and stress, 18*(2), 113-136. https://doi.org/10.1080/02678370410001734322

Cox, T. (1978). *Stress / Tom Cox*. London : Macmillan.

Cox, T. (2000). *Research on work-related stress / [report written by Tom Cox, Amanda Griffiths, Eusebio Rial-González]*

European Agency for Safety and Health at Work. Luxembourg : OOPEC.

Cox, T., & Griffiths, A. (2010). Work-related stress: a theoretical perspective. In S. Leka & J. Houndmont (Eds.), *Occupational Health Psychology* (pp. 31-56). Wiley Blackwell.

Cox, T., & Howarth, I. (1990, 1990/04/01). Organizational health, culture and helping. *Work & Stress, 4*(2), 107-110. https://doi.org/10.1080/02678379008256972

Cox, T., & Leiter, M. (1992, 1992/07/01). The health of health care organizations. *Work & Stress, 6*(3), 219-227. https://doi.org/10.1080/02678379208259954

Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking Job Demands and Resources to Employee Engagement and Burnout: A Theoretical Extension and Meta-Analytic Test. *Journal of Applied Psychology, 95*(5), 834-848. https://doi.org/10.1037/a0019364

Creedy, D., Sidebotham, M., Gamble, J., Pallant, J., & Jennifer, F. (2017, 01/09). Prevalence of burnout, depression, anxiety and stress in Australian midwives: A cross-sectional survey. *BMC Pregnancy and Childbirth, 17*. https://doi.org/10.1186/s12884-016-1212-5

Creswell, J. W. (2018a). *Designing and conducting mixed methods research / John W. Creswell, Vicki L. Plano Clark* (3rd ed. ed.). Thousand Oaks, Calif.

London : Sage Publications.

Creswell, J. W. (2018b). *Research design : qualitative, quantitative, and mixed methods approaches / John W. Creswell & J. David Creswell* (5th ed., International student ed. ed.). Thousand Oaks, Calif.

London : Sage Publications.

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52*(4), 281-302. https://doi.org/10.1037/h0040957

Crosby, P. B. (1979). *Quality is free : the art of making quality certain / Philip B. Crosby*. New York : McGraw-Hill.

Cunliffe, A. L. (2011). Crafting Qualitative Research: Morgan and Smircich 30 Years On. *Organizational research methods, 14*(4), 647-673. https://doi.org/10.1177/1094428110373658

Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: a theoretical review. *Human resources for health, 18*(1), 41-41. https://doi.org/10.1186/s12960-020-00469-9

Dawson, J. F., & Richter, A. W. (2006). Probing Three-Way Interactions in Moderated Multiple Regression: Development and Application of a Slope Difference Test. *Journal of Applied Psychology, 91*(4), 917-926. https://doi.org/10.1037/0021-9010.91.4.917

Deloitte. (2020). *Mental health and employers: Refreshing the case for investment*. https://www2.deloitte.com/uk/en/pages/consulting/articles/mental-health-and-employers-refreshing-the-case-for-investment.html

Demerouti, E. (2018). Integrating individual strategies in the Job Demands-Resources theory. *Istanbul Business REsearch, 47*(1), 5-32.

Demerouti, E., & Bakker, A. (2011). The Job Demands-Resources model: Challenges for future research. *SA Journal of Industrial Psychology, 37*(2), 1-9. https://doi.org/10.4102/sajip.v37i2.974

Demerouti, E., Bakker, A., Nachreiner, F., & Schaufeli, W. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*(3), 499-512. https://doi.org/10.1037//0021-9010.86.3.499

Demerouti, E., Shimazu, A., Bakker, A. B., Shimada, K., & Kawakami, N. (2013). Work-self balance: A longitudinal study on the effects of job demands and resources on personal functioning in Japanese working parents. *Work & Stress, 27*(3), 223-243. https://doi.org/10.1080/02678373.2013.812353

Deming, W. E. (2000). *Out of the crisis / W. Edwards Deming*. Cambridge, Mass.

London : MIT Press.

Devkaran, S. (2014). *International Healthcare Accreditation: an Analysis of Clinical Quality and Patient Experience in the UAE* [Thesis,

Devkaran, S., & Farrell, P. N. (2014). The impact of hospital accreditation on clinical documentation compliance: a life cycle explanation using interrupted time series analysis [10.1136/bmjopen-2014-005240]. *BMJ Open, 4*(8). http://bmjopen.bmj.com/content/4/8/e005240.abstract

Devkaran, S., O'Farrell, P. N., Ellahham, S., & Arcangel, R. (2019). Impact of repeated hospital accreditation surveys on quality and reliability, an 8-year interrupted time series analysis. *BMJ Open, 9*(2), e024514-e024514. https://doi.org/10.1136/bmjopen-2018-024514

Devkaran, S., & O'Farrell, P. N. (2015). The impact of hospital accreditation on quality measures: an interrupted time series analysis. *BMC Health Services Research, 15*(1), 137. https://doi.org/10.1186/s12913-015-0784-5

[Record #2923 is using a reference type undefined in this output style.]

Dicke, T., Marsh, H. W., Riley, P., Parker, P. D., Guo, J., & Horwood, M. (2018). Validating the Copenhagen Psychosocial Questionnaire (COPSOQ-II) Using Set-ESEM: Identifying Psychosocial Risk Factors in a Sample of School Principals [Original Research]. *Frontiers in Psychology, 9*(584). https://doi.org/10.3389/fpsyg.2018.00584

Dicke, T., Stebner, F., Linninger, C., Kunter, M., & Leutner, D. (2018). A longitudinal study of teachers' occupational well-being: Applying the job demands-resources model. *Journal of Occupational Health Psychology, 23*(2), 262-277. https://doi.org/http://dx.doi.org/10.1037/ocp0000070

Dollard, M. F. (2012). Psychosocial safety climate: A lead indicator of workplace psychological health and engagement and a precursor to intervention success. In *Improving organizational interventions for stress and well-being: Addressing process and context.* (pp. 77-101). Routledge/Taylor & Francis Group.

Dollard, M. F. (2019). The PSC-4; A Short PSC Tool [GENERIC]. *Springer International Publishing*, 385-409. https://doi.org/10.1007/978-3-030-20319-1_16

Dollard, M. F., & Bakker, A. B. (2010). Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. *Journal of Occupational and Organizational Psychology, 83*(3), 579-599. https://doi.org/10.1348/096317909X470690

Dollard, M. F., & McTernan, W. (2011). Psychosocial safety climate: a multilevel theory of work stress in the health and community service sector. *Epidemiology and Psychiatric Sciences, 20*(4), 287-293. https://doi.org/10.1017/S2045796011000588

Dollard, M. F., Tuckey, M. R., & Dormann, C. (2012). Psychosocial safety climate moderates the job demand–resource interaction in predicting workgroup distress. *Accident Analysis & Prevention, 45*, 694-704. https://doi.org/https://doi.org/10.1016/j.aap.2011.09.042

Donahue, K. T., & Vanostenberg, P. (2000). Joint Commission International accreditation: relationship to four models of evaluation. *International Journal for Quality in Health Care, 12*(3), 243-246. https://doi.org/10.1093/intqhc/12.3.243

Dormann, C., & Zapf, D. (1999). Social Support, Social Stressors at Work, and Depressive Symptoms: Testing for Main and Moderating Effects With Structural Equations in a Three-Wave Longitudinal Study. *Journal of Applied Psychology, 84*(6), 874-884. https://doi.org/10.1037/0021-9010.84.6.874

Doyle, L., Brady, A.-M., & Byrne, G. (2009). An overview of mixed methods research. *Journal of research in nursing, 14*(2), 175-185. https://doi.org/10.1177/1744987108093962

Drebit, S., Shajari, S., Alamgir, H., Yu, S., & Keen, D. (2010). Occupational and environmental risk factors for falls among workers in the healthcare sector. *Ergonomics, 53*(4), 525-536. https://doi.org/10.1080/00140130903528178

Duffy, B., Smith, K., Terhanian, G., & Bremer, J. (2005). Comparing data from online and face-to-face surveys. *International journal of market research, 47*(6), 615-630. https://doi.org/10.1177/147078530504700602

Ehlers, L. H., Jensen, M. B., Simonsen, K., Rasmussen, G., & Braithwaite, J. (2017). Attitudes towards accreditation among hospital employees in Denmark: a cross-sectional survey. *International Journal for Quality in Health Care, 29*(5), 693-698. https://doi.org/10.1093/intqhc/mzx090

Eklöf, M., Törner, M., & Pousette, A. (2014). Organizational and social-psychological conditions in healthcare and their importance for patient and staff safety. A critical incident study among doctors and nurses. *Safety Science, 70*, 211-221. https://doi.org/10.1016/j.ssci.2014.06.007

El-Jardali, F., Ammar, W., Hemadeh, R., Jamal, D., & Jaafar, M. (2013). Improving primary healthcare through accreditation: baseline assessment of readiness and challenges in lebanese context. *The International Journal of Health Planning and Management, 28*(4), e256-e279. https://doi.org/10.1002/hpm.2170

El-Jardali, F., Hemadeh, R., Jaafar, M., Sagherian, L., El-Skaff, R., Mdeihly, R., Jamal, D., & Ataya, N. (2014). The impact of accreditation of primary healthcare centers: Successes, challenges and policy implications as perceived by healthcare providers and directors in Lebanon. *Acta Veterinaria Scandinavica, 14*(1), 86. https://doi.org/10.1186/1472-6963-14-86

El-Jardali, F., Jamal, D., Dimassi, H., Ammar, W., & Tchaghchaghian, V. (2008). The impact of hospital accreditation on quality of care: perception of Lebanese nurses. *International Journal for Quality in Health Care, 20*(5), 363-371. https://doi.org/10.1093/intqhc/mzn023

Elbarazi, I., Loney, T., Yousef, S., & Elias, A. (2017). Prevalence of and factors associated with burnout among health care professionals in Arab countries: A systematic review. *BMC Health Services Research, 17*(1), 491-491. https://doi.org/10.1186/s12913-017-2319-8

Elkins, G., Cook, T., Dove, J., Markova, D., Marcus, J. D., Meyer, T., Rajab, M. H., & Perfect, M. (2010). Perceived Stress Among Nursing and Administration Staff Related to Accreditation. *Clinical Nursing Research, 19*(4), 376-386. https://doi.org/10.1177/1054773810373078

Eneroth, M., Gustafsson Sendén, M., Schenck Gustafsson, K., Wall, M., & Fridner, A. (2017). Threats or violence from patients was associated with turnover intention among foreign-born GPs - a comparison of four workplace factors associated with attitudes of wanting to quit one's job as a GP. *Scandinavian journal of primary health care, 35*(2), 208-213. https://doi.org/10.1080/02813432.2017.1333319

Engel, C., & Andersen, H. (2016). Side Effects of Overdoing It: Lessons from a Comprehensive Hospital Accreditation Programme. In (pp. 115-127). https://doi.org/10.1201/9781315605609-9

EU-OSHA. (2007). *Expert forecast on emerging psychosocial risks related to occupational safety and health / European Agency for Safety and Health at Work*. Luxembourg : Office for Official Publications of the European Communities.

Farmer, T., Robinson, K., Elliott, S. J., & Eyles, J. (2006). Developing and Implementing a Triangulation Protocol for Qualitative Health Research. *Qualitative Health Research, 16*(3), 377-394. https://doi.org/10.1177/1049732305285708

Fereday, J., & Muir-Cochrane, E. (2006, 2006/03/01). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods, 5*(1), 80-92. https://doi.org/10.1177/160940690600500107

Fernandes, J. d. C., Portela, L. F., Rotenberg, L., & Griep, R. H. (2013). Working hours and health behaviour among nurses at public hospitals. *Revista latino-americana de enfermagem, 21*(5), 1104-1111. https://doi.org/10.1590/S0104-11692013000500013

Field, A. P. (2018). *Discovering statistics using IBM SPSS statistics / Andy Field* (5th ed. ed.). London : SAGE.

Finch, W. H. (2019). *Exploratory Factor Analysis*. SAGE Publications.

Fokkema, M., & Greiff, S. (2017). How Performing PCA and CFA on the Same Data Equals Trouble: Overfitting in the Assessment of Internal Structure and Some Editorial Thoughts on It. *European journal of psychological assessment : official organ of the European Association of Psychological Assessment, 33*(6), 399-402. https://doi.org/10.1027/1015-5759/a000460

Freudenberger, H. J. (1974, 1974/01/01). Staff Burn-Out [https://doi.org/10.1111/j.1540-4560.1974.tb00706.x]. *Journal of Social Issues, 30*(1), 159-165. https://doi.org/https://doi.org/10.1111/j.1540-4560.1974.tb00706.x

Frey, B. B. (2018, 2021/09/27). The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation. https://doi.org/10.4135/9781506326139

Gale, N. K., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC medical research methodology, 13*(1), 117. https://doi.org/10.1186/1471-2288-13-117

Gallup. (2021). *State of the Global Workplace 2021 Report*.

Garrick, A., Mak, A. S., Cathcart, S., Winwood, P. C., Bakker, A. B., & Lushington, K. (2014). Psychosocial safety climate moderating the effects of daily job demands and recovery on fatigue and work engagement. *Journal of Occupational and Organizational Psychology, 87*(4), 694-714. https://doi.org/10.1111/joop.12069

Gauche, C., De Beer, L. T., & Brink, L. (2017). Exploring demands from the perspective of employees identified as being at risk of burnout. *International Journal of Qualitative Studies on Health and Well-being, 12*(1). https://doi.org/10.1080/17482631.2017.1361783

Gazica, M. W., Powers, S. R., & Kessler, S. R. (2021). Imperfectly perfect: Examining psychosocial safety climate's influence on the physical and psychological impact of perfectionism in the practice of law. *Behavioral sciences & the law*. https://doi.org/10.1002/bsl.2546

Gilboa, S., Shirom, A., Fried, Y., & Cooper, C. (2008). A META-ANALYSIS OF WORK DEMAND STRESSORS AND JOB PERFORMANCE: EXAMINING MAIN AND MODERATING EFFECTS. *Personnel Psychology, 61*(2), 227-271. https://doi.org/10.1111/j.1744-6570.2008.00113.x

Godambe, S. A., & Shah, R. K. (2021). Introduction: A Case-Based Approach to Quality Improvement. In R. K. Shah & S. A. Godambe (Eds.), *Patient Safety and Quality Improvement in Healthcare: A Case-Based Approach* (pp. 1-14). Springer International Publishing. https://doi.org/10.1007/978-3-030-55829-1_1

Golafshani, N. (2015). Understanding Reliability and Validity in Qualitative Research. *Qualitative report*. https://doi.org/10.46743/2160-3715/2003.1870

Gomaa, A. E., Tapp, L. C., Luckhaupt, S. E., Vanoli, K., Sarmiento, R. F., Raudabaugh, W. M., Nowlin, S., & Sprigg, S. M. (2015). Occupational Traumatic Injuries Among Workers in Health Care Facilities — United States, 2012–2014. *MMWR. Morbidity and mortality weekly report, 64*(15), 405-410. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5779551/pdf/405-410.pdf

Govindaraju, N. (2019, Jun/Aug

Jun/Aug 2019

2021-08-02). The impact of Job stress, Workload and Long Working Hours on the Job Satisfaction of Government Doctors at Tamil Nadu. *i-Manager's Journal on Management, 14*(1), 25-32. https://doi.org/https://doi.org/10.26634/jmgt.14.1.15207

Grati, L. (2021). Smoking as a method of coping for medical workers. *The Moldovan Medical Journal, 64*(3), 16-24. https://doi.org/10.52418/moldovan-med-j.64-3.21.03

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a Conceptual Framework for Mixed-Method Evaluation Designs. *Educational evaluation and policy analysis, 11*(3), 255-274. https://doi.org/10.2307/1163620

Greenfield, D., & Braithwaite, J. (2008). Health sector accreditation research: a systematic review. *International Journal for Quality in Health Care, 20*(3), 172-183. https://doi.org/10.1093/intqhc/mzn005

Greenfield, D., & Braithwaite, J. (2009). Developing the evidence base for accreditation of healthcare organisations: a call for transparency and innovation. *Quality & Safety in Health Care, 18*(3), 162-163. https://doi.org/10.1136/qshc.2009.032359

Greenfield, D., Lawrence, S. A., Kellner, A., Townsend, K., & Wilkinson, A. (2019). Health service accreditation stimulating change in clinical care and human resource management processes: A study of 311 Australian hospitals. *Health policy, 123*(7), 661-665. https://doi.org/10.1016/j.healthpol.2019.04.006

Greenfield, D., Pawsey, M., Hinchcliff, R., Moldovan, M., & Braithwaite, J. (2012). The standard of healthcare accreditation standards: a review of empirical research underpinning their development and impact. *BMC Health Services Research, 12*(1), 329. https://doi.org/10.1186/1472-6963-12-329

Grepperud, S. (2015). Is the hospital decision to seek accreditation an effective one? *The International Journal of Health Planning and Management, 30*(1), E56-E68. https://doi.org/10.1002/hpm.2263

Groenewegen, P. P., & Hutten, J. B. F. (1991). Workload and job satisfaction among general practitioners: A review of the literature. *Social science & medicine (1982), 32*(10), 1111-1119. https://doi.org/10.1016/0277-9536(91)90087-S

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In *Handbook of qualitative research.* (pp. 105-117). Sage Publications, Inc.

Guerra Bretaña, R. M., & Marín Álvarez, Y. A. (2017). ACCREDITATION AND CERTIFICATION OF HOSPITAL QUALITY: DIFFERENT OR SIMILAR? *Revista de ingeniería biomédica, 11*(21), 35-41.

Gutzeit, M. F., O'Brien, H., & Valentine, J. E. (2021). Organizational Safety Culture: The Foundation for Safety and Quality Improvement. In R. K. Shah & S. A. Godambe (Eds.), *Patient Safety and Quality Improvement in Healthcare: A Case-Based Approach* (pp. 15-35). Springer International Publishing. https://doi.org/10.1007/978-3-030-55829-1_2

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: test of a theory. *Organizational Behavior and Human Performance, 16*(2), 250-279. https://doi.org/10.1016/0030-5073(76)90016-7

Hakanen, J. J., Schaufeli, W. B., & Ahola, K. (2008, 2008/07/01). The Job Demands-Resources model: A three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work & Stress, 22*(3), 224-241. https://doi.org/10.1080/02678370802379432

Halbesleben, J. R. B., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work and stress, 19*(3), 208-220. https://doi.org/10.1080/02678370500340728

Hall, G., Dollard, M., & Coward, J. (2010). Psychosocial Safety Climate: Development of the PSC-12. *International Journal of Stress Management, 17*(4), 353-383. https://doi.org/10.1037/a0021320

Hall, G., Dollard, M. F., & Coward, J. (2010). Psychosocial Safety Climate: Development of the PSC-12. *International Journal of Stress Management, 17*(4), 353-383. https://doi.org/10.1037/a0021320

Hall, G., Dollard, M. F., Tuckey, M. R., Winefield, A. H., & Thompson, B. M. (2010). Job demands, work-family conflict, and emotional exhaustion in police officers: A longitudinal test of competing theories. *Journal of Occupational and Organizational Psychology, 83*(1), 237-250. https://doi.org/10.1348/096317908x401723

Hall, G., Dollard, M. F., Winefield, A. H., Dormann, C., & Bakker, A. B. (2013). Psychosocial safety climate buffers effects of job demands on depression and positive organizational behaviors. *Anxiety, stress, and coping, 26*(4), 355-377. https://doi.org/10.1080/10615806.2012.700477

Hall, L. H., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. B. (2016). Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. *PloS one, 11*(7), e0159015-e0159015. https://doi.org/10.1371/journal.pone.0159015

Hanne, B., Jari, J. H., & Hugo, W. (2018). Copenhagen Psychosocial Questionnaire - A validation study using the Job Demand-Resources model. *PloS one, 13*(4), e0196450. https://doi.org/10.1371/journal.pone.0196450

Hansez, I., & Chmiel, N. (2010). Safety Behavior: Job Demands, Job Resources, and Perceived Management Commitment to Safety. *Journal of Occupational Health Psychology, 15*(3), 267-278. https://doi.org/10.1037/a0019528

Harter, J. K., Schmidt, F. L., & Keyes, C. L. M. (2003). Well-being in the workplace and its relationship to business outcomes: A review of the Gallup studies. In *Flourishing: Positive psychology and the life well-lived.* (pp. 205-224). American Psychological Association. https://doi.org/10.1037/10594-009

Hartley, C., & Coffee, P. (2019). Perceived and received dimensional support: Main and stress-buffering effects on dimensions of burnout. *Frontiers in Psychology, 10*(JULY), 1724-1724. https://doi.org/10.3389/fpsyg.2019.01724

Harvey, S. B., Modini, M., Joyce, S., Milligan-Saville, J. S., Tan, L., Mykletun, A., Bryant, R. A., Christensen, H., & Mitchell, P. B. (2017). Can work make you mentally ill? A systematic meta-review of work-related risk factors for common mental health problems. *Occupational and environmental medicine (London, England), 74*(4), 301-310. https://doi.org/10.1136/oemed-2016-104015

Haslam, S. A., McMahon, C., Cruwys, T., Haslam, C., Jetten, J., & Steffens, N. K. (2018). Social cure, what social cure? The propensity to underestimate the importance of social factors for health. *Social science & medicine (1982), 198*, 14-21. https://doi.org/10.1016/j.socscimed.2017.12.020

Hassard, J., Teoh, K., Cox, T., Dewe, P., Cosmar, M., Gründler, R., Flemming, D., Cosemans, B., & Van den Broek, K. (2014). Calculating the cost of work-related stress and psychosocial risks. *Publications Office of the European Union*(Luxembourg). https://doi.org/10.2802/20493

Haugan, G., & Eriksson, M. (2021). *Health Promotion in Health Care – Vital Theories and Research [electronic resource] / edited by Gørill Haugan, Monica Eriksson* (1st ed. 2021. ed.). Cham : Springer International Publishing : Imprint: Springer.

Haverkamp, B. E., & Young, R. A. (2007). Paradigms, Purpose, and the Role of the Literature: Formulating a Rationale for Qualitative Investigations. *The Counseling psychologist, 35*(2), 265-294. https://doi.org/10.1177/0011000006292597

Heidemann, E. G. (2000). Moving to global standards for accreditation processes: the ExPeRT Project in a larger context. *International Journal for Quality in Health Care, 12*(3), 227-230. https://doi.org/10.1093/intqhc/12.3.227

Heires, M. (2008). The International Organization for Standardization (ISO). *New political economy, 13*(3), 357-367. https://doi.org/10.1080/13563460802302693

Ho, L. M.-J., Chang, L. H.-H., Chiu, L. Y.-T., & Norris, L. J. (2014). Effects of Hospital Accreditation on Medical Students: A National Qualitative Study in Taiwan. *Academic Medicine, 89*(11), 1533-1539. https://doi.org/10.1097/ACM.0000000000000481

Horan, K. A., Singh, R. S., Moeller, M. T., Matthews, R. A., Barratt, C. L., Jex, S. M., & O'Brien, W. H. (2019). The relationship between physical work hazards and employee withdrawal: The moderating role of safety compliance. *Stress and Health, 35*(1), 81-88. https://doi.org/10.1002/smi.2844

Houdmont, J., & Leka, S. (2010). *Contemporary occupational health psychology. Volume 1, Global perspectives on research and practice [electronic resource] / edited by Jonathan Houdmont, Stavroula leka*. Oxford : Wiley-Blackwell.

Houkes, I., Winants, Y., Twellaar, M., & Verdonk, P. (2011). Development of burnout over time and the causal order of the three dimensions of burnout among male and female GPs. A three-wave panel study. *BMC public health, 11*(1), 240-240. https://doi.org/10.1186/1471-2458-11-240

Howard, A., Antczak, R., & Albertsen, K. (2022). *Overview Report of the Third European Survey of Enterprises on New and Emerging Risks (ESENER 2019)*. EU-OSHA.

Hox, J. J. (2010). *Multilevel analysis [electronic resource] : techniques and applications / Joop J. Hox* (2nd ed. ed.). New York : Routledge. https://doi.org/https://doi.org/10.4324/9780203852279

Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

10.1037/1082-989x.1.2.130

Hu, Q., Schaufeli, W. B., & Taris, A. W. (2017). How are changes in exposure to job demands and job resources related to burnout and engagement? : A longitudinal study among Chinese nurses and police officers. *Stress and Health, 33*(5), 631-644. https://doi.org/10.1002/smi.2750

Hu, Q., Schaufeli, W. B., & Taris, T. W. (2011). The Job Demands–Resources model: An analysis of additive and joint effects of demands and resources. *Journal of Vocational Behavior, 79*(1), 181-190. https://doi.org/10.1016/j.jvb.2010.12.009

Hu, Q., Schaufeli, W. B., & Taris, T. W. (2013). Does equity mediate the effects of job demands and job resources on work outcomes? *Career Development International, 18*(4), 357-376. https://doi.org/10.1108/CDI-12-2012-0126

Huq, Z., & Martin, T. N. (2000). Workforce cultural factors in TQM/CQI implementation in hospitals. *Health Care Management Review, 25*(3), 80-93. https://doi.org/10.1097/00004010-200007000-00009

Hussein, M., Pavlova, M., Ghalwash, M., & Groot, W. (2021, 2021/10/06). The impact of hospital accreditation on the quality of healthcare: a systematic literature review. *BMC Health Services Research, 21*(1), 1057. https://doi.org/10.1186/s12913-021-07097-6

Idris, M. A., Dollard, M., & Winefield, A. (2011). *Integrating psychosocial safety climate in the JD-R model: A study amongst Malaysian workers* (Vol. 37). https://doi.org/10.4102/sajip.v37i2.851

Idris, M. A., Dollard, M. F., & Tuckey, M. R. (2015). Psychosocial Safety Climate as a Management Tool for Employee Engagement and Performance: A Multilevel Analysis. *International Journal of Stress Management, 22*(2), 183-206. https://doi.org/10.1037/a0038986

Idris, M. A., Dollard, M. F., & Yulita. (2014). Psychosocial safety climate, emotional demands, burnout, and depression: A longitudinal multilevel study in the Malaysian private sector. *Journal of Occupational Health Psychology, 19*(3), 291-302. https://doi.org/10.1037/a0036599

IoM. (2000). *To Err Is Human : Building a Safer Health System*. The National Academies Press. https://doi.org/doi:10.17226/9728

ISQua. (1998). International standards and accreditation for health care: Feasibility paper. *International Journal for Quality in Health Care, 10*(3), 269-280. https://doi.org/10.1093/intqhc/10.3.269

Israel, B. A., House, J. S., Schurman, S. J., Heaney, C. A., & Mero, R. P. (1989, 1989/04/01). The relation of personal resources, participation, influence, interpersonal relationships and coping strategies to occupational stress, job strains and health: A multivariate analysis. *Work & Stress, 3*(2), 163-194. https://doi.org/10.1080/02678378908256942

Jaccard, J. (2003). *Interaction effects in multiple regression [electronic resource] / James Jaccard, Robert Turrisi* (2nd ed. ed.). Thousand Oaks, Calif.

London : SAGE.

James, W. (1907). *Pragmatism : a new name for some old ways of thinking : popular lectures on philosophy / by William James*. London : Longmans, Green.

JCI Accreditation. (2010). https://www.health-tourism.com/jci-accreditation/

Jeon, G.-S., You, S.-J., Kim, M.-G., Kim, Y.-M., & Cho, S.-I. (2019). Psychometric properties of the Korean version of the Copenhagen Burnout Inventory in Korean homecare workers for older adults. *PloS one, 14*(8), e0221323-e0221323. https://doi.org/10.1371/journal.pone.0221323

Johnson, J. V., & Hall, E. M. (1988). Job strain, work place social support, and cardiovascular disease: a cross-sectional study of a random sample of the Swedish working population. *American journal of public health (1971), 78*(10), 1336-1342. https://doi.org/10.2105/AJPH.78.10.1336

Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a Definition of Mixed Methods Research. *Journal of mixed methods research, 1*(2), 112-133. https://doi.org/10.1177/1558689806298224

Jolly, P. M., Kong, D. T., & Kim, K. Y. (2021). Social support at work: An integrative review. *Journal of Organizational Behavior, 42*(2), 229-251. https://doi.org/10.1002/job.2485

Jones, A. P., & James, L. R. (1979). Psychological climate: Dimensions and relationships of individual and aggregated work environment perceptions. *Organizational Behavior and Human Performance, 23*(2), 201-250. https://doi.org/10.1016/0030-5073(79)90056-4

Joop J. Hox, M. M., Rens van de Schoot. (2018). *Multilevel Analysis: Techniques and Applications* (Third edition ed.). Routledge. (First edition published by Lawrence Erlbaum Associates, Publishers 2002)

Jöreskog, K. G. (1966). SOME CONTRIBUTIONS TO MAXIMUM LIKELIHOOD FACTOR ANALYSIS. *Research bulletin (Educational Testing Service.), 1966*(2), i-54. https://doi.org/10.1002/j.2333-8504.1966.tb00539.x

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. John Wiley.

Kahn, W. A. (1990). Psychological Conditions of Personal Engagement and Disengagement at Work. *Academy of Management journal, 33*(4), 692-724. https://doi.org/10.2307/256287

Kaiser, H. F. (1974, 1974/03/01). An index of factorial simplicity. *Psychometrika, 39*(1), 31-36. https://doi.org/10.1007/BF02291575

Karasek, R. (1990). *Healthy work : stress, productivity, and the reconstruction of working life / Robert Karasek and Töres Theorell*. New York : BasicBooks.

Karasek, R., Brisson, C., Kawakami, N., Houtman, I., Bongers, P., & Amick, B. (1998, October 1998). The Job Content Questionnaire (JCQ): An Instrument for Internationally Comparative Assessments of Psychosocial Job Characteristics. *Journal of Occupational Health Psychology., 3*(4), 322-355.

Karasek, R. A. (1979). Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign. *Administrative science quarterly, 24*(2), 285-308. https://doi.org/10.2307/2392498

Kelloway, E. K. (2015). *Using Mplus for Structural Equation Modeling: A Researcher's Guide* (Second Edition ed.) https://doi.org/10.4135/9781483381664

Khan, A., Teoh, K. R. H., Islam, S., & Hassard, J. (2018). Psychosocial work characteristics, burnout, psychological morbidity symptoms and early retirement intentions: a cross-

sectional study of NHS consultants in the UK. *BMJ Open, 8*(7), e018720. https://doi.org/10.1136/bmjopen-2017-018720

Khan, S., & Alam, M. S. (2014, 2014/12/01/). Kingdom of Saudi Arabia: A potential destination for medical tourism. *Journal of Taibah University Medical Sciences, 9*(4), 257-262. https://doi.org/https://doi.org/10.1016/j.jtumed.2014.01.007

Kinman, G., & Teoh, K. (2018). *What could make a difference to the mental health of UK doctors? A review of the research evidence*.

Kinman, G., Teoh, K., & Harriss, A. (2020). Supporting the well-being of healthcare workers during and after COVID-19. *Occupational Medicine, 70*(5), 294-296. https://doi.org/10.1093/occmed/kqaa096

[Record #3135 is using a reference type undefined in this output style.]

Kline, R. B. (2016). *Principles and practice of structural equation modeling / Rex B. Kline* (4th ed. ed.). London : Guilford Press.

Klinefelter, Z., Sinclair, R. R., Britt, T. W., Sawhney, G., Black, K. J., & Munc, A. (2021). Psychosocial safety climate and stigma: Reporting stress-related concerns at work. *Stress and Health, 37*(3), 488-503. https://doi.org/10.1002/smi.3010

Koltko-Rivera, M. E. (2004, 2004/03/01). The Psychology of Worldviews. *Review of General Psychology, 8*(1), 3-58. https://doi.org/10.1037/1089-2680.8.1.3

Kompier, M. A. J. (2005). Assessing the Psychosocial Work environment- " subjective " Versus " Objective " Measurement. *Scandinavian journal of work, environment & health, 31*(6), 405-408. https://doi.org/10.5271/sjweh.946

Konze, A.-K., Rivkin, W., & Schmidt, K.-H. (2017). Is Job Control a Double-Edged Sword? A Cross-Lagged Panel Study on the Interplay of Quantitative Workload, Emotional Dissonance, and Job Control on Emotional Exhaustion. *International journal of environmental research and public health, 14*(12), 1608. https://doi.org/10.3390/ijerph14121608

Koo, T. K., & Li, M. Y. (2016). A Guideline of Selecting and Reporting Intraclass Correlation Coefficients for Reliability Research. *Journal of Chiropractic Medicine, 15*(2), 155-163. https://doi.org/10.1016/j.jcm.2016.02.012

Koornneef, E., Robben, P., & Blair, I. (2017). Progress and outcomes of health systems reform in the United Arab Emirates: a systematic review. *BMC Health Services Research, 17*(1). https://doi.org/10.1186/s12913-017-2597-1

Kornbluh, M. (2015). Combatting Challenges to Establishing Trustworthiness in Qualitative Research. *Qualitative Research in Psychology, 12*(4), 397-414. https://doi.org/10.1080/14780887.2015.1021941

Kousgaard, M. B., Thorsen, T., & Due, T. D. (2019). Experiences of accreditation impact in general practice - A qualitative study among general practitioners and their staff. *BMC Family Practice, 20*(1). https://doi.org/10.1186/s12875-019-1034-4

Kraemer, T., Schneider, A., Spiess, E., Angerer, P., & Weigl, M. (2016). Associations between job demands, work-related strain and perceived quality of care: a longitudinal study among hospital physicians. *International Journal for Quality in Health Care, 28*(6), 824-829. https://doi.org/10.1093/intqhc/mzw119

Kristensen, T., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress, 19*(3), 192-207. https://doi.org/10.1080/02678370500297720

Kumar, S. (2016, Jun 30). Burnout and Doctors: Prevalence, Prevention and Intervention. *Healthcare (Basel), 4*(3). https://doi.org/10.3390/healthcare4030037

Kwan, S. S. M., Tuckey, M. R., & Dollard, M. F. (2014). The role of the psychosocial safety climate in coping with workplace bullying: A grounded theory and sequential tree analysis. *European Journal of Work and Organizational Psychology, 25*(1), 1-15. https://doi.org/10.1080/1359432X.2014.982102

Laeeque, S. H., Bilal, A., Babar, S., Khan, Z., & Ul Rahman, S. (2018, 2018/01/02). How Patient-Perpetrated Workplace Violence Leads to Turnover Intention Among Nurses: The Mediating Mechanism of Occupational Stress and Burnout. *Journal of Aggression, Maltreatment & Trauma, 27*(1), 96-118. https://doi.org/10.1080/10926771.2017.1410751

Lam, M. B., Figueroa, J. F., Feyman, Y., Reimold, K. E., Orav, E. J., & Jha, A. K. (2018). Association between patient outcomes and accreditation in US hospitals: observational study. *BMJ, 363*, k4011. https://doi.org/10.1136/bmj.k4011

Lambert, S. D., & Loiselle, C. G. (2008). Combining individual interviews and focus groups to enhance data richness. *Journal Of Advanced Nursing, 62*(2), 228-237. https://doi.org/10.1111/j.1365-2648.2007.04559.x

LaRocco, J. M., House, J. S., & French Jr, J. R. P. (1980). Social Support, Occupational Stress, and Health. *Journal of health and social behavior, 21*(3), 202-218. https://doi.org/10.2307/2136616

Larsen, L. T. (2022). Not merely the absence of disease: A genealogy of the WHO's positive health definition. *History of the human sciences, 35*(1), 111-131. https://doi.org/10.1177/0952695121995355

Law, R., Dollard, M. F., Tuckey, M. R., & Dormann, C. (2011). Psychosocial safety climate as a lead indicator of workplace bullying and harassment, job resources, psychological health and employee engagement. *Accident Analysis and Prevention, 43*(5), 1782-1793. https://doi.org/10.1016/j.aap.2011.04.010

Lazarus, R. S. P., & Folkman, S. P. (1984). *Stress, Appraisal, and Coping*. Springer Publishing Company. http://ebookcentral.proquest.com/lib/nottingham/detail.action?docID=423337

Leather, P., Lawrence, C., Beale, D., Cox, T., & Dickson, R. (1998). Exposure to occupational violence and the buffering effects of intra-oranizational support. *Work and stress, 12*(2), 161-178. https://doi.org/10.1080/02678379808256857

Lei, P.-W., & Wu, Q. (2007). Introduction to Structural Equation Modeling: Issues and Practical Considerations. *Educational measurement, issues and practice, 26*(3), 33-43. https://doi.org/10.1111/j.1745-3992.2007.00099.x

Lei, P., Wu, Y., Ye, R., Sunil, T. S., & Zhou, H. (2019). Social support and blood pressure: a cross-sectional study. *The Lancet (British edition), 394*, S51-S51. https://doi.org/10.1016/S0140-6736(19)32387-6

Leiter, M. (1991). THE DREAM DENIED: PROFESSIONAL BURNOUT AND THE CONSTRAINTS OF HUMAN SERVICE ORGANIZATIONS. *Canadian psychology = Psychologie canadienne, 32*(4), 547-558. https://doi.org/10.1037/h0079040

Leka, S., & Houdmont, J. (2010). *Occupational health psychology / edited by Stavroula Leka, Jonathan Houdmont*. Chichester : Wiley-Blackwell.

Leka, S., Jain, A. K., Iavicoli, S., & Di Tecco, C. (2015). An evaluation of the policy context on psychosocial risks and mental health in the workplace in the European Union: achievements, challenges, and the future.

Lemaire, J. B., & Wallace, J. E. (2017). Burnout among doctors. *BMJ, 358*, j3360-j3360. https://doi.org/10.1136/bmj.j3360

Leonardi, F. (2018). The Definition of Health: Towards New Perspectives. *International journal of health services, 48*(4), 735-748. https://doi.org/10.1177/0020731418782653

[Record #2497 is using a reference type undefined in this output style.]

Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions for Program Evaluation, 1986*(30), 73-84. https://doi.org/https://doi.org/10.1002/ev.1427

Lipscomb, J. A. (2017). Hazards for Healthcare Workers. In *Occupational and Environmental Health* (7 ed., pp. 673-680). Oxford University Press. https://doi.org/10.1093/oso/9780190662677.003.0037

Liu, B., Lu, Q., Zhao, Y., & Zhan, J. (2020). Can the psychosocial safety climate reduce ill-health presenteeism? Evidence from chinese healthcare staff under a dual information processing path lens. *International journal of environmental research and public health, 17*(8), 2969. https://doi.org/10.3390/ijerph17082969

Liu, Y., Mo, S., Song, Y., & Wang, M. (2016). Longitudinal Analysis in Occupational Health Psychology: A Review and Tutorial of Three Longitudinal Modeling Techniques. *Applied Psychology, 65*(2), 379-411. https://doi.org/10.1111/apps.12055

Loerbroks, A., Glaser, J., Vu-Eickmann, P., & Angerer, P. (2017). Physician burnout, work engagement and the quality of patient care. *Occupational Medicine, 67*(5), 356-362. https://doi.org/10.1093/occmed/kqx051

Loh, M. Y., Idris, M. A., Dollard, M. F., & Isahak, M. (2018). Psychosocial safety climate as a moderator of the moderators: Contextualizing JDR models and emotional demands effects. *Journal of Occupational and Organizational Psychology, 91*(3), 620-644. https://doi.org/10.1111/joop.12211

Lohr, K. N., & Schroeder, S. A. (1990). A Strategy for Quality Assurance in Medicare. *The New England journal of medicine, 322*(10), 707-712. https://doi.org/10.1056/NEJM199003083221031

Long, J. C., Pomare, C., Ellis, L. A., Churruca, K., & Braithwaite, J. (2021). The pace of hospital life: A mixed methods study. *PloS one, 16*(8), e0255775-e0255775. https://doi.org/10.1371/journal.pone.0255775

Lumley, T., Diehr, P., Emerson, S., & Chen, L. (2002). The importance of the normality assumption in large public health data sets. *Annual review of public health, 23*(1), 151-169. https://doi.org/10.1146/annurev.publhealth.23.100901.140546

MacCallum, R. (1986). Specification Searches in Covariance Structure Modeling. *Psychological Bulletin, 100*(1), 107-120. https://doi.org/10.1037/0033-2909.100.1.107

Mansour, S., & Tremblay, D.-G. (2018). Psychosocial safety climate as resource passageways to alleviate work-family conflict. *Personnel Review, 47*(2), 474-493. https://doi.org/10.1108/PR-10-2016-0281

Marsh, H. W., Balla, J. R., & McDonald, R. P. (1988). Goodness-of-Fit Indexes in Confirmatory Factor Analysis: The Effect of Sample Size. *Psychological Bulletin, 103*(3), 391-410. https://doi.org/10.1037/0033-2909.103.3.391

Marsh, L. E., Kanngiesser, P., & Hood, B. (2018). When and how does labour lead to love? The ontogeny and mechanisms of the IKEA effect. *Cognition, 170*, 245-253. https://doi.org/10.1016/j.cognition.2017.10.012

Maslach, C. (1982). Burnout: The Cost of Caring.

Maslach, C., & Jackson, S. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior (pre-1986), 2*(2), 99. https://doi.org/https://doi.org/10.1002/job.4030020205

Maslach, C., & Leiter, M. P. (1997). *The truth about burnout : how organizations cause personal stress and what to do about it / Christina Maslach, Michael P. Leiter*. San Francisco, Calif. : Jossey-Bass.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job Burnout. *Annual Review of Psychology, 52*(1), 397-422. https://doi.org/10.1146/annurev.psych.52.1.397

Mauno, S., Kinnunen, U., & Ruokolainen, M. (2007). Job demands and resources as antecedents of work engagement: A longitudinal study. *Journal of Vocational Behavior, 70*(1), 149-171. https://doi.org/10.1016/j.jvb.2006.09.002

Mayer, T. M. (2021). *Battling Healthcare Burnout: Learning to Love the Job You Have, While Creating the Job you Love*. Berrett-Koehler Publishers.

Maziero, V. G., & Spiri, W. C. (2013). The meaning of the hospital accreditation process for nurses of a public state hospital. *Revista Eletronica de Enfermagem, 15*(1), 121-129. https://doi.org/10.5216/ree.v15i1.14757

McGonagle, A. K., Barnes-Farrell, J. L., Di Milia, L., Fischer, F. M., Hobbs, B. B. B., Iskra-Golec, I., Kaliterna, L., & Smith, L. (2014). Demands, resources, and work ability: A cross-national examination of health care workers. *European Journal of Work and Organizational Psychology, 23*(6), 830-846. https://doi.org/10.1080/1359432X.2013.819158

Medisauskaite, A., & Kamau, C. (2019). Does occupational distress raise the risk of alcohol use, binge-eating, ill health and sleep problems among medical doctors? a UK cross-sectional study. *BMJ Open, 9*(5), e027362. https://doi.org/10.1136/bmjopen-2018-027362

Melia, K. M. (2010). Recognizing Quality in Qualitative Research. In *The SAGE Handbook of Qualitative Methods in Health Research*. SAGE Publications Ltd. https://doi.org/10.4135/9781446268247

Melo, S. (2016). The impact of accreditation on healthcare quality improvement: a qualitative case study. *Journal of Health Organization and Management, 30*(8), 1242-1258. https://doi.org/10.1108/JHOM-01-2016-0021

Melodena, S. B. (2008). Dubai – a star in the east: A case study in strategic destination branding. *Journal of place management and development, 1*(1), 62-91. https://doi.org/10.1108/17538330810865345

Mengistu, D. A., & Tolera, S. T. (2020). Prevalence of occupational exposure to needle-stick injury and associated factors among healthcare workers of developing countries: Systematic review. *Journal of Occupational Health, 62*(1), e12179-n/a. https://doi.org/10.1002/1348-9585.12179

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative Research : A Guide to Design and Implementation*. John Wiley & Sons, Incorporated. http://ebookcentral.proquest.com/lib/nottingham/detail.action?docID=2089475

MOHAP. (2018, 28/1/2018). *Joint Commission International honors Ministry of Health and Prevention*. Ministry of Health and Prevention. Retrieved 18/11/201 from https://www.mohap.gov.ae/en/MediaCenter/News/Pages/1951.aspx

Moncada, S., Utzet, M., Molinero, E., Llorens, C., Moreno, N., Galtés, A., & Navarro, A. (2014). The copenhagen psychosocial questionnaire II (COPSOQ II) in Spain—A tool for psychosocial risk assessment at the workplace. *American Journal of Industrial Medicine, 57*(1), 97-107. https://doi.org/10.1002/ajim.22238

Moran-Ellis, J., Alexander, V. D., Cronin, A., Dickinson, M., Fielding, J., Sleney, J., & Thomas, H. (2006). Triangulation and integration: processes, claims and implications. *Qualitative research : QR, 6*(1), 45-59. https://doi.org/10.1177/1468794106058870

Morse, J. M. (2003). Principles of mixed methods and multimethod research design. *Handbook of mixed methods in social and behavioral research, 1*, 189-208.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification Strategies for Establishing Reliability and Validity in Qualitative Research. *International Journal of Qualitative Methods, 1*(2), 13-22. https://doi.org/10.1177/160940690200100202

Mosadeghrad, A. M. (2015). Developing and validating a total quality management model for healthcare organisations. *TQM journal, 27*(5), 544-564. https://doi.org/10.1108/TQM-04-2013-0051

Munro, R. A. (2009). *Lean Six Sigma for the Healthcare Practice : A Pocket Guide*. ASQ Quality Press. http://ebookcentral.proquest.com/lib/nottingham/detail.action?docID=3002595

Murphy, C. N., & Yates, J. (2009). *The International Organization for Standardization (ISO): global governance through voluntary consensus*. Routledge.

Murphy, E., & Dingwall, P. R. (2003). *Qualitative Methods and Health Policy Research*. Taylor & Francis Group. http://ebookcentral.proquest.com/lib/nottingham/detail.action?docID=4906408

Murphy, L. R. (2002). Job stress research at NIOSH: 1972–2002. In *Historical and Current Perspectives on Stress and Health* (Vol. 2, pp. 1-55). Emerald Group Publishing Limited. https://doi.org/10.1016/S1479-3555(02)02001-2

Muthén, L. K., & Muthén, B. O. (2002). How to Use a Monte Carlo Study to Decide on Sample Size and Determine Power. *Structural equation modeling, 9*(4), 599-620. https://doi.org/10.1207/s15328007sem0904_8

Muthén, L. K., & Muthén, B. O. (2017). Mplus: Statistical Analysis with Latent Variables: User's Guide (Version 8). *Los Angeles, CA: Muthén & Muthén.*

Myers, S. (2012). *Patient safety and hospital accreditation [electronic resource] : a model for ensuring success / Sharon Ann Myers*. New York : Springer Pub. Co.

Nasurdin, A. M., Ling, T. C., & Khan, S. N. (2018). LINKING SOCIAL SUPPORT, WORK ENGAGEMENT AND JOB PERFORMANCE IN NURSING. *International Journal of Business and Society, 19*(2), 363-386. http://ezproxy.nottingham.ac.uk/login?url=https://www.proquest.com/scholarly-journals/linking-social-support-work-engagement-job/docview/2392466906/se-2?accountid=8018

Neal, A., & Griffin, M. A. (2006). A study of the lagged relationships among safety climate, safety motivation, safety behavior, and accidents at the individual and group levels. *Journal of Applied Psychology, 91*(4), 946-953. https://doi.org/10.1037/0021-9010.91.4.946

NHS. (2021). *Guide to developing and implementing ward and unit accreditation programmes.* https://www.england.nhs.uk/publication/guide-to-developing-and-implementing-ward-and-unit-accreditation-programmes/

Nicklin, W., & Dickson, S. (2009). The Value and Impact of Accreditation in Health Care: A Review of the Literature. 14.

Nicklin, W., Fortune, T., van Ostenberg, P., O'Connor, E., & McCauley, N. (2017). Leveraging the full value and impact of accreditation. *International Journal for Quality in Health Care, 29*(2), 310-312. https://doi.org/10.1093/intqhc/mzx010

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Norton, M. I., Mochon, D., & Ariely, D. (2012). The IKEA effect: When labor leads to love. *Journal of consumer psychology, 22*(3), 453-460. https://doi.org/10.1016/j.jcps.2011.08.002

O'Cathain, A., Murphy, E., & Nicholl, J. (2008). Multidisciplinary, Interdisciplinary, or Dysfunctional? Team Working in Mixed-Methods Research. *Qualitative Health Research, 18*(11), 1574-1585. https://doi.org/10.1177/1049732308325535

O'Cathain, A., Murphy, E., & Nicholl, J. (2010). Three techniques for integrating data in mixed methods studies. *BMJ, 341*(7783), 45-1150. https://doi.org/10.1136/bmj.c4587

O'Reilly, M., & Parker, N. (2013). 'Unsatisfactory Saturation': a critical exploration of the notion of saturated sample sizes in qualitative research. *Qualitative research : QR, 13*(2), 190-197. https://doi.org/10.1177/1468794112446106

OECD. (2018). *Promoting mental health in Europe: Why and how?* https://doi.org/doi:https://doi.org/10.1787/health_glance_eur-2018-4-en

OECD. (2019). *Health at a Glance 2019*. https://doi.org/doi:https://doi.org/10.1787/4dd50c09-en

Oksanen, T., Kouvonen, A., Vahtera, J., Virtanen, M., & Kivimäki, M. (2010). Prospective study of workplace social capital and depression: are vertical and horizontal components equally important? *Journal of epidemiology and community health (1979), 64*(8), 684-689. https://doi.org/10.1136/jech.2008.086074

Orgambídez-Ramos, A., & de Almeida, H. (2017). Work engagement, social support, and job satisfaction in Portuguese nursing staff: A winning combination. *Applied Nursing Research, 36*, 37-41. https://doi.org/10.1016/j.apnr.2017.05.012

Ouchi, W. G. (1979). A Conceptual Framework for the Design of Organizational Control Mechanisms. *Management science, 25*(9), 833-848. https://doi.org/10.1287/mnsc.25.9.833

Øvretveit, J. (2000). Total quality management in European healthcare. *International Journal of Health Care Quality Assurance, 13*(2), 74-80. https://doi.org/10.1108/09526860010319523

Packer, M. J., & Goicoechea, J. (2000). Sociocultural and Constructivist Theories of Learning: Ontology, Not Just Epistemology. *Educational psychologist, 35*(4), 227-241. https://doi.org/10.1207/S15326985EP3504_02

Patton, M. Q. (2015). *Qualitative research & evaluation methods : integrating theory and practice / Michael Quinn Patton* (4th ed. ed.). Los Angeles

London : SAGE.

Pejtersen, J. H., Kristensen, T. S., Borg, V., & Bjorner, J. B. (2009, 2010/02/01). The second version of the Copenhagen Psychosocial Questionnaire. *Scandinavian Journal of Public Health, 38*(3_suppl), 8-24. https://doi.org/10.1177/1403494809349858

Pett, M. A. (2003). *Making sense of factor analysis [electronic resource] : the use of factor analysis for instrument development in health care research / Marjorie A. Pett, Nancy R. Lackey, John J. Sullivan*. Thousand Oaks, Calif. : Sage Pub.

Phillips, D. C., & Burbules, N. C. (2000). *Postpositivism and educational research*. Rowman & Littlefield Publishers.

Piko, B. F. (2006). Burnout, role conflict, job satisfaction and psychosocial health among Hungarian health care staff: A questionnaire survey. *International Journal of Nursing Studies, 43*(3), 311-318. https://doi.org/10.1016/j.ijnurstu.2005.05.003

Pisanti, R., Lombardo, C., Lucidi, F., Violani, C., & Lazzari, D. (2013). Psychometric properties of the Maslach Burnout Inventory for Human Services among Italian nurses: a test of alternative models. *Journal Of Advanced Nursing, 69*(3), 697-707. https://doi.org/10.1111/j.1365-2648.2012.06114.x

Plack, M. M. (2006). The Development of Communication Skills, Interpersonal Skills, and a Professional Identity Within a Community of Practice. *Journal of physical therapy education, 20*(1), 37-46. https://doi.org/10.1097/00001416-200601000-00005

Pomey, M.-P. (2015). Accreditation and Other External Evaluations of Quality and Safety of Care and Services: Innovations for Improvement? In T. a. Francis (Ed.), *Management Innovations for Healthcare Organizations* (pp. 461). Routledge.

Pomey, M.-P., Contandriopoulos, A.-P., François, P., & Bertrand, D. (2004). Accreditation: a tool for organizational change in hospitals? *International Journal of Health Care Quality Assurance, 17*(3), 113-124. https://doi.org/10.1108/09526860410532757

Pomey, M. P., François, P., Contandriopoulos, A. P., Tosh, A., & Bertrand, D. (2005). Paradoxes of French accreditation. *Quality and Safety in Health Care, 14*(1), 51. https://doi.org/10.1136/qshc.2004.011510

Probst, T. M., & Graso, M. (2013). Pressure to produce = pressure to reduce accident reporting? *Accident Analysis and Prevention, 59*, 580-587. https://doi.org/10.1016/j.aap.2013.07.020

Raskin, J. D. (2008). The Evolution of Constructivism. *Journal of constructivist psychology, 21*(1), 1-24. https://doi.org/10.1080/10720530701734331

Rattrie, L. T. B., & Kittler, M. G. (2014). The job demands-resources model and the international work context – a systematic review. *Journal of Global Mobility, 2*(3), 260-279. https://doi.org/http://dx.doi.org/10.1108/JGM-06-2014-0018

Reardon, M., Abrahams, R., Thyer, L., & Simpson, P. (2020, 2020/04/01). Review article: Prevalence of burnout in paramedics: A systematic review of prevalence studies [https://doi.org/10.1111/1742-6723.13478]. *Emergency Medicine Australasia, 32*(2), 182-189. https://doi.org/https://doi.org/10.1111/1742-6723.13478

Reich, T. C., & Hershcovis, M. S. (2011). Interpersonal relationships at work. In *APA handbook of industrial and organizational psychology, Vol 3: Maintaining, expanding, and contracting the organization.* (pp. 223-248). American Psychological Association. https://doi.org/10.1037/12171-006

Rickard, G., Lenthall, S., Dollard, M., Opie, T., Knight, S., Dunn, S., Wakerman, J., MacLeod, M., Seiler, J., & Brewster-Webb, D. (2012, 2012/12/01/). Organisational intervention to reduce occupational stress and turnover in hospital nurses in the Northern Territory, Australia. *Collegian, 19*(4), 211-221. https://doi.org/https://doi.org/10.1016/j.colegn.2012.07.001

Ritchie, W. J., Ni, J., Stark, E. M., & Melnyk, S. A. (2019). The Effectiveness of ISO 9001-Based Healthcare Accreditation Surveyors and Standards on Hospital Performance Outcomes: A Balanced Scorecard Perspective. *The Quality management journal, 26*(4), 162-173. https://doi.org/10.1080/10686967.2019.1647770

Rosenberg, J. (2005). Globalization theory: A post Mortem. *International politics (Hague, Netherlands), 42*(1), 2-74. https://doi.org/10.1057/palgrave.ip.8800098

Rotenstein, L., Torre, M., Ramos, M. A., Rosales, R. C., Guille, C., Sen, S., & Mata, D. (2018). Prevalence of Burnout Among Physicians A Systematic Review. *Jama-*

Journal Of The American Medical Association, 320(11), 1131-1150. https://doi.org/10.1001/jama.2018.12777

Rowley, J. (2012). Conducting research interviews. *Management research review, 35*(3/4), 260-271. https://doi.org/10.1108/01409171211210154

Rubin, H. J., & Rubin, I. S. (2005). Continuing the Design: Making the Research Credible. In *Qualitative Interviewing (2nd ed.): The Art of Hearing Data* (2nd ed.). SAGE Publications, Inc. https://doi.org/10.4135/9781452226651

Rugulies, R., Aust, B., & Madsen, I. E. H. (2017). Effort-reward imbalance at work and risk of depressive disorders. A systematic review and meta-analysis of prospective cohort studies. *Scandinavian journal of work, environment & health, 43*(4), 294-306. https://doi.org/10.5271/sjweh.3632

Saldaña, J. (2016). *The coding manual for qualitative researchers / Johnny Saldaña* (3rd ed. ed.). London : SAGE.

Sales, S. M. (1970, 1970/11/01/). Some effects of role overload and role underload. *Organizational Behavior and Human Performance, 5*(6), 592-608. https://doi.org/https://doi.org/10.1016/0030-5073(70)90042-5

Salyers, M. P., Bonfils, K. A., Luther, L., Firmin, R. L., White, D. A., Adams, E. L., & Rollins, A. L. (2016). The Relationship Between Professional Burnout and Quality and Safety in Healthcare: A Meta-Analysis. *Journal of general internal medicine : JGIM, 32*(4), 475-482. https://doi.org/10.1007/s11606-016-3886-9

Sandeva, G., & Gidikova, P. (2020). CURRENT PSYCHOSOCIAL RISK FACTORS IN THE HEALTHCARE SECTOR. *Trakia journal of sciences, 18*(Suppl.1), 63-71. https://doi.org/10.15547/tjs.2020.s.01.011

Sauter, S. L., Murphy, L. R., & Hurrell, J. J. (1990). Prevention of Work-Related Psychological Disorders: A National Strategy Proposed by the National Institute for Occupational Safety and Health (NIOSH). *The American psychologist, 45*(10), 1146-1158. https://doi.org/10.1037/0003-066X.45.10.1146

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behavior, 25*(3), 293-315. https://doi.org/10.1002/job.248

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The Measurement of Work Engagement With a Short Questionnaire: A Cross-National Study. *Educational and Psychological Measurement, 66*(4), 701-716. https://doi.org/10.1177/0013164405282471

Schaufeli, W. B., Salanova, M., González-romá, V., & Bakker, A. B. (2002). The Measurement of Engagement and Burnout: A Two Sample Confirmatory Factor Analytic Approach. *Journal of happiness studies, 3*(1), 71-92. https://doi.org/10.1023/A:1015630930326

Schaufeli, W. B., Shimazu, A., Hakanen, J., Salanova, M., & De Witte, H. (2017). An Ultra-Short Measure for Work Engagement. *European Journal of Psychological Assessment, -1*(-1), 1-15. https://doi.org/10.1027/1015-5759/a000430

Schaufeli, W. B., & Taris, T. W. (2014). A critical review of the job demands-resources model: Implications for improving work and health. In *Bridging occupational, organizational and public health: A transdisciplinary approach.* (pp. 43-68). Springer Science + Business Media. https://doi.org/10.1007/978-94-007-5640-3_4

Schein, E. H. (2004). *Organizational culture and leadership / Edgar H. Schein* (3rd ed. ed.). San Francisco : Jossey-Bass.

Schonfeld, I. S. (2017). *Occupational health psychology : work, stress, and health / Irvin Sam Schonfeld, PhD, MPH, Chu-Hsiang Chang, PhD*. New York, New York : Springer Publishing Company.

Schwandt, T. A., Lincoln, Y. S., & Guba, E. G. (2007). Judging interpretations: But is it rigorous? trustworthiness and authenticity in naturalistic evaluation. *New directions for evaluation, 2007*(114), 11-25. https://doi.org/10.1002/ev.223

Schwartz, B. (2000). Self-Determination: The Tyranny of Freedom. *The American psychologist, 55*(1), 79-88. https://doi.org/10.1037/0003-066X.55.1.79

Schwarzer, R., & Knoll, N. (2007). Functional roles of social support within the stress and coping process: A theoretical and empirical overview. *International journal of psychology, 42*(4), 243-252. https://doi.org/10.1080/00207590701396641

Schwarzer, R., & Leppin, A. (1991, 1991/02/01). Social Support and Health: A Theoretical and Empirical Overview. *Journal of Social and Personal Relationships, 8*(1), 99-127. https://doi.org/10.1177/0265407591081005

Scrivens, E. (1995, 1995/07/01). International trends in accreditation [https://doi.org/10.1002/hpm.4740100303]. *The International Journal of Health Planning and Management, 10*(3), 165-181. https://doi.org/https://doi.org/10.1002/hpm.4740100303

Scrivens, E. E. J., Klein, R., & Steiner, A. (1995). Accreditation: what can we learn from the Anglophone model? *Health policy (Amsterdam), 34*(3), 193-204. https://doi.org/10.1016/0168-8510(95)00766-0

Selig, J., & Little, T. (2012). Autoregressive and cross-lagged panel analysis for longitudinal data. In (pp. 265-278).

Selm, M. v., & Jankowski, N. W. (2006). Conducting online surveys. *Quality & Quantity, 40*(3), 435-456. https://doi.org/10.1007/s11135-005-8081-8

Selye, H. (1978). *The stress of life / by Hans Selye* (Rev. ed., pbk. ed. ed.). New York

London : McGraw-Hill.

Sepkowitz, K. A., & Eisenberg, L. (2005). Occupational deaths among healthcare workers. *Emerging infectious diseases, 11*(7), 1003-1008. https://doi.org/10.3201/eid1107.041038

Shanafelt, T. D. M. D., Dyrbye, L. N. M. D. M., Sinsky, C. M. D., Hasan, O. M. M. P. H., Satele, D. M. S., Sloan, J. P., & West, C. P. M. D. P. (2016). Relationship Between Clerical Burden and Characteristics of the Electronic Environment With Physician Burnout and Professional Satisfaction. *Mayo Clinic proceedings, 91*(7), 836-848. https://doi.org/10.1016/j.mayocp.2016.05.007

Shanafelt, T. D. M. D., Hasan, O. M. M. P. H., Dyrbye, L. N. M. D. M., Sinsky, C. M. D., Satele, D. M. S., Sloan, J. P., & West, C. P. M. D. P. (2015). Changes in Burnout and Satisfaction With Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014. *Mayo Clinic proceedings, 90*(12), 1600-1613. https://doi.org/10.1016/j.mayocp.2015.08.023

Shaw, C. (2015). Accreditation is not a stand-alone solution. *Eastern Mediterranean health journal = La revue de sante de la Mediterranee orientale = al-Majallah al-sihhiyah li-sharq al-mutawassit, 21*(3), 226. https://doi.org/10.26719/2015.21.3.226

Shaw, C., Groene, O., Mora, N., & Sunol, R. (2010). Accreditation and ISO certification: do they explain differences in quality management in European hospitals? *International Journal for Quality in Health Care, 22*(6), 445-451. https://doi.org/10.1093/intqhc/mzq054

Shaw, J. B., & Weekley, J. A. (1985, 1985/04/01). The Effects of Objective Work-load Variations of Psychological Strain and Post-Work-Load Performance. *Journal of Management, 11*(1), 87-98. https://doi.org/10.1177/014920638501100108

Sheehan, K. B. (2002). Toward a Typology of Internet Users and Online Privacy Concerns. *The Information society, 18*(1), 21-32. https://doi.org/10.1080/01972240252818207

Shimazu, A., Schaufeli, W. B., Kosugi, S., Suzuki, A., Nashiwa, H., Kato, A., Sakamoto, M., Irimajiri, H., Amano, S., Hirohata, K., Goto, R., & Kitaoka-Higashiguchi, K. (2008, 2008/07/01). Work Engagement in Japan: Validation of the Japanese Version of the Utrecht Work Engagement Scale [https://doi.org/10.1111/j.1464-0597.2008.00333.x]. *Applied Psychology, 57*(3), 510-523. https://doi.org/https://doi.org/10.1111/j.1464-0597.2008.00333.x

Shirom, A., Nirel, N., & Vinokur, A. D. (2006). Overload, Autonomy, and Burnout as Predictors of Physicians' Quality of Care. *Journal of Occupational Health Psychology, 11*(4), 328-342. https://doi.org/10.1037/1076-8998.11.4.328

Shortell, S. M., Bennett, C. L., & Byck, G. R. (1998). Assessing the impact of continuous quality improvement on clinical practice: what it will take to accelerate progress. *The Milbank quarterly, 76*(4), 593. https://doi.org/10.1111/1468-0009.00107

Sieber, S. D. (1973). The Integration of Fieldwork and Survey Methods. *The American journal of sociology, 78*(6), 1335-1359. https://doi.org/10.1086/225467

Siegrist, J. (1996). Adverse Health Effects of High-Effort/Low-Reward Conditions. *Journal of Occupational Health Psychology, 1*(1), 27-41. https://doi.org/10.1037/1076-8998.1.1.27

Siegrist, J. (2014). Social Inequalities in Work and Health in a Globalized Economy. In Springer (Ed.), *Bridging Occupational, Organizational and Public Health.* Springer, Dordrecht. https://doi.org/https://doi.org/10.1007/978-94-007-5640-3_2

Siny, T., Colin, F. R., & Abdullah Sulieman, T. (2017). Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine. *Saudi Journal of Anaesthesia, 11*(5), 80-89. https://doi.org/10.4103/sja.SJA_203_17

Smith, B., & McGannon, K. R. (2018, 2018/01/01). Developing rigor in qualitative research: problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology, 11*(1), 101-121. https://doi.org/10.1080/1750984X.2017.1317357

Smith, J. A. (2015). *Qualitative psychology : a practical guide to research methods / edited by Jonathan A. Smith* (3rd ed. ed.). Los Angeles

London : SAGE.

Spath, P. K. D. L. (2017). *Applying quality management in healthcare : a systems approach*. https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=1839063

Stenbacka, C. (2001). Qualitative research requires quality concepts of its own. *Management decision, 39*(7), 551-556. https://doi.org/10.1108/EUM0000000005801

Steptoe, A., & Kivimäki, M. (2012). Stress and cardiovascular disease. *Nature reviews cardiology, 9*(6), 360-370. https://doi.org/10.1038/nrcardio.2012.45

Stevens, S. S. (1946). On the Theory of Scales of Measurement. *Science, 103*(2684), 677-680. https://doi.org/doi:10.1126/science.103.2684.677

Stevenson, D., & Farmer, P. (2017). *Thriving at work: the Stevenson/Farmer review of mental health and employers*. https://www.gov.uk/government/publications/thriving-at-work-a-review-of-mental-health-and-employers

Stone, M. (1974). Cross-Validatory Choice and Assessment of Statistical Predictions. *Journal of the Royal Statistical Society. Series B, Methodological, 36*(2), 111-147. https://doi.org/10.1111/j.2517-6161.1974.tb00994.x

Swathi, K. S., Barkur, G., & G, S. (2020). Impact of accreditation on performance of healthcare organizations: A review of global studies. *International journal of quality and service sciences, 12*(1), 85-108. https://doi.org/10.1108/IJQSS-10-2018-0085

Sweeney, J., & Heaton, C. (2000). Interpretations and variations of ISO 9000 in acute health care. International Organization for Standardization. *International Journal for Quality in Health Care, 12*(3), 203-209.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics*. Harlow: Pearson Education UK.

Tabanelli, M. C., Depolo, M., Cooke, R. M. T., Sarchielli, G., Bonfiglioli, R., Mattioli, S., & Violante, F. S. (2008, 2008/10/01). Available instruments for measurement of psychosocial factors in the work environment. *International Archives of Occupational and Environmental Health, 82*(1), 1-12. https://doi.org/10.1007/s00420-008-0312-6

Taber, K. S. (2018, 2018/12/01). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education, 48*(6), 1273-1296. https://doi.org/10.1007/s11165-016-9602-2

Taris, T. W., Kompier, M. A. J., Geurts, S. A. E., Houtman, I. L. D., & Van Den Heuvel, F. F. M. (2010). Professional efficacy, exhaustion, and work characteristics among police officers: A longitudinal test of the learning-related predictions of the demand-control model. *Journal of Occupational and Organizational Psychology, 83*(2), 455-474. https://doi.org/10.1348/096317909X424583

Taris, T. W., & Schaufeli, W. B. (2015). The Job Demands-Resources Model. In *The Wiley Blackwell Handbook of the Psychology of Occupational Safety and Workplace Health* (pp. 155-180). https://doi.org/https://doi.org/10.1002/9781118979013.ch8

Tashakkori, A. (2020). *Foundations of mixed methods research : integrating quantitative and qualitative approaches in the social and behavioral sciences / Abbas Tashakkori, R. Burke Johnson, Charles Teddlie* (Second Edition. ed.). London

Thousand Oaks : SAGE Publications, Inc.

Tashakkori, A., & Creswell, J. W. (2007). The New Era of Mixed Methods. *Journal of mixed methods research, 1*(1), 3-7. https://doi.org/10.1177/2345678906293042

Teoh, K., Hassard, J., & Cox, T. (2019). Doctors' perceived working conditions and the quality of patient care: a systematic review. *Work and stress, 33*(4), 385-413. https://doi.org/10.1080/02678373.2019.1598514

Teoh, K., Hassard, J., & Cox, T. (2020). Individual and organizational psychosocial predictors of hospital doctors' work-related wellbeing: a multilevel and moderation perspective. https://doi.org/10.1097/HMR.0000000000000207

Timmermans, S. (2003). *The gold standard : the challenge of evidence-based medicine and standardization in health care / Stefan Timmermans and Marc Berg*. Philadelphia, Pa. : Temple University Press.

Touati, N., & Pomey, M.-P. (2009). Accreditation at a crossroads: Are we on the right track? *Health policy, 90*(2), 156-165. https://doi.org/10.1016/j.healthpol.2008.09.007

UAE. (2021). *Healthcare budget*. Retrieved 17/1/2022 from https://u.ae/en/information-and-services/health-and-fitness/healthcare-budget

UN. (2022). *Uae Population 1950-2022*. https://www.macrotrends.net/countries/ARE/uae/population. Retrieved 2022-01-11.

Vagg, P. R., & Spielberger, C. D. (1998). Occupational Stress: Measuring Job Pressure and Organizational Support in the Workplace. *Journal of Occupational Health Psychology, 3*(4), 294-305. https://doi.org/10.1037/1076-8998.3.4.294

van der Eijk, C., & Rose, J. (2015). Risky Business: Factor Analysis of Survey Data – Assessing the Probability of Incorrect Dimensionalisation. *PloS one, 10*(3), e0118900. https://doi.org/10.1371/journal.pone.0118900

Vegchel, N. v., de Jonge, J., Bosma, H., & Schaufeli, W. (2005). Reviewing the effort–reward imbalance model: drawing up the balance of 45 empirical studies. *Social science & medicine (1982), 60*(5), 1117-1131. https://doi.org/10.1016/j.socscimed.2004.06.043

Verma, J. (2020). *UAE is Set to Become Hub of Medical Tourism*. Retrieved 20/11/2021 from https://insights.omnia-health.com/hospital-management/uae-set-become-hub-medical-tourism

Warner, M., Schenker, N., Heinen, M. A., & Fingerhut, L. A. (2005). The effects of recall on reporting injury and poisoning episodes in the National Health Interview Survey [10.1136/ip.2004.006965]. *Injury Prevention, 11*(5), 282. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1730266/pdf/v011p00282.pdf

Watkins, M. (2000, 01/01). Monte Carlo PCA for Parallel Analysis (Computer Software). *State College, PA: Ed & Psych Associates*.

Weick, K. E. (2015). *Managing the unexpected : sustained performance in a complex world / Karl E. Weick, Kathleen M. Sutcliffe* (Third edition. ed.). Hoboken, New Jersey : Wiley.

West, C. P., Dyrbye, L. N., & Shanafelt, T. D. (2018). Physician burnout: contributors, consequences and solutions. *Journal of internal medicine, 283*(6), 516-529. https://doi.org/10.1111/joim.12752

Weston, R., & Gore, P. A. (2006). A Brief Guide to Structural Equation Modeling. *The Counseling psychologist, 34*(5), 719-751. https://doi.org/10.1177/0011000006286345

Whittemore, R., Chase, S. K., & Mandle, C. L. (2001). Validity in Qualitative Research. *Qualitative Health Research, 11*(4), 522-537. https://doi.org/10.1177/104973201129119299

WHO. (1948). *Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946*. http://whqlibdoc.who.int/hist/official_records/constitution.pdf

WHO. (2003). Quality and accreditation in health care services, A GLOBAL REVIEW. *Wolrd Health Organization*. https://doi.org/https://apps.who.int/iris/handle/10665/68410

WHO. (2010). *Health Impact of Psychosocial Hazards at Work: An Overview* [Report].

WHO. (2015). *World health statistics 2015*

WHO. (2018). *Delivering quality health services: a global imperative for universal health coverage*. World Health Organization. https://apps.who.int/iris/handle/10665/272465

WHO. (2019). *World health statistics 2019: monitoring health for the SDGs, sustainable development goals*. World Health Organization.

[Record #3183 is using a reference type undefined in this output style.]

WHO. (2022). *Mental health: strengthening our response*. World Health Organization. Retrieved 31 August 2022 from https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response

Wickstrom, G., & Bendix, T. (2000). The "Hawthorne effect" — what did the original Hawthorne studies actually show? *Scandinavian journal of work, environment & health, 26*(4), 363-367. https://doi.org/10.5271/sjweh.555

Wilkinson, S. (1998, Jul). Focus groups in health research: exploring the meanings of health and illness. *J Health Psychol, 3*(3), 329-348. https://doi.org/10.1177/135910539800300304

Williams, R., & Kemp, V. (2020). Caring for healthcare practitioners. *BJPsych advances, 26*(2), 116-128. https://doi.org/10.1192/bja.2019.66

Willis, C. A. (2021, 2021/07/03). Hospital Accreditation: A Primer. *Journal of Hospital Librarianship, 21*(3), 289-299. https://doi.org/10.1080/15323269.2021.1967685

Woo, T., Ho, R., Tang, A., & Tam, W. (2020). Global prevalence of burnout symptoms among nurses: A systematic review and meta-analysis. *Journal of psychiatric research, 123*, 9-20. https://doi.org/10.1016/j.jpsychires.2019.12.015

Woodhead, A. (2013). Scoping medical tourism and international hospital accreditation growth. *International Journal of Health Care Quality Assurance, 26*(8), 688-702. https://doi.org/10.1108/IJHCQA-10-2011-0060

Woodman, J. (2020). *Patients Beyond Borders Fourth Edition: Everybody's Guide to Affordable, World-Class Medical Travel* (4th Edition ed.). Calvander Communications. http://www.patientsbeyondborders.com

Wright, W., & Khatri, N. (2015). Bullying among nursing staff: Relationship with psychological/behavioral responses of nurses and medical errors. *Health Care Management Review, 40*(2), 139-147. https://doi.org/10.1097/HMR.0000000000000015

Xanthopoulou, D., Bakker, A. B., Dollard, M. F., Demerouti, E., Schaufeli, W. B., Taris, T. W., & Schreurs, P. J. G. (2007). When do job demands particularly predict burnout? *Journal of Managerial Psychology, 22*(8), 766-786. https://doi.org/10.1108/02683940710837714

Xanthopoulou, D., Bakker, A. B., & Fischbach, A. (2013). Work engagement among employees facing emotional demands: The role of personal resources. *Journal of personnel psychology, 12*(2), 74-84. https://doi.org/10.1027/1866-5888/a000085

Xu, Y., & Goodacre, R. (2018). On Splitting Training and Validation Set: A Comparative Study of Cross-Validation, Bootstrap and Systematic Sampling for Estimating the Generalization Performance of Supervised Learning. *Journal of analysis and testing, 2*(3), 249-262. https://doi.org/10.1007/s41664-018-0068-2

Yuan, K. H., & Bentler, P. M. (2000). Three Likelihood-Based Methods for Mean and Covariance Structure Analysis with Nonnormal Missing Data. *Sociological methodology, 30*(1), 165-200. https://doi.org/10.1111/0081-1750.00078

Yulita, Idris, M. A., & Dollard, M. (2016). Psychosocial Safety Climate: Past, Present, and Future Research. In A. Shimazu, R. Bin Nordin, M. Dollard, & J. Oakman (Eds.), *Psychosocial Factors at Work in the Asia Pacific: From Theory to Practice* (pp. 89-134). Springer International Publishing. https://doi.org/10.1007/978-3-319-44400-0_6

Zábrodská, K., Mudrák, J., Šolcová, I., Květon, P., Blatný, M., & Machovcová, K. (2018). Burnout among university faculty: the central role of work-family conflict. *Educational Psychology, 38*(6), 800-819. https://doi.org/10.1080/01443410.2017.1340590

Zadow, A., & Dollard, M. F. (2015). Psychosocial Safety Climate. In *The Wiley Blackwell Handbook of the Psychology of Occupational Safety and Workplace Health* (pp. 414-436). https://doi.org/https://doi.org/10.1002/9781118979013.ch18

Zadow, A., & Dollard, M. F. (2016). Psychosocial safety climate. In S. Clarke, T. M. Probst, F. Guldenmund, & J. Passmore (Eds.), *The Wiley Blackwell handbook of the psychology of occupational safety and workplace health* (pp. 414-436). Wiley-Blackwell.

Zadow, A., Dollard, M. F., Parker, L., & Storey, K. (2019). Psychosocial Safety Climate: A Review of the Evidence. In M. F. Dollard, C. Dormann, & M. Awang Idris (Eds.), *Psychosocial Safety Climate: A New Work Stress Theory* (pp. 31-75). Springer International Publishing. https://doi.org/10.1007/978-3-030-20319-1_2

Zadow, A. J., Dollard, M. F., McLinton, S. S., Lawrence, P., & Tuckey, M. R. (2017). Psychosocial safety climate, emotional exhaustion, and work injuries in healthcare workplaces. *Stress and Health, 33*(5), 558-569. https://doi.org/10.1002/smi.2740

Zohar, D. (1980). Safety climate in industrial organizations: Theoretical and applied implications. *Journal of Applied Psychology, 65*(1), 96-102. https://doi.org/10.1037/0021-9010.65.1.96

Zohar, D., & Luria, G. (2005). A Multilevel Model of Safety Climate: Cross-Level Relationships Between Organization and Group-Level Climates. *Journal of Applied Psychology, 90*(4), 616-628. https://doi.org/10.1037/0021-9010.90.4.616

Appendix

Appendix 1: The Demographic data of Interviews and Focus Group Discussion

Appendix 1 Demographic data of Interview participants.

Participant	Gender	Profession	Experience with accreditation	Tenure (Years)	Location
P001	Female	Allied Health Professional	No	6-12 months	Hospital 1
P002	Female	Administrator	No	12 months-3 years	Hospital 1
P003	Female	Nurse	No	> 5 years	Hospital 1
P004	Male	Doctor	Yes	6-12 months	Hospital 1
P005	Female	Nurse (Unit Manager)	No	> 5 years	Hospital 1
P006	Female	Nurse	No	> 5 years	Hospital 1
P007	Female	Nurse	No	> 5 years	Hospital 1
P008	Female	Nurse	No	12 months-3 years	Hospital 1
P009	Female	Nurse	No	> 5 years	Hospital 1
P010	Female	Nurse	No	> 5 years	Hospital 1
P011	Male	Doctor	No	> 5 years	Hospital 1
P012	Male	Doctor	No	6-12 months	Hospital 1
P013	Female	Doctor	No	> 5 years	Hospital 1
P014	Male	Doctor	Yes	> 5 years	Hospital 2
P015	Female	Nurse	No	> 5 years	Hospital 2
P016	Female	Allied Health Professional	No	12 months-3 years	Hospital 1
P017	Female	Allied Health Professional	No	12 months-3 years	Hospital 1

Participant	Gender	Profession	Experience with accreditation	Tenure (Years)	Location
P018	Male	Nurse (Unit Manager)	Yes	> 5 years	Hospital 2
P019	Female	Nurse	No	> 5 years	Hospital 2
P020	Female	Nurse	No	12 months-3 years	Hospital 2
P021	Female	Nurse	No	> 5 years	Hospital 1
P022	Male	Allied Health Professional	No	> 5 years	Hospital 1
P023	Male	Doctor	Yes	12 months-3 years	Hospital 3
P024	Female	Nurse	No	> 5 years	Hospital 3
P025	Female	Nurse	No	> 5 years	Hospital 3
P026	Female	Doctor	No	> 5 years	Primary Healthcare Center
P027	Male	Doctor	No	3 years-5 years	Hospital 2
P028	Female	Doctor	No	> 5 years	Hospital 1

Appendix 2 Demographic Data of Participants from Focus Group Discussions

Participant	Gender	Profession	Experience with accreditation	Tenure (Years)	Location
FG001	Female	Nurse	No	12 months-3 years	PHC network
FG002	Female	Nurse	No	3 years-5 years	PHC network
FG003	Female	Nurse	No	> 5 years	PHC network
FG004	Female	Nurse	No	> 5 years	PHC network
FG005	Female	Nurse	No	> 5 years	PHC network
FG006	Female	Nurse	No	> 5 years	PHC network
FG007	Female	Dentist	No	3 years-5 years	PHC network
FG008	Female	Dentist	No	3 years-5 years	PHC network
FG009	Male	Doctor	No	> 5 years	PHC network
FG010	Female	Doctor	Yes	> 5 years	PHC network
FG011	Male	Doctor	No	> 5 years	PHC network
FG012	Female	Doctor	No	> 5 years	PHC network
FG013	Female	Doctor	No	> 5 years	PHC network
FG014	Female	Allied Health Professional	No	3 years-5 years	PHC network
FG015	Female	Allied Health Professional	No	> 5 years	PHC network
FG016	Female	Allied Health Professional	No	> 5 years	PHC network
FG017	Female	Allied Health Professional	No	> 5 years	PHC network
FG018	Female	Administrator	No	3 years-5 years	PHC network
FG019	Female	Administrator	No	> 5 years	PHC network
FG020	Female	Administrator	No	> 5 years	PHC network

Participant	Gender	Profession	Experience with accreditation	Tenure (Years)	Location
FG021	Female	Administrator	No	> 5 years	PHC network
FG022	Female	Administrator	No	> 5 years	PHC network

Appendix 2: The structure of the qualitative questions

Interviews were designed to last for 20 to 30 minutes and consist between 12-15 questions to understand and explore the way participants perceived accreditation inspections. Furthermore, interviews explored how these inspections affected HCPs' daily work, relationship with managers, supervisors, or colleagues and their psychological health. At the beginning of each interview, I explained the purpose of the research and inform participants about their rights in the study such as confidentiality, right to withdraw at any time, and offer them a telephone interview if they do not feel comfortable to continue the interview session.

Participants were then asked to describe their feelings regarding the accrediting process, such as the way their tasks were influenced. Also, participants were asked about the emotional and physical demand of such process and whether those demands affected the delivery of care to patients during the preparation for accreditation. It was essential also to discuss the perceived advantages of accreditation by allowing participants to explain how such process is viewed as an opportunity for their professional growth and development.

Finally, participants were asked to describe whether their management was involved in initiatives or actions that protected employees' well-being during the accrediting phase. Interviewees are asked to recall a situation that supports their input. At the end, the interviewer gave a debriefing on what was covered during the

interview and provide participants with a contact number for further information. In addition, questions were added to discuss the health and well-being experienced by HCPs and the way HCPs' health was prioritised by leaders. For example, questions attempted to understand participants' feelings towards the workload of accreditation, management's corrective actions towards issues that affected employees' psychological health, and whether any preventive or protection measures were taken by the facility leaders to prevent psychological consequences related to accreditation.

Appendix 3: Parallel quotes from interviews and focus groups.

#	Interviews	Focus groups
	Theme 1: Challenging factors in the process of accreditation	
	Sub-theme: Focused efforts on administrative "work"	
1	P004: For us it is not, [that] we cannot leave the department, and we have to adapt ourselves to do the courses, after our duty, or before our duty [hours]. If the course is at 10 am and my duty at 7 pm, I will come at 10 to finish the course by 1 pm, then I will go back home, then I will come back at 7 pm.	FG003: Training courses were running continuously, that what made them feel so confident. They were under pressure, but I am sure that they were happy, confident and proud of themselves.
2	P012: A lot of time had been consumed because every week there would be one hour or two [hours] I had to shell out either from my clinic or from the operating room. So, I had to be on my toes knowing that, yes, today I might be called many times for a particular meeting to clarify things.	FG002: It was like a workload that time. we were like [attending] so many meetings and we were going for that, and they are calling for this one at the same time we have to be with the [electronic medical system] training because it was new for us. So, then I can say that we were stressed,
3	P013: So, with this accreditation system, it focuses on documentation, timing of staff and putting orders in the system, and all this stuff. Thus, it pulled us away from patients and put us in front of the computer. This is what had happened for nurses, for lab technicians, for doctors, for [emergency] physicians, for everyone.	FG002: The problem is that we discovered such issue at the end, when we finished the majority of our work. and even for the documentation, although it was the most essential part in the whole process, we knew about it at the end.
4	P017: Appointments were cancelled, and appointments were postponed. Delays in inpatient services, it was seen and provided, but it was delayed more than [the] usual or the time that it was supposed to be given.	FG002: So, patients will get frustrated, because of the long waiting time to see the doctor or from the technical issues which really arise because of the implementing system, and this would then reflect when the patient starts to complain and get upset. This would reflect on us. So, we would get like a little bit upset. If somebody complained against me.

#	Interviews	Focus groups
	Sub-theme: Observed work-related hazards	
5	P009: We worked hard. We used to leave the hospital so late, after finishing our duty, we used to leave late from work.	FG001: And after the duty also we stayed altogether and doing something. And morning staff we will work till evening, and even staff will come in the morning, like that.
6	P024: …if they [would] provide us [with] more staff, it would be fine. We [could have done] the documentation and patients care all together, but because of the shortage of staff we [were] really having a hard time doing this.	FG003: If we need for example any equipment or requirements, it should not be delivered few days before the accreditation. Essential items should be part of the system and it should be available all the time.
7	P018: It is a hard thing to achieve, okay, the accreditation because too many paperwork you will do it, and you know, you will change personal, even the personal mind you will change it. Yeah. Personal mind you will change it.	FG003: For me, I faced difficulties. Some of the staff did not accept these changes; there was some sort of negligence from the staff. Therefore, when we released the new [policies], we used to chase them. So, we used to teach them and inform them what to do… and for me, it was a challenge to come and ask them to work in a certain manner in a few months.
8	P007: The hospital appointed more new staff, but just before accreditation they started to give us.	FG001: They have to give [us] the resources and the staff, whatever it is; staff are also resources. All the things to be in [our] hands, then [we can] start working. Therefore, it will not be tense and will go smoothly. This will not waste our time. Therefore, we can reach the goal very fast instead of wasting [our] time.
9	P010: I mean, squeezing us in this small period [of time] to do all the [required] things. This was the worst thing at that time.	FG001: We were like lacking somewhere to finish for the deadline I can say, the infection control, all those things.

#	Interviews	Focus groups
10	P017: things were just announced at the last moment. And [we] had to rush through it to finish and [we] were not sure if it was right or wrong. There were things that had to be rushed and finished in the morning that [surveyors] were here. Therefore, [we] had to run from one office to another.	FG002: I think give more time for people you know, to handle it and prepare well because I think ministry at that time, okay this year you will get the [accreditation] So you will do everything just to get the [accreditation] is not a matter of, you know, getting the [accreditation] within one year or. I think it's a matter of preparing also the mentality of the people.
11	P010: So we, it was like not prepared from beginning to do to be ready for that. form I mean, they were telling "there is accreditation, there is accreditation" but the real work was started just a few weeks before the date which is supposed to be examined on that.	FG002: if things were clear from the beginning, it would not be easier, but better for the preparation. I mean, our time was wasted because we were repeating things. Because everyone was saying something different.
	Sub-theme: Perceived pressure from accreditation demands	
12	P020: At first [I felt] nervous. Overly stressed – I can say – and a lot of work, a lot of paperwork, we [had] to read, we [had] to understand what [we were] reading, and [we had] to apply it. I mean before accreditation.	FG002: I will add to [my colleagues] during the [accreditation] preparation it was really stressful, for us as physicians, for our patients, even our families, during the [accreditation] preparation,
13	P028: To be honest, I experienced a lot of stress. I have anxiety issues and, unfortunately, I had some, to a lesser extent, anger problems, and anger issues. So, I had to go and see a psychologist for that…. Honestly, it started before, but when I felt that I could not handle it anymore, it was like, just to say, one month prior to the actual arrival of the [surveyors'].	FG003: For me as a head of department, I got tired at a point of the preparation, I am not saying that I had negative feelings or depressed, but I was under the pressure there was anxiety and I gained weight, I used to eat chocolate in huge quantities. Also, my social life had decreased significantly. At a point when I noticed my weight gain, gastric problems and sleep disturbance I thought that I need to visit the psychologist.
14	P017: During the accreditation hours when they came here, as I said we have to stay longer so which like my family and they are	FG002: During the [accreditation] preparation, it was really stressful for us as physicians, for our patients, and even [for] our families.

#	Interviews	Focus groups
	going out or during the holiday they are going out while I'm HERE.	
	Sub-theme: Management's role during accreditation	
15	P001: I think because [my supervisor] was already busy, she was [running] meetings with us, trying to revise the policies with us, but nobody actually concentrated or thought about [the] psychological effect or the stress [placed] on the staff, because we [felt] she was already stressed.	FG002: If we want to scale the stress [level], I think leaders had the highest level of stress, when you go down [to front line staff] the stress would be much less. I think for us as GPs, who are working with patients, I think less stress, but the stress would be more with the people who are the coordinator and the technical directors.
16	P004: You cannot blame anyone if you are in this stressful situation because it is something mandatory to keep the hospital working, it is required from the Ministry of Health, so they have to be like this, but it is on the other side, [workers] who are receiving, it will be stressful [for them].	FG002: FG011 [00:34:44] Also we felt that we had no choice. It was life or death situation. FG012 [00:34:49] (laugh) FG012 [00:34:51] Like if we did not achieve, we will be dead. End of story. (laugh) FG012 [00:34:59] No escape, it was an order, and we have to do it.
	Theme 2: Enablers to achieve accreditation	
	Sub-theme: Supportive approaches in accreditation	
1	P023: I sometimes mean [we] feel that [it] is too much. But the team was good. I mean there were quite a few people, you know, who were really dedicated, and we worked out of fast. So, whenever you have teamwork, you feel good. I mean, sometimes even if [we] are stressed [we] just sit and have coffee together, [we] laugh and feel good about those things	FG004: Teamwork was evident during the preparation phase. It was one of the best things that happened to us during the preparation.

#	Interviews	Focus groups
2	P028: Also, I would say that they had provided us, later on, with the public holidays because the accreditation came at the time of our national day. Therefore, we were asked to come to work on these days, which was a public holiday; thus, they compensated us with a day off.	FG003: There are positive feedback form the staff in the work, they feel that they are working in a professional manner, and we had good feedback from people in the department. staff from other department were supporting workers in my department, and it was encouraging them.
	Sub-theme: Meaningful work after accreditation	
3	P020: I mean before it is just like I will come and go for [my] duty, I do something only [for the] patient's care, I do not need to do this one, and I do not want to do this. ” It is just like [to] come and go, but now, um, during the accreditation, I have to do something meaningful. I mean something meaningful in my life that I am doing because not only [it’s] for me but [also] for my colleagues [and] for the patients.	FG002: I see it as safe, now we have guidelines, something to keep worth, I mean to keep patients and healthcare providers safe, for both sides.
4	P028: I feel relieved, and I do not want to go through that again.	FG001: Those [staff] that were like in a [state of] tension [during] that time, I think they do not want to do it again. They do not want to repeat that on the next [accreditation].
5	P010: [work] is now organized. I feel it is organized, I mean, now everything in its place, and dealing even with patients, we have specific [procedures] like, right and wrong, and all these things. We have many things changed and removed from the departments, which were not needed, and not to be used.	FG003: To me as a team, I felt that workers were happy that they were recognized by other workers that they were so confident. They were well trained; they had the confident. Many of my teams' ability had emerged during the preparation phase as leaders. It is not that they were just in the pharmacy.

Appendix 4: Example of the quantitative questionnaire

The study used the personal burnout subscale from the Copenhagen Burnout Inventory (CBI) (Kristensen et al., 2005) to test personal fatigue and exhaustion influencing HCPs' psychological health during accreditation. Personal burnout subscale is claimed to be generic allowing individuals to respond regardless of their occupation. According to Kristensen et al. (2005), the personal burnout construct measures the psychological and the physical exhaustion experienced by individuals. The subscale has high reliability ($\alpha = 0.87$) and overcomes certain limitations in the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981) such as the absence of little correspondence between the measures and the concept. Although the majority of research on burnout used the MBI tool, a recent review called researchers to use other tools for reasons attributed to avoiding such limitations (Rotenstein et al., 2018). Furthermore, by selecting measures, i.e., COPSOQ-II and CBI, the final tool accounted for the Arabic culture when translating items. Although the MBI questionnaire s widely used, translating certain words from the questionnaire could lead to technical problems in interpreting the meaning of certain items.

The survey included major risks discussed disclosed in the qualitative study. The survey was divided into six sections as following: (1) Demographic data; (2) Job demands; (3) Job resources; (4) Psychosocial safety climate; (5) Burnout; and (6) Work engagement.

Appendix 4 Demographics questions.

Section 1

1. Please indicate your gender:
   - ☐ Male
   - ☐ Female

2. Please write your date of birth to maintain your confidentiality throughout the study

   ……. Date / …… Month / ……Year

3. What best describe your profession?
   - ☐ General Practitioner
   - ☐ Specialist
   - ☐ Consultant
   - ☐ Nurse
   - ☐ Nurse Assistant
   - ☐ Laboratory Technician
   - ☐ Radiographer
   - ☐ Pharmacist
   - ☐ Others

     Please specify: …….

4. Please indicate your current grade:
   - ☐ First
   - ☐ Second
   - ☐ Third
   - ☐ Fourth
   - ☐ Others

     Please specify: …….

5. Please select the most managerial roles you have
   - ☐ I only have an administrative role in this facility
   - ☐ I have both administrative and clinical roles in this facility
   - ☐ I do not have an administrative role in this facility
6. Do you have direct contact with patients?
   - ☐ Yes
   - ☐ No

7. Do you have shift duties?
   - ☐ Yes
   - ☐ No

Appendix 4 Questionnaire items.

Scale	Items name	Question	Response option
Accreditation Demands	AcD1	Do you feel that your current work takes so much form your time that you cannot treat patients properly	A
	AcD2	Do you feel that the required paperwork you are expected to complete keeps you away from patients?	A
	AcD3	Do you feel the documentation requirements keeps you away from patients?	A
	AcD4	Do you feel that additional activities such as attending training or meetings keeps you away from patients?	A
Social Support	SoP1	Is there a good atmosphere between you and your colleagues?	B
	SoP2	Is there good co-operation between the colleagues at work?	B
	SoP3	Do you feel part of a community at your place of work?	B
	SoP4	How often is your nearest superior willing to listen to your problems at work?	B
	SoP5	How often do you get help and support from your nearest superior?	B
	SoP6	How often does your nearest superior talk with you about how well you carry out your work?	B
PSC-4	PSC3	Senior management show support for stress prevention through involvement and commitment	C
	PSC6	Senior management considers employees' psychological health to be as important as productivity	C
	PSC7	There is good communication here about psychological safety issues which affect me	C
	PSC12	In my organisation, the prevention of stress involves all levels of the organisation	C
Personal Burnout	PBrn1	How often do you feel tired?	B
	PBrn2	How often are you physically exhausted?	B
	PBrn3	How often are you emotionally exhausted?	B
	PBrn4	How often do you think "I can't take it anymore"?	B
	PBrn5	How often do you feel worn out?	B
	PBrn6	How often do you feel weak and susceptible to illness?	B

Scale	Items name	Question	Response option
Work Engagement	WEng1	At my work, I feel that I am bursting with energy	D
	WEng2	At my job, I feel strong and vigorous	D
	WEng3	I am enthusiastic about my job	D
	WEng4	My job inspires me	D
	WEng5	When I get up in the morning, I feel like going to work	D
	WEng6	I feel happy when I am working intensely	D
	WEng7	I am proud on the work that I do	D
	WEng8	I am immersed in my work	D
	WEng9	I get carried away when I'm working	D

Responses options (values for the scales):

A. Not Applicable (0); To a very large extent (1); To a large extent (2); Somewhat (3); To a small extent (4); To a very small extent (5)
B. Always (100); Often (75); Sometimes (50); Seldom (25); Never/Hardly ever (0)
C. Strongly Agree (1); Agree (2); Neither agree or Disagree (3); Disagree (4); Strongly Disagree (5)
D. Never (0); Almost Never (1); Rarely (2); Sometimes (3); Often (4); Very Often (5); Always (6)

Appendix 5: Variables derived from the qualitative study

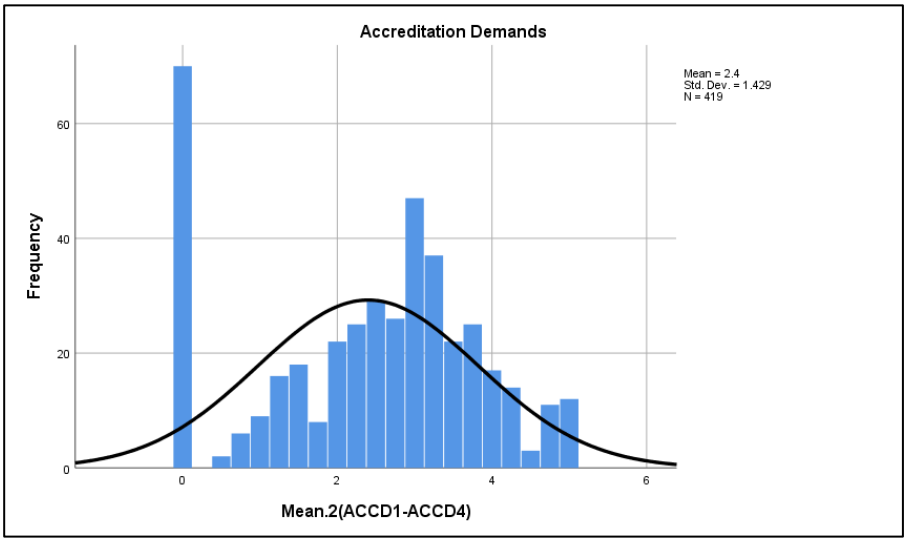
Domain	Variable	Definition	Sub-themes and Codes
Job demands	Quantitative Demands	The number of tasks given to employees and the time available to perform such tasks.	Working Additional Hours.
	Work Pace	The speed required to perform tasks at work, reflecting the intensity of work.	Increased Work Pace / Time Pressure due to Delays.
	Work-family Conflict	The mutual opposing roles expected from work and family.	Impact on Family and Social Life.
	Accreditation Demands	The unique tasks expected from employees to accomplish to achieve accreditation.	Focused efforts on administrative “work”.
Job resources	Possibilities for Development	When the task is challenging but provide opportunity for learning and development	Meaningful work after accreditation.
	Role Clarity	When employees understand their roles at work to meet organisational expectation.	Organised Working Environment.
	Social Support from Colleagues	The opportunity to get support from co-workers when needed at work.	Supportive approaches in accreditation.
	Social Community at work	When employees work well together and in a group. It reflects the sense of teamwork.	Observed Collaboration and Teamwork.
	Social Support from Supervisor	When employees can obtain social support from their direct supervisor when needed	Support and Encouragement from Managers.

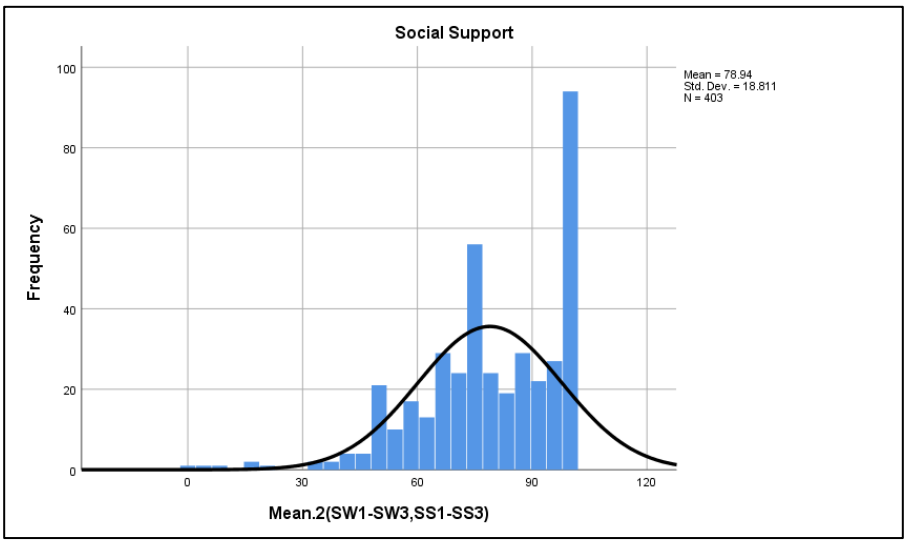
Domain	Variable	Definition	Sub-themes and Codes
	Recognition	When the organisation management recognises one's effort at work.	Recognition of Achievement.
Organisational resources	Psychosocial safety climate	Shared perceptions about the presence of policies and procedures that protect workers psychological health.	Managements' role during accreditation.
Health impairment	Personal Burnout	general feeling of physical and psychological exhaustion or fatigue experienced by individuals.	Impact on Physical and Emotional Health.
Motivation	Work Engagement	Attachments of employees to their work despite their experience at workplace.	Meaningful work after accreditation.

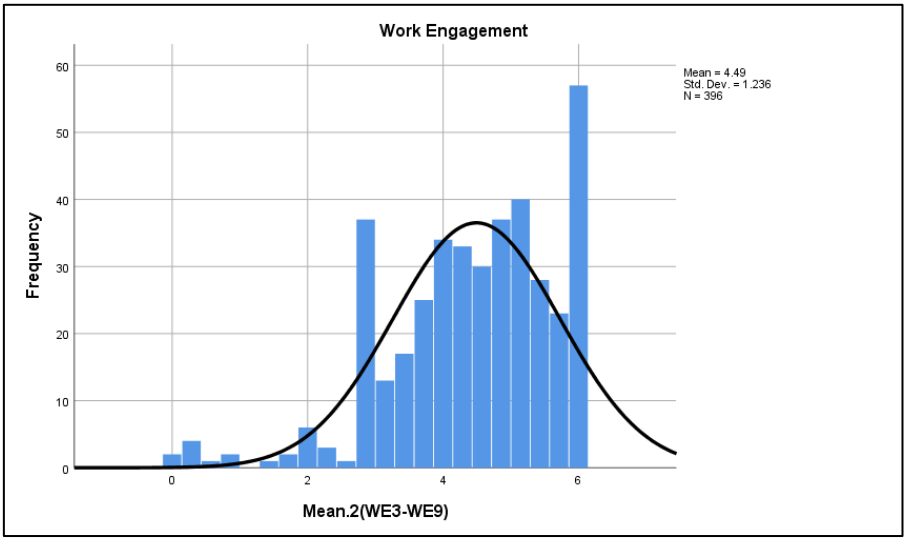
Appendix 6: Comparison of the Internal Consistency of the Translated Items

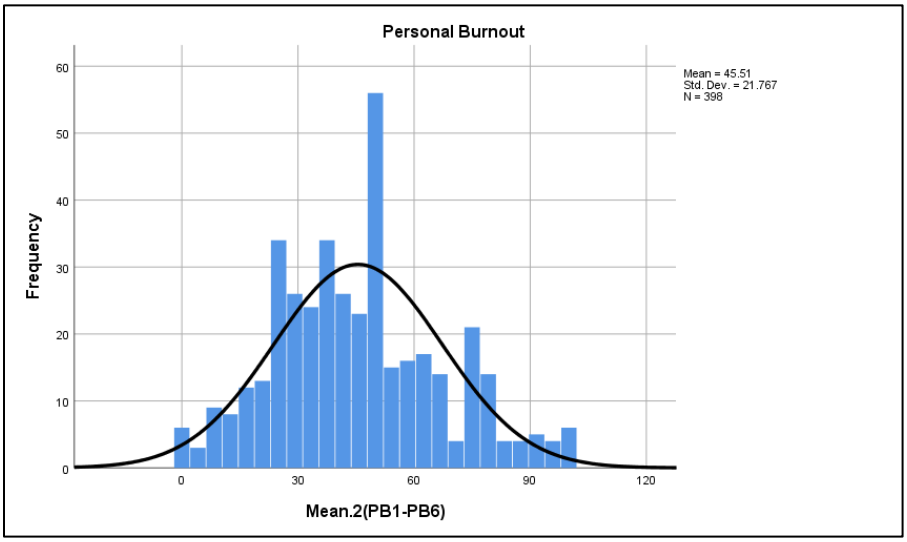
Hypothesized Factors	Scale (number of items	Original (English)			Translated (Arabic)		
		Cronbach's alpha	Item Means	Variance	Cronbach's alpha	Item Means	Variance
Job Demands	Accreditation Demands (4)	0.72	2.75	0.03	0.84	1.64	0.03
Job Resources	Social Community at work (3)	0.90	81.91	3.06	0.83	80.38	0.98
Job Resources	Social Support Superior (3)	0.93	76.36	11.51	0.87	76.47	19.76
Psychosocial Safety Climate	PSC (4)	0.93	3.19	0.002	0.95	3.05	0.01
Burnout	Personal Burnout (6)	0.93	44.26	79.94	0.91	48.15	55.55
Work Engagement	Work Engagement (7)	0.91	4.52	0.09	0.96	4.43	0.04

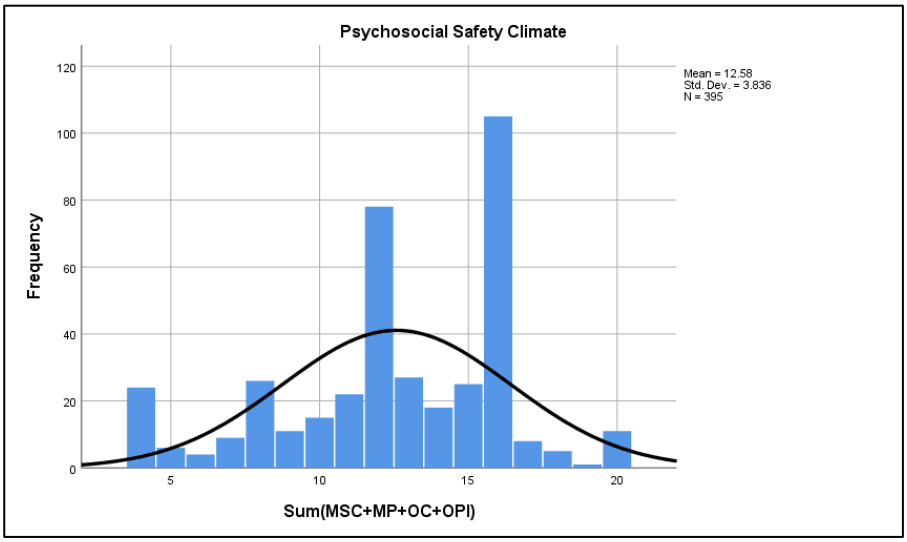
Appendix 7: Histograms with normal curve of the final variables






Work Engagement
Mean = 4.49
Std. Dev. = 1.236
N = 396
Frequency
Mean.2(WE3-WE9)


Personal Burnout
Mean = 45.51
Std. Dev. = 21.767
N = 398
Frequency
Mean.2(PB1-PB6)


Psychosocial Safety Climate
Mean = 12.58
Std. Dev. = 3.836
N = 395
Frequency
Sum(MSC+MP+OC+OPI)

Appendix 8: Certificates of forward and back translation

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Verification of Arabic Translation of English Survey on "The Impact of Accreditation on Work and Workers' Health"

I, Andrew William John SCHLICH MA (Oxon),
principal translator and Managing Director of AST Language Services Limited, of Unit 8, Ayr Street, Nottingham, England, hereby declare that to the best of my knowledge and belief the accompanying document is a true translation into Arabic of the English survey on "The Impact of Accreditation on Work and Workers' Health".

Signed this 7th day of August 2019

pp.

A.W.J. Schlich

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Verification of English Translation of Arabic University of Nottingham Survey on "The impact of certificate on work and workers' health".

I, Andrew William John SCHLICH MA (Oxon),
principal translator and Managing Director of AST Language Services Limited, of Unit 8, Ayr Street, Nottingham, England, hereby declare that to the best of my knowledge and belief the accompanying document is a true translation into English of the Arabic University of Nottingham survey on " The impact of certificate on work and workers' health".

Signed this 23rd day of August 2019

A.W.J. Schlich

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