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HEALTHCARE NEEDS AND RISK IN POLICE CUSTODY

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STATEMENT OF AUTHORSHIP

This thesis is submitted to The University of Nottingham in part fulfillment of the Doctorate in Forensic Psychology. The idea for this thesis was the author's own and reflects her interest in those individuals detained in police custody and the police custody environment.

I herby declare that:

- I am the sole author of this thesis.
- I have fully acknowledged and referenced the ideas and works of others, whether published or unpublished, in my thesis.
- I have prepared my thesis specifically for the degree of Doctor of Forensic Psychology, whilst under supervision at The University of Nottingham.
- My thesis does not contain work extracted from another thesis, dissertation, or research paper previously presented for another degree or diploma at this, or any other university.

ABSTRACT

Police custody is an area of scholarly research that has previously been overlooked. Whilst the research and literature regarding this topic begins to grow, there still remains a wide variety of aspects to be considered. The population detained in police custody differs to that of prison custody due to the individuals' suspected offending behaviour and the environment in which they are temporarily held. One of the biggest differences is determined by the fact that police custody detainees have not yet been found guilty of an offence. Police custody is also unique in its environment and can impact upon detainees in various ways, dependent upon their personal characteristics and circumstances. Reducing risk whilst detained in police custody, in addition to targeting behaviours that can reduce risk upon release, are of paramount importance to the police and to the general public. Further exploration and subsequent review of risk reduction provides valuable opportunities for researchers to implement positive, effective changes. The overall aim of this thesis is to further explore the needs of those detained in police custody.

Chapter One presents a general introduction to the topic. Chapter Two presents a literature review following a systematic approach regarding the healthcare needs of those detained in police custody.

The findings revealed that there is a considerable presence of mental health, substance misuse, and physical health care needs amongst those who are detained. The results supported the view that the development of a consistent, standardised measure to determine specific healthcare needs and their severity can aid with supporting detainees and their healthcare concerns.

Chapter Three presents a critique of an impulsivity measure, the Barratt Impulsiveness Scale (BIS-11). The concluding remarks reported that further research is essential in examining the psychometric properties of the BIS-11 amongst forensic populations. The indications regarding the BIS-11's reliability and validity are supportive, although further evidence considering the effectiveness of this tool for decision-making would be beneficial. To gain the most accurate understanding of an individual's level of impulsivity, the BIS-11 should be used in conjunction with other data. This includes additional psychometric results, clinical judgment, and behavioural observations.

Chapter Four reports on an empirical study that examined the prevalence of impulsivity, self-harm, and situational aggression amongst detainees in police custody. In addition, the predictive validity of one of the current police risk assessments (National Strategy for Police Information Systems (NSPIS) risk assessment)

was reviewed. Further analyses explored the hypothesis that the additional implementation of psychological tools, such as psychometric questioning and structured clinical judgment assessments, would provide greater predictive value than the NSPIS risk assessment alone. This study identified that impulsivity traits are highly prevalent amongst detainees, with over half scoring within the 'clinically high' range for the non-planning impulsiveness trait. Of those individuals who reported engagement in self-harming behaviours, their scores lay highly on the scale that identified 'self-punishment' as the primary function of their self-harm. A total of 40% of individuals engaged in some form of aggressive and / or problematic behaviour throughout their duration in police custody. The NSPIS risk assessment has significant predictive value when predicting risky behaviour. However, with the additional implementation of one Dynamic Appraisal of Situational Aggression (DASA) assessment and the BIS-11 total score, the predictability increases by 21%.

A single case study is presented in Chapter Five that considers the effectiveness of Dialectical Behaviour Therapy (DBT)-informed skills training in the community, undertaken with an individual entering the National Health Service (NHS) via her detention in police custody. This individual displayed borderline personality disorder traits and exhibited self-harming behaviours. The difficulties

associated with working with such a client group have been discussed. In Chapter Six, a discussion concludes the thesis. Overall, the thesis identifies valuable findings in relation to a population and an environment that has previously been overlooked.

DEDICATION

"It's a funny thing about mothers and fathers. Even when their own child is the most disgusting little blister you could ever imagine, they still think that he or she is wonderful."

Roald Dahl, *Matilda*

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TABLE OF CONTENTS

Statement of Authorship I

Abstract II

Dedication VI

Acknowledgements VII

Contents IX

List of Appendices XIV

List of Tables XV

List of Figures XVII

CHAPTER ONE
INTRODUCTION 1

Aim of Thesis 2
Police Custody 2
Police Powers and Codes of Practice 3
Detainee Vulnerabilities 6
A Place of Safety for S136 Arrests 10
Deaths in Police Custody 14
Independent Reviews of Police Custody 15
Risk Assessments in Police Custody 20
Problematic Behaviours in Police Custody 23
Thesis Structure 25

CHAPTER TWO
A LITERATURE REVIEW FOLLOWING A SYSTEMATIC APPROACH: THE HEALTHCARE NEEDS OF INDIVIDUALS DETAINED IN POLICE CUSTODY 29

Abstract 30
Introduction 32
Previous Reviews 36

Aims 39
Method 41
Scoping Exercise 41
Search Terms 41
Search Strategy 42
Subject Experts 43
Inclusion and Exclusion Criteria 44
Quality Assessment 46
Data Extraction 51
Descriptive Data Synthesis 51
Results 90
Mental Health Concerns 93
Use of Mental Health Services 94
Mental Illnesses 96
Suicide 97
Self-Harm 98
Substance Misuse Concerns 100
Drugs 101
Alcohol 103
Physical Healthcare Concerns 104
Additional Healthcare Concerns 106
Study Quality 107
Discussion 139
Overall Completeness and Applicability of Evidence 147
Quality of the Evidence 148
Potential Biases in the Overview Process 150
Recommendations 152
Practical 152
Research 153
Conclusion 154

Rationale for Chapter Three 155

CHAPTER THREE
CRITIQUE OF A PSYCHOMETRIC MEASURE: THE BARRATT IMPULSIVENESS SCALE WITH FORENSIC POPULATIONS ..157

Introduction 158
Literature Review 158
BIS-11 Overview 167
BIS-11 Normative Data 174
Use of BIS-11 with Forensic Populations 177
Psychometric Properties 180
Reliability 180
Internal Reliability 180

Test-Retest Reliability 182
Validity 184
Face Validity 184
Concurrent Validity 186
Predictive Validity 188
Content Validity 192
Construct Validity 194
Discussion 196
Conclusion 198

Rationale for Chapter Four 199

CHAPTER FOUR
IMPULSIVITY, SELF-HARM, AND SITUATIONAL AGGRESSION AS PREDICTORS OF PROBLEMATIC BEHAVIOURS IN POLICE CUSTODY 201
Abstract 202
Introduction 204
Study Aims 211
Hypotheses 212
Method 213
Sample 213
Measures 215
Adapted Inventory of Statements about Self-Injury (ISAS) 215
Barratt Impulsiveness Scale (BIS-11) 216
Dynamic Appraisal of Situational Aggression (DASA) 217
Demographic Pro-Forma 218
NSPIS Risk Assessment 219
Detention Log 221
Design 221
Procedure 221
Treatment of Data 223
Analytical Approach 226
Ethical Considerations 228
Results 232
Sample 232
Risky, Problematic, and Violent Behaviours 233
Self-Harm 235
Impulsivity 238
Predictive Validity of the Current NSPIS Risk Assessment 239
Predictive Validity of Additional Measures 242
Post-Hoc Analyses 246
Discussion 248

Prevalence of Risk, Problematic, and Violent Behaviours 250
Prevalence of Self-Harm and its Function 253
Prevalence of Impulsive Traits 256
Exploratory Review of Risk Assessment Predictability 257
Limitations 266
Directions for Future Research and Practice 267
Conclusion 268

Rationale for Chapter Five 271

CHAPTER FIVE
DBT-INFORMED SKILLS TRAINING IN THE COMMUNITY WITH AN INDIVIDUAL ENTERING NHS SERVICES VIA DETENTION IN POLICE CUSTODY: A SINGLE CASE STUDY 273

Ethical Considerations 274
Abstract 275
Introduction 277
Dialectical Behaviour Therapy (DBT) 282
Assessment 289
Initial CJLD Mental Health Assessment and Referral 289
Client Details 292
Social Circumstances 292
Historical 292
Offending Behaviour 293
Current 293
Mental Health 294
Substance Misuse 294
Self-Harm 295
Pre-Intervention Psychometrics 296
Impulsivity 297
Functions of Self-Injury 298
Self-Esteem 299
Locus of Control 299
Summary of Pre-Intervention Psychometrics 300
Client Formulation 301
Treatment Targets 305
Intervention 307
Sessions 307
Responsivity Issues 315
Results 319
Therapeutic Process and Treatment Success 323
Areas of Further Work 324
Discussion 325
Future Directions 331

Summary of Findings 334

CHAPTER SIX
DISCUSSION.....335
Aims and Purpose of Thesis 336
Limitations..... 336
Future Research 339
Concluding Remarks..... 341

REFERENCES.....343

APPENDICES.....399

LIST OF APPENDICES

CHAPTER TWO

A LITERATURE REVIEW FOLLOWING A SYSTEMATIC APPROACH: THE HEALTHCARE NEEDS OF INDIVIDUALS DETAINED IN POLICE CUSTODY .....

1. Scoping Exercise Search Outcome 400
2. Search Syntaxes and Outcomes 402
3. Inclusion Criteria Pro-Forma 406
4. Quality Assessment Checklist 407
5. Data Extraction Form 410

CHAPTER FOUR

IMPULSIVITY, SELF-HARM, AND SITUATIONAL AGGRESSION AS PREDICTORS OF PROBLEMATIC BEHAVIOURS IN POLICE CUSTODY .....

6. Demographic Pro-Forma 413
7. Research Study Information Sheet 416
8. The University of Nottingham Consent Form 418
9. Local Police Force Consent Form 419
10. Research Study Debrief Form 420
11. OHRN Ethics Approval Process 421

CHAPTER FIVE

DBT-INFORMED SKILLS TRAINING IN THE COMMUNITY WITH AN INDIVIDUAL ENTERING NHS SERVICES VIA DETENTION IN POLICE CUSTODY: A SINGLE CASE STUDY .....

12. Case Study Client Consent Form 422
13. CJLD Service Standard Screening Procedure 423
14. Borderline Personality Disorder DSM-5 Criteria 424

LIST OF TABLES

CHAPTER TWO

A LITERATURE REVIEW FOLLOWING A SYSTEMATIC APPROACH: THE HEALTHCARE NEEDS OF INDIVIDUALS DETAINED IN POLICE CUSTODY .....

1. Pre-Defined Inclusion and Exclusion Criteria 45
2. Characteristics of Studies Exploring Healthcare Needs of Police Custody Detainees 53
3. Final Systematic Review Studies with Research Areas Covered ... 92
4. Detainees and Use of Mental Health Services 95
5. Combined Data from Publications Reporting on Mental Illness Prevalence 96
6. Percentage of Detainee Sample Reporting Previous Suicide Attempts and Current Suicidal Ideation 98
7. Percentage of Detainee Sample Reporting Previous and Current Self-Harm 99
8. Combined Data from Publications Reporting on the Misuse of Illicit Substances 102
9. Combined Data from Publications Reporting on Physical Healthcare 105
10. Combined Data on Additional Healthcare Needs 107
11. Quality of Studies Exploring Healthcare Needs of Police Custody Detainees 113

CHAPTER THREE

CRITIQUE OF A PSYCHOMETRIC MEASURE: THE BARRATT IMPULSIVENESS SCALE WITH FORENSIC POPULATIONS .....

12. Normative Data for the BIS-11 Total Score 174

CHAPTER FOUR

IMPULSIVITY, SELF-HARM, AND SITUATIONAL AGGRESSION AS PREDICTORS OF PROBLEMATIC BEHAVIOURS IN POLICE CUSTODY .....

13. Frequency of Individuals Clinically Scoring on the Adapted ISAS 237
14. Regression Analysis Outcome for the Pre-Defined Categories of the NSPIS Risk Assessment Predicting Risky Behaviour in the Detention Log 242
15. Regression Analysis Outcome for the Final Model 246

CHAPTER FIVE

DBT-INFORMED SKILLS TRAINING IN THE COMMUNITY

WITH AN INDIVIDUAL ENTERING NHS SERVICES VIA DETENTION IN POLICE CUSTODY: A SINGLE CASE STUDY…….

16. Pre- and Post-Impulsivity Psychometric Assessment Results..... 320

17. Pre- and Post-Function of Self-Harm Psychometric Assessment Results 321

LIST OF FIGURES

CHAPTER TWO

A LITERATURE REVIEW FOLLOWING A SYSTEMATIC APPROACH: THE HEALTHCARE NEEDS OF INDIVIDUALS DETAINED IN POLICE CUSTODY .....

1. Search and Inclusion Process 91

CHAPTER FOUR

IMPULSIVITY, SELF-HARM, AND SITUATIONAL AGGRESSION AS PREDICTORS OF PROBLEMATIC BEHAVIOURS IN POLICE CUSTODY .....

2. Study Procedure 224

CHAPTER FIVE

DBT-INFORMED SKILLS TRAINING IN THE COMMUNITY WITH AN INDIVIDUAL ENTERING NHS SERVICES VIA DETENTION IN POLICE CUSTODY: A SINGLE CASE STUDY .....

3. Destructive Emotion Exercise 311

4. Emotion I'd Like to Experience More Exercise 311

5. Wise Mind Handout 314

CHAPTER ONE

INTRODUCTION

Aim of Thesis

The overall aim of this thesis is to consider the variety of needs of those individuals who are detained in police custody and how various practices can be amended and implemented to ensure their welfare whilst they are detained. The thesis comprises a systematic literature review exploring the existing literature relating to the prevalence of healthcare needs of detainees; an empirical research study that investigates the problematic behaviour exhibited, with further exploration of the predictive validity of the NSPIS police risk assessment; a critique of the BIS-11 developed by Patton, Stanford, and Barratt (1995); and a single case study considering the psychological assessment, formulation, and treatment of an individual identified for psychological therapy via her detention in police custody.

Police Custody

Police custody is considered to be the principal gateway to the Criminal Justice System (CJS). Scholarly and criminological researchers have previously overlooked this area; however, within recent years, exploration has developed considerably (Her Majesty's Inspectorate of Constabulary (HMIC), 2015; Payne-James et al., 2010; Skinns, 2011).

A police custody suite is a nominated area within a police station where individuals suspected of an offence are taken upon arrest. This environment is still considered to be within the community, and at this stage these individuals are not necessarily guilty of committing a criminal offence. These individuals will hereon in be referred to as 'detainees'. HMIC (2015) state that police-authorised detention is for two main criminal justice purposes: to allow the prompt investigation of an offence or of the conduct of the person in question; and / or to prevent any prosecution for an offence being hindered by the disappearance of the person in question. Police custody can also serve as a safety purpose in that detention may be authorised to prevent someone from causing physical injury to himself or herself, or another person (HMIC, 2015). A detainee can be held in police custody for up to 24 hours, although additional time can be applied for depending upon the nature of the suspected offence. During this time, it is the duty of the police and / or the Crown Prosecution Service (CPS) to reach a decision whether to charge, caution, bail, take no further action, or release the detainee without charge (CPS, n.d.; Skinns, 2011; UK Government, n.d.).

Police Powers and Codes of Practice

The police powers of investigation in England and Wales, including arrests and detention, are governed by the statutory framework of the Police and Criminal Evidence Act 1984 (Home Office, 1984),

more commonly known by its acronym PACE. A part of this legislation includes the PACE Codes of Practice that are divided into eight sections, each one referring to a different aspect of the police's duties:

- Code A refers to a police officer's statutory powers to search a person or any vehicle prior to making any arrest.
- Code B refers to the police's powers to enter and search premises, and to seize and retain property found on premises and persons.
- Code C lays out the requirements for the detention, treatment, and questioning of suspects whilst in custody.
- Code D refers to the processes used by police for the identification of persons in relation to the commission of a criminal offence, in addition to ensuring the accuracy and reliability of all records.
- Code E governs all audio recording of interviews carried out at the police station.
- Code F relates to the visual recording with sound of interviews.
- Code G refers to the police's powers of arrest regarding any individual suspected of committing or connected with the commission of a criminal offence under Section 24 of the PACE Act 1984.

- Code H lays out the requirements for the detention, treatment, and questioning of suspects arrested under the Terrorism Act 2000.

These codes of practice provide precise guidance as to how the police should direct their approach and proceed with a detainee's case. It is of the utmost importance that they conduct all necessary actions in a timely and proper manner (Offender Health Research Network (OHRN), 2010). The police custody sergeant's obligatory duties are: to ensure that the custody suite is fit for purpose and continually maintained to a high standard; to implement staffing models that consider demand levels and operational resilience, and ensure that these are adhered to; to incorporate healthcare models that consult with health professionals, and that consistently best meet the needs of the detainees in accordance with National Service Protocol; and to ensure that there remains the flexibility for contingency planning (College of Policing, 2015). Whilst the custody officers hold varying levels of responsibility with regard to those outlined duties, it is their direct responsibility to treat all detainees in accordance with the PACE Act and the codes of practice issued under it. This includes identifying vulnerable people, i.e. those under the age of 18, those with mental health difficulties, those with learning disabilities, and detainees who are experiencing difficulties understanding the processes; managing risks that can

arise; and working effectively with other agencies (HMIC, 2015). Furthermore, all police staff must ensure that the principles of safer detention are observed and adhered to. Detention in custody should be appropriate and last no longer than necessary; detainees should have access to health and social care services appropriate to their needs; any force used must be necessary, proportionate, and lawful; and police staff must ensure that they have undergone and received adequate training for their role (College of Policing, 2015).

The above summarises the substantial range of operations that staff working in custody must take into account prior to their contact with detainees. Adherence to these obligatory duties creates organisational pressures for the staff. Moreover, they face additional pressures that include financial constraints, limited resources, targets, and legal changes (British Broadcasting Company, 2013; ThinBlueLineUK Blog, 2010).

Detainee Vulnerabilities

Whilst police custody staff have overall responsibility for detainees, additional professionals present within this workplace environment contribute to the detainees' wellbeing and care during their detention. Police custody, as a workplace environment, has become increasingly multi-professional in nature. For the last three decades, it has been a welcoming host to a range of practitioners,

and this gradual adjustment has been influenced considerably by the profile and status of the detainees themselves. Detainees' mental, physical, legal, and drug-related needs must be dealt with accurately, ethically, and appropriately. Such a task subsequently calls for the requirement of specialist professionals to be present within police custody environments. These multi-professional groups can include legal advisors, appropriate adults[1], doctors, nurses, interpreters, drugs workers, and independent custody workers (Skinns, 2011). The involvement of a multi-disciplinary team in an individual's care can be challenging, although for effective working within this context to occur, treatment and care from those with specialist knowledge and expertise should be administered. Furthermore, improved levels of quality in treatment outcomes and patient / client support can be achieved through better understanding and awareness of a detainee's health status (NHS England, 2013).

The Home Office (2016a) reported that in March 2016, the police in England and Wales made a total of 896,209 arrests. The research, data analyses and inspection reports from HMIC (2015) show that many individuals who are detained in police custody are vulnerable in some way. Their vulnerability can present itself in many forms,

[1] An appropriate adult is responsible for safeguarding the rights and welfare of a child or mentally vulnerable adult who is either detained by police or is interviewed under caution voluntarily (National Appropriate Adult Network, 2016).

including mental health problems, learning disabilities, physical illness or disability, substance misuse, age, and race. Literature reviews of the health needs of detainees in police custody in England and Wales reported that approximately 20% of detainees suffer from psychiatric conditions, 50% self-reported problems with drugs and alcohol, and up to 74% of detainees required regular medication (Rekrut-Lapa & Lapa, 2014). Additionally, 7.1% had previously been sectioned under the Mental Health Act (MHA) 1983 (Department of Health (DoH), 1983), 16.7% had intentionally self-injured, and 25% were in current contact with other healthcare teams (Payne-James et al*.,* 2010). Combined conclusions reported mental health issues, particularly depression, to be the most prevalent of healthcare needs for those detained in police custody, with an extensive range of mixed diseases and pathology representative of the chaotic lifestyle of many detainees (Payne-James et al*.,* 2010; Rekrut-Lapa & Lapa, 2014). In his research, Cummins' (2008) indicated that those with vulnerabilities are more likely to be drawn into the criminal justice system, and are more 'at risk' within that system. It has been estimated that 25% of police time is spent handling cases that involve individuals with mental disorders (Glasper, 2014).

Within recent years, awareness has increased regarding the unsuitability of the police custody environment for vulnerable

individuals, particularly those experiencing mental health issues (Cummins, 2008). The Independent Police Complaints Commission (IPCC) reported that detaining such individuals may have the effect of criminalising people for what is predominantly a health need, and that the environment itself may exacerbate any existing levels of distress (Docking, Grace, & Bucke, 2008; Joint Parliamentary Committee on Human Rights, 2004). There is a wealth of literature regarding the mental health concerns and welfare of those detained in police custody. The research and literature reviews confirm that this unique environment is not suited for those experiencing symptomatology associated with acute mental illness (Adebowale, 2013; Bather, Fitzpatrick, & Rutherford, 2008; Cummins, 2007; 2008; 2012; DoH, 2009; HMIC, 2015; Jones, 2007; Payne-James et al., 2010; Rekrut-Lapa & Lapa, 2014; Skinns, 2011).

Hayes (1996) reported that the point of arrest is likely to be one of the most volatile and emotional times for an arrestee, and that their experienced emotions are likely to run into their time spent in police custody cells. Jones' (2007) review of the 'five pains of custody' (Sykes, 1958) recognised that feelings of trauma, injustice, fear, anxiety, loneliness, depression, and uncertainly can all manifest due to the various deprivations in this environment. They can include the deprivation of liberty, deprivation of autonomy and control, entry shock, fear of violence from police officers (Police Complaints

Authority, 2002), fear of the unknown, lack of social support, loss of stimulation, and the potential withdrawal from / influence of substances (Paton & Jenkins, 2002). Skinns' (2011) analysis of interviews from individuals who have, at some point, been detained in police custody reported feelings of distress, boredom, uncertainty, isolation, and disorientation. One individual reported that he was not suffering from any mental health issues but the environment alone made him feel "depressed" (Skinns, 2011). Cummins (2008) reported that these feelings are experienced more prevalently amongst those who are already suffering from mental health concerns.

A Place of Safety for S136 Arrests

In addition to those detainees who are arrested upon suspicion of committing a crime, there are individuals who have been detained under Section 136 (S136) of the MHA 1983 (applicable in England and Wales). This is the principal legislative document governing the care and treatment of people with mental disorders. This particular section of the MHA (1983) legislates that:

> If a constable finds in a place to which the public have access a person who appears to him to be suffering from mental disorder and to be in immediate need of care or control, the constable may, if he thinks it necessary to do so in the

> interests of that person or for the protection of other persons, remove that person to a place of safety. (p. 104)

Currently, police cells are technically considered to be a 'place of safety'. Although, there has been considerable recognition for some time that they are also inappropriate for such instances of detention, i.e. detention under S136 (Cummins, 2008; DoH, 2014; Jones & Mason, 2002). Detention within police cells for those held under S136 must be a last resort and with the purpose that the individual shall receive a full MHA Assessment to determine their treatment pathway (Bather et al., 2008).

In 2013/14, the Health and Social Care Information Centre (2013), in collaboration with the Association of Chief Police Officers, estimated that a police station was used as a place of safety in 26% of cases involving a S136 detainment (this was an 11% decrease over the last three years; HMIC, 2015). The most common precipitating behaviours to a S136 detention include threatened or actual self-harm, verbal abuse, disorientation, causing a disturbance, and threatened or actual violence towards a person or property (DoH, 2014; Gray, Smedley, & Thomas, 1997; Sadiq, Moghal, & Mahadun, 2011). The DoH's (2014) literature review on the use of S136 reported a high prevalence of personality disorders, drug-induced psychosis, and schizophrenia amongst those who

were detained under this section of the MHA (Martin & Thomas 2013; Mokhtar & Hogbin, 1993; Pipe, Bhat, Matthews, & Hampstead, 1991; Rogers, 1990; Spence & McPhillips, 1995; Turner, Ness, & Imison, 1992; as cited in DoH, 2014). Research by Sadiq et al. (2011), whereby they considered the use of S136 in the Trafford borough of Manchester, showed that over one third of individuals were admitted to inpatient units post-assessment. Whilst S136 does have its merits, there are concerns around the increasing use of this specific section of the MHA (Royal College of Psychiatrists, 2014a).

Whilst aspects of the PACE Codes of Practice provide safeguards for the more vulnerable individuals in police custody, Cummins (2007) highlighted that it is the current practices that are a cause for concern. For example, it has been reported that those detained under S136 spend longer in police custody than if they have been arrested (DoH, 2009).

Considering the deprivations that can be experienced, combined with the vulnerability that the police custody environment appears to create, the psychological impact could be problematic. The available research suggests that these experiences, particularly when combined with mental illness, can considerably increase the likelihood of self-harm or suicide (Cummins, 2008; HMIC, 2015).

Self-harm is a behaviour that can often go undetected, even in environments where there are the facilities to monitor and observe individuals over long periods of time, i.e. via CCTV. Even where there are guidelines in place to reduce the number of incidents, i.e. the PACE Codes of Practice, these behaviours cannot always be prevented (Ministry of Justice (MoJ), 2016). Whilst it is standard procedure for police forces in England and Wales to record all incidents of self-harming behaviours exhibited by detainees (Cummins, 2008), this data is not widely accessible as the MoJ limits its statistical bulletins to self-harm occurrences within prison custody only (MoJ, 2016). However, independent research and investigations specifically focusing on this area allow for some illumination into these occurrences. Cummins' (2008) study reported that there were 168 incidents of deliberate self-harm among detainees during an eight-month period within one English police force. This study identified that those who self-harmed were predominantly male (73%), were arrested upon suspicion of committing a criminal offence (72.6%), and had been arrested under the influence of alcohol (47%); a total of 31.5% had no prior warning markers on their police records (Cummins, 2008). Leigh, Johnson, and Ingram (1998) discovered that in 80% of cases where individuals went on to self-harm in police custody, there were no apparent signs to suggest that such an incident would occur. In fact, there was a considerable absence of any expressions of intent,

guilt, hopelessness, and other depressive symptomatologies. The highest rates of these incidents are found to occur during the earlier hours of detention (Association of Chief Police Officers, 2006, as cited in Cummins, 2008).

Deaths in Police Custody

The police have a continuing responsibility and duty to protect any individual they have arrested (Leigh et al*.,* 1998; College of Policing, 2017). Due to the severity of an occurrence of death in custody, in addition to claims regarding officers' responsibility for such an occurrence, the literature largely positions its focus upon deaths in custody (Bucke, Teers, Menin, Payne-James, & Stark, 2008; Hannan, Hearnden, Grace, & Bucke 2010; University of Greenwich & The Runnymede Trust, 2013).

There is both academic and non-academic literature that evidences a complex relationship between mental disorder and deaths in custody (Best et al*.,* 2004; Blaauw, Kerkhof, & Vermunt, 1997; HMIC, 2015; IPCC, 2015; Jones, 2007; Leigh et al*.,* 1998; University of Greenwich & The Runnymede Trust, 2013). This could be due to a number of reasons including the extensive contact that those with mental disorders have with the police, and the custody environment itself and its ability to exacerbate symptoms of any pre-existing disorders (Cummins, 2008; University of Greenwich &

The Runnymede Trust, 2013), with substance misuse and external factors directly interwoven (Best et al., 2004; Platt & Kreitman, 1990). Docking et al.'s (2008) investigations conclude that approximately half of all deaths in or following police custody involve detainees with some form of mental health issue. This is supported by the findings of the IPCC (2015), who state that out of the 17 deaths that occurred in police custody across England and Wales in 2014/15, eight of them were identified as having mental health concerns. The disorders that these individuals presented with included depression, bipolar disorder, paranoia, and schizophrenia, with one individual having been detained under S136. The IPCC further comments that over an 11-year reporting period, a total of six individuals are known to have completed suicide within a police cell (IPCC, 2015).

Independent Reviews of Police Custody

Historically, the police environment and the individuals detained in custody suites have been considerably overlooked. Only upon review was it recognised as being one of the least developed areas in the offender pathway (DoH, 2009). In 2007, the government requested that an independent review be undertaken to ascertain to what extent offenders with mental health issues could be diverted from custodial settings, to appropriate services. Lord Bradley, a life peer sitting in the House of Lords, completed this review. The

findings were published in The Bradley Report (DoH, 2009), unambiguously highlighting how underdeveloped the national strategies were for mentally disordered offenders in the CJS. A number of recommendations were made in this report emphasising how the focus should shift to consider prevention and early intervention, with an additional need for a nationally guided approach across the 43 separate police forces in England and Wales (DoH, 2009).

The exploratory analysis of the available literature confirms there is a high prevalence of individuals coming into contact with the police with pre-existing mental health issues. The introduction of interventions at this early stage in the CJS would broaden the opportunities available to individuals, so that they are able to obtain and engage in the support they require. The implementation of such interventions would aim to manage mental health issues in the long term and reduce associated re-offending. The intervention was specifically presented as a Liaison and Diversion (L&D) Programme (DoH, 2009). Initially commissioned by the DoH, the formulation of the programme took place in 2010 with a transition in April 2014 to NHS England. This programme developed into a cross-government initiative with partnerships from the Home Office, MoJ, Youth Justice Board, Her Majesty's Courts and Tribunal Service, Public Health England, Offender Health Collaborative, National Offender

Management Service, and the CPS (NHS England, 2014). One aspect of this programme included the development of a Criminal Justice Mental Health Team, to be present within police custody. This team would consist of frontline forensic community psychiatric nurses, who would be responsible for screening and assessing detainees for mental health concerns and / or learning disabilities. Furthermore, they would be providing access to expertise and liaising with courts and community services to ensure continuity in the detainees' care whilst within the CJS (DoH, 2009).

The Centre for Mental Health, following The Bradley Report and its progressions, formed an independent review team in 2012 known as The Bradley Commission. The Commission found that whilst evidence of any benefits from L&D programmes was unclear, there was adequate evidence to justify further research and service development, overall recognising a greater need for services to be implemented within police custody to support both the detainees and officers (Durcan, Saunders, Gadsby, & Hazard, 2014). Regarding the liaison and diversion vision communicated in The Bradley Report, there has been considerable progress. Ten pilot sites across the country have adopted the newly devised operating model that provides a standardised policy for such a service (NHS England, 2014). Nottinghamshire Healthcare NHS Trust, in February 2010, formed one of these pilot sites. A 12-month service

evaluation completed for this site reviewed 416 individuals who came into contact with the team via their detention in police custody (Thorley, 2014). Across all referral sources, the most frequently identified need was that of mental health (47.7-77.9%). The evaluation reported that on over three out of four occasions, advice was provided to the detainee (77.6%); no action was necessary 34.6% of the time as the detainee's need was already met; a successful and supported referral was made in one out of every four assessments (25%); a referral was refused by the client once in every ten assessments (10%); 6.4% of the input was accounted for by a member of the team providing information to the detainee's GP or to Primary Care services; and 2.8% of the input was identified as 'other' (Thorley, 2014). Should future evaluations of such Criminal Justice Liaison and Diversion (CJLD) services continue to yield successful results, there is a proposal for a full roll out to all police custody suites, anticipated for 2017 (Durcan et al., 2014).

Similarly, in 2012, the Independent Commission on Mental Health and Policing was formed, chaired by Lord Victor Adebowale, to specifically review the work of the Metropolitan Police Service (MPS). The review took into consideration those who have died or been seriously injured following contact with the police, including any time spent in police custody, where mental health issues were

present (Adebowale, 2013). The Commission's findings, obtained from case reviews, surveys, meetings, and visits, led to a total of 28 recommendations for change. Five of these recommendations fall under a section considering improvements in the healthcare provided in police custody. These recommendations included: the incorporation of mental health nurses, requesting that they have experience related to offenders and can be available to all custody suites as required; the practices and policies in custody suites must acknowledge the needs of people at risk, on grounds of their mental health, and take appropriate steps to refer them to other services; the MPS should adopt the Newcastle health screening tool (the Health Screening of People in Police Custody (HELP-PC)), or one that meets the same level of effectiveness for risk assessment in all custody suites; a report should be published considering the care of people who are suffering from comorbidities and the outcomes of pre-release risk assessments; and the MPS should transfer commissioning and budgetary responsibilities for healthcare provisions in this environment to the NHS (Adebowale, 2013). Additional recommendations included further direction for policies, guidance, and operating procedures; skills, awareness, and confidence of frontline staff with regard to mental health; and a requirement for more effective interagency working. The Commissioners concluded that the implementation of these recommendations would reduce the likelihood of serious injury or

death occurring when individuals are within police custody and are experiencing mental health issues (Adebowale, 2013).

Risk Assessments in Police Custody

The Bradley Report and the report completed by the Independent Commission on Mental Health and Policing, via their exploratory research, brought to light a variety of practices within police custody that would benefit from improvement, particularly when the profiles of individuals who are detained in this setting are acknowledged. Both commissions raised considerable levels of awareness for mental health and policing; they have opened up the gateway for the necessary developments to be made, and are moving forwards to ensure that both officers and detainees are provided with adequate support. An existing practice considered in these reviews included the reception screening of detainees that incorporates the NSPIS risk assessment carried out by a custody officer. This is a vital task that aims to provide an overview of a detainee's risk. It includes information about their general wellbeing, their mental health needs, risk of self-harm and / or suicide, and physical health. Such a risk assessment further assists officers in their decision-making when considering appropriate levels of observations and intervention for a detainee. The final decisions are based upon forecasted levels of harm to individuals, the public, other detainees, and / or property (HMIC, 2015). The

data obtained in these risk assessments is largely based upon self-report information, predominately led by a 'closed' questioning style, with minimal opportunity for extended dialogue. Furthermore, considerable discrepancies were observed in the quality of the final completed version (Adebowale, 2013; McKinnon & Grubin, 2013). Although not specifically reviewing the NSPIS risk assessment, Baksheev, Ogloff, and Thomas (2012) recognised that such screening tools identify high false negative rates in relation to the identification of mental disorders. This was concluded within their review of psychiatric disorders and unmet needs in Australian police cells, with recommendations for second tier triage assessments after initial screening. Taking into account these highlighted inadequacies, McKinnon and Grubin (2014) piloted a modified risk assessment: the HELP-PC. Their results showed that by adopting a more structured approach, ultimately replacing the initial NSPIS risk assessment, significant improvements in the rates of detection of health morbidity could be achieved (McKinnon & Grubin, 2014).

The NSPIS risk assessment was conceptualised to consider aspects of risk that are relevant to those based in police custody, guided by the National Decision Model and its Code of Ethics. In addition, it was essential that such an assessment be practical and undemanding in nature to administer (College of Policing, 2015).

Although the aspects of practicality and ease of administration are part of the police's priority, these factors can, on occasion, compromise the accuracy via a variety of impingements. An analysis by the HMIC (2015) of the inspectorates' inspection programmes identified that the quality and the effectiveness of risk assessments were an 'area for improvement'. As the majority of the information obtained within these risk assessments comes from the detainee themselves, this introduces a level of bias that can have negative effects, i.e. false positives and false negatives (Donaldson & Grant-Vallone, 2002). One of the areas of risk that is considered within this risk assessment is that of self-harm and suicide. This subject can vary in its perceived levels of sensitivity, dependent on the detainee, and so should be approached with caution and compassion. Unfortunately, this does not appear to be the case in the police custody environment, as probing questions regarding an individual's self-harm take place at the custody desk where many other individuals may be present. These individuals can include other custody officers, arresting officers, legal representatives, other detainees, and a variety of healthcare professionals. The feedback received within the HMIC (2015) analysis reported that detainees had a preference for their risk assessments to be completed in private, and would like the opportunity to sit down and provide greater detail in their responses. Detainees commented that the current approach to the

risk assessment appears to be more of an exercise in compliance as opposed to an opportunity to identify and genuinely meet their needs. Furthermore, it is another of the police's duties that requires its completion in a timely manner due to the level of importance and the guidance it provides. Rushed assessments can lead to the introduction of human error, and the lack of adequate opportunity to acquire information from third-party sources may compromise the accuracy of the final assessment (College of Policing, 2015). Overall, it has been considered that the police custody environment is not conducive to carrying out risk assessments and that ultimately, they have been identified as unreliable in identifying mental health concerns, learning disabilities, and withdrawal symptomatology. There is considerable fluctuation in the levels of quality and the assessment is essentially unable to accurately recognise the vulnerabilities of detainees (HMIC, 2015).

Problematic Behaviours in Police Custody

The combination of the above evidence obtained by the HMIC's inspectorate inspection programme, and the research that has successfully implemented alternatives to the current police risk assessment, suggest that there is opportunity for additional research and exploration within this area. Police protection policies and procedures (Dorset Police, 2010) identify that mental illness,

frustration of an overbearing environment, substance misuse, and extreme negative emotions are factors that can considerably contribute to violent and aggressive behaviour from an individual, whilst they are detained in police custody. Empirical evidence suggests that there are significant correlations between impulsivity, violence potential, and suicidality (including depressive mood) (Gvion & Apter, 2012). With these factors largely prevalent amongst those who suffer from mental illness and those who misuse substances, it can be inferred that they have the potential to occur within the police custody environment.

Di Pierro, Sarno, Gallucci, and Madeddu (2014) investigated the association between impulsivity and the affect regulation process of self-harm and found that impulsivity traits have a direct influence on the success of this self-harming function for that individual. Di Pierro et al. (2014) concluded that highly impulsive individuals are shown to continue experiencing negative high-arousal affects after self-harming, with the self-harming act not having the complete desired outcome. This, in turn, could lead the individual to engaging in other behaviours to achieve a regulated emotional state. Impulsivity is an important personality trait to be continually aware of as mentioned above, as there are links to self-harming and to violence potential. In addition, impulsivity is also found to influence offending behaviour, with the most prevalent form of

impulsivity amongst the offending population being that of non-planning, i.e. not caring about the consequences of actions (Killias, Redondo, & Sarnecki, 2012).

Aiming to reduce and prevent incidences of self-harm and violent and / or aggressive behaviour within police custody could be beneficial to both the police and to the detainee themselves. A literature search revealed no prior investigations into the area of the preventative / predictive validity of the current NSPIS risk assessment using methods including psychometric tools and comparative risk assessments. However, recent research has provided substantial evidence that a psychologically-informed redesign of the current NSPIS risk assessment can provide valuable results relating to detainees' wellbeing and care (McKinnon & Grubin, 2014).

Thesis Structure

To summarise, the overall aim of this thesis is to consider the variety of needs of those individuals who are detained in police custody and how various practices can be amended and implemented to ensure their welfare whilst they are detained.

Chapter Two aims to provide a broad overview of the prevalence of the healthcare needs of those detained in custody, following a

systematic approach. The existent research largely focuses on self-harming behaviours and deaths, and by reviewing available information relating to healthcare needs this can provide a significant contribution to the ever-growing literature regarding those detained in police custody. The review begins with an introduction that outlines the importance of reviewing healthcare needs, with a focus on how the environment of custody can exacerbate these. The review then considers the recent implementation of CJLD teams into police custody suites across England and Wales, and the effectiveness of these teams in addressing various needs reported by detainees (predominantly mental health issues). Unlike previous literature reviews, no exclusion filters were applied to the detainee population. Utilising the systematic approach to combine primary research studies ensures a comprehensive overview of this topic area is available. A critique of the BIS-11 follows in Chapter Three. The critique explores the general psychometric properties of this instrument with further consideration given to its strengths and limitations, and its application amongst forensic populations.

The empirical research study presented in Chapter Four investigates the prevalence of impulsivity, self-harming behaviour, and situational aggression in police custody from a sample of detainees. The research also explores the predictive validity of the current

NSPIS police risk assessment and considers if the additional implementation of psychological questioning and structured clinical judgment assessments can create a more predictive model.

A single case study is presented in Chapter Five that considers the psychological assessment, formulation, and treatment of an individual who was detained in police custody. This individual presented with identified psychological needs and agreed to engage in treatment whilst in the community. The discussion considers the responsivity issues experienced and the difficulties in attempting to implement psychological therapy in the community.

The thesis reaches its conclusion in Chapter Six with a discussion of the work presented, collating the main findings and reviewing recommendations for future research and practice.

CHAPTER TWO

A LITERATURE REVIEW FOLLOWING A SYSTEMATIC APPROACH: THE HEALTHCARE NEEDS OF INDIVIDUALS DETAINED IN POLICE CUSTODY

ABSTRACT

A literature review following a systematic approach was conducted to further investigate and survey the mental and physical healthcare needs of individuals detained in police custody. A variety of sources, including electronic databases and contact with subject experts, were utilised to assess any relevant information to include within this systematic review. The resulting references were subjected to pre-defined inclusion and exclusion criteria, and quality assessed using checklists adapted from the Critical Appraisal Skills Programme (CASP). Overall, the final 27 studies included revealed that 41.8% of those detained in police custody were currently registered with mental health services, with 20.9% requiring a formal mental health assessment; 34% of deaths were recorded as suicides, with up to 33.9% recording previous participation in self-harming behaviour; up to 27.3% documenting current engagement in self-harming behaviour; and a minimum of 1.1% reporting expressions of suicidal ideation. Depression, anxiety, and schizophrenia were the most prevalent mental health concerns amongst detainees, with between 14% and 69.7% misusing both illicit drugs and alcohol. The most prevalent physical healthcare concern was that of injuries, followed by hypertension and diabetes. The main recommendation resulting from this systematic review includes the development of a consistent and standardised measure

to obtain information and guidance towards supporting and treating specific healthcare needs in police custody.

INTRODUCTION

Police custody is considered to be a central part of the criminal justice process and the earliest stage by which someone enters the CJS (Skinns, 2011). In relation to scholarly research, police custody is a neglected area with little being known about the general healthcare needs of detainees (Payne-James et al., 2010; Skinns, 2011). In recent years, the HMIC has carried out inspections of all police custody suites in the UK. This was with the view of contributing to the UK's response to its international obligation to ensure the conduction of regular inspections of all places of detention. Such inspections consisted of reviewing policies associated with individual rights, the treatment and conditions of places of detention, and detainees' healthcare concerns (HM Inspectorate of Prisons and HMIC, 2011). With regard to healthcare matters specifically, the role these inspections played were to provide any necessary recommendations, consider what members of staff were available to competently deal with any arising healthcare concerns, and investigate what liaison schemes and information were provided to detainees. Within such inspections, no contemplation was given towards the specific healthcare needs of detainees and how the police can implement effective approaches to manage these during an individual's detention. The Bradley Report's (DoH, 2009) review of people with

mental health problems and learning disabilities in the CJS highlighted this general absence of research within police custody, prompting researchers to investigate (Brooker et al., 2012).

In the context of this systematic review, healthcare needs (in addition to universal demographics such as age, gender, etc.) include information surrounding mental health issues and / or diagnoses, substance misuse, medication prescriptions and their usage, deliberate self-injurious behaviour, suicides and deaths, physical health concerns, and disease. Information collated on these ailments has then been presented to determine how the appropriate care has been rendered within police custody (McKinnon & Grubin, 2010; Payne-James et al., 2010). Empirical studies and literature reviews following a similar format, whilst investigating mental and physical health needs, are largely prevalent within the medical field and are considered to be a 'high priority' by healthcare commissioners. This is largely with the view of influencing more effective communications between healthcare providers and their service users (Stevens & Gabbay, 1991), as such relationships are shown to have the most significant impact upon service-user satisfaction levels (Crow et al., 2003). A critical comparison can be made here between disciplines, with the perspective that skills can be effectively mapped and utilised from one branch of knowledge to another, i.e. from medical to the police force. If the ways in which

the police identify, communicate, and manage the healthcare needs of those detained in custody can be enhanced, it may be postulated that an improvement in relationships will occur. This could then lead to an increase in the detainees' level of satisfaction towards having some of their needs met in an already stress-inducing environment (Blaauw & Kerkhof, 2002; National Policing Improvement Agency, 2012; Skinns, 2011).

Research has suggested that those individuals who record the lowest satisfaction levels in relation to their healthcare needs being met are those who also experience various elements of psychological distress (Crow et al., 2003). Skinns' (2011) and Choongh's (1997) investigations reported that police custody was deemed stressful, depressing, isolating, and intolerable by those who had previously been detained, stating that the environment was stressful due to a combination of detainee's nerves and worry regarding the uncertainties of what was going to happen to them. The potential for an individual to experience psychological distress within police custody is high (Sanders, Young, & Burton, 2010) and if healthcare needs whilst in custody are not appropriately assessed or treated, this can contribute to the elevation of any existing distress, or even cause it. The disordered and disorganised lifestyle of the majority of detainees inhibits their propensity to independently seek treatment for their healthcare concerns, putting

them and those they come into contact with, at risk (Payne-James et al., 2010). Entering into police custody presents the opportunity to initiate assessment and treatment of healthcare needs, essentially providing an individualised form of healthcare despite the environment. This experience may prompt detainees to self-recognise the need for treatment (Kessler et al., 2001), should it be appropriate, reducing the level of risk to themselves and others. Furthermore, there is evidence to suggest that there is a significantly positive relationship between untreated healthcare needs and subsequent recidivism, particularly with mental health problems (Dorn et al., 2014). When consideration is given to the area of healthcare and crime, the research has resulted in the implementation of a variety of policies within the UK. These have largely focused on the link between poor mental health and offending behaviour, and how to make any improvements (Mental Health Foundation, 2011; Peay, 2011; Vinkers, de Beurs, Barendregt, Rinne, & Hoeck, 2011). The policies primarily consider a range of programmes and interventions that are aimed towards members of the community who are at high risk of social exclusion, poor mental health, and offending, i.e. individuals often passing through police custody (Seymour, 2010). The continual introduction of CJLD teams based in police custody suites around the UK evidences the importance of dealing with detainees' healthcare concerns. Individuals who had received support from a

CJLD service reported that following this contact a positive impact on their wellbeing would materialise as a result of the early identification and subsequent referrals (Disley et al., 2016). Additionally, service users' confidence to independently seek treatment relating to their healthcare needs increased, with significant reductions in substance misuse reported along with reductions in self-reported offending (Youth Support Services, 2015). In the US, results from The National Treatment Improvement Evaluation Study (a congressionally mandated five-year study) have shown that the availability of healthcare treatment has a marked impact upon criminal behaviour, with admission to appropriate treatment significantly associated with lower recidivism, fewer arrests, and critical reductions in criminal activity (Barkow & Edwards, 2010; Gerstein et al., 1997).

Previous Reviews

No systematic reviews of the literature specifically covering healthcare issues and the needs of those detained in police custody have previously been carried out. There are, however, a plethora of literature reviews that primarily focus on only one specific healthcare concern of those detained in police custody. They provide descriptive statistics of that specific need and publish recommendations for assessment procedures, future implications, and policies. Whilst these reviews primarily place their attention on

suicides and deaths in police custody (Blaauw & Kerkhof, 2002; Karch & Stephens, 1999; Leigh et al., 1998; Morrison, McDonald, & Dalton, 1994), their secondary interest is placed on mental health issues, including detention under S136 of the MHA (Borschmann, Gillard, Turner, Chambers, & O'Brien, 2010; Brownell & Naik, 2000; Kent & Gunasekaran, 2010; Ogloff et al., 2013). This section of the MHA legislates that if the police find a member of the public who is considered to have a mental disorder and requires immediate care or control, the police have the power to move that person to a place of safety. Currently, police cells are considered to be a place of safety, however, detention within police cells for those held under S136 must be as a last resort and with the purpose that the individual shall receive a full MHA Assessment to determine their treatment pathway (Bather et al., 2008).

Commonly, the literature reviews highlight the elevated prevalence of mental health concerns and substance misuse issues within a police custody sample. Particularly, it is presented with a view of comparing descriptive statistics to those persons incarcerated and those within the community (Blaauw & Kerkhof, 2002). With those reviews that focus upon deaths in custody, the emphasis remains with the method of death (Leigh et al., 1998). Those evaluating matters regarding S136 detentions consider the handling of said detainees and conclude with recommendations for improvements

within the police station as the designated place of safety (Borschmann et al., 2010; Ogloff et al., 2013). The endorsements centre on specialised training for custodial and civilian staff in the police custody environment (Leigh et al., 1998), with mental health services to be integrated within all justice agencies (Ogloff et al., 2013). Training programmes are currently available across the country to support police officers in improving their working relationship with detainees who have mental health problems. However, at present, their availability and content differ across all police forces. The content ranges from mental health first aid training, delivered by the NHS (available within the Humberside Police Service), to full-day mental health awareness sessions (available to Dyfed Powys Police, Essex Police, and Suffolk Police Services; MIND & Victim Support, 2013). Feedback from those who have participated in such training commented that it helped inform their approach when attending to someone with a mental health concern, and overall, they found it extremely beneficial, both professionally and personally (MIND & Victim Support, 2013). So, whilst increasing awareness, such training can provide skills to use in practice. With evidenced success regarding training, the College of Policing has now stated that the police will receive a minimum of two days of training on mental health issues (Dodd, 2016).

Overall, these reviews consistently appear to concentrate on specific populations within police custody, i.e. the deceased, drug users, and those detained under S136. Literature reviews and research studies centring their investigations on the police custody environment are also typically geographically exclusive, with the results only accounting for only a few boroughs of counties or single police stations.

Aims

This review will use a replicable systematic approach to examine the healthcare needs of all populations detained in police custody. It will study the prevalence of such healthcare issues and concerns, with a main focus on considering the quality of relevant studies. Unlike previous literature reviews, no exclusion filters will be applied to the detainee population, utilising the systematic approach to combine primary research studies making available a comprehensive overview of this topic area. This will allow for a greater generalisation of findings and enable any recommendations made to reach their optimal potential in practice. Attempting to collate information to improve screening procedures and enhance treatment strategies for both police staff and detainees is key. Such a review will allow the police to gain greater confidence in their risk management, with this being one of their primary aims, combined with providing detainees with a substantial healthcare

service, in what the evidence suggests is a prime opportunity to engage in treatment.

The findings of this review could also further inform the training needs of the police. Police staff are not always trained in the area of mental and physical healthcare and often come into contact with individuals who have undiagnosed issues. Training that focuses on the most prevalent healthcare needs of detainees will be cost- and time-effective; will sanction additional levels of preparation; and introduce the concept of appropriate empathic response from the police to the detainees when managing their healthcare difficulties.

Improving an aspect that is often overlooked in police custody will also minimise further disruption to the criminal process in this environment, decrease detainee distress, and aim to potentiate more efficient information exchanges between services. The main objective from completing this systematic review is to evaluate the healthcare needs and issues of individuals detained within police custody.

METHOD

Scoping Exercise

A scoping exercise was carried out on the 12th September 2016 to ascertain the feasibility of carrying out a review that would synthesise the research that explores the healthcare needs of those detained in police custody. The largest collections of systematic reviews are held within The Campbell Collaboration Library and The Cochrane Library. These two databases were searched using the search terms outlined below. From the 323 results, no existing systematic reviews on this topic area were identified (see Appendix 1). The results of this preliminary scoping exercise determined that it was appropriate to complete a systematic review on the above topic area, providing a further contribution to the literature.

Search Terms

The following search terms were used to search electronic databases, and were modified accordingly to meet the specific requirements of the particular database:

1. ("police custod*" or "custody suite" or "custod*").ti,ab,kw
2. ("detaine*" or "detained person*").ti,ab,kw
3. ("health* AND assess*" or "health* AND determin*" or "health*").ti,ab,kw
4. ("substance misuse*" or "drug misuse*" or "alcohol

misuse*").ti,ab,kw

5. ("self ADJ3 harm" or "self ADJ3 injur*" or "parasuicid*" or "suicid*").ti,ab,kw
6. ("mental health*" or "mental* handicap*" or "mental* disabled person*" or "mental* disabled").ti,ab,kw
7. 1 OR 2 AND 3 OR 4 OR 5 OR 6

The following search term was used for the additional literature and E-Thesis website gateways searches:

1. "police custody"

All references and hits that were returned using the search terms above were exported into the EndNote X6® application. The search syntaxes for each database are displayed in Appendix 2.

Search Strategy

The main search for the review initially involved exploring both published and unpublished research and literature. The searching of electronic databases, government and specialist websites, and e-theses websites provided further relevant publications.

Electronic Bibliographic Databases (searched 12th September 2016)

1. EMBASE
2. Medline®

3. PsycINFO
4. PsycARTICLES *Full Text*
5. NCJRS

Government and Specialist Websites (searched 12th September 2016)

1. Ministry of Justice
2. Home Office

E-Thesis Websites (searched 12th September 2016)

1. DART: Europe E-Thesis
2. Nottingham E-Thesis

Reference List of Previous Literature Reviews

Six relevant literature reviews were identified from the electronic database searches (Borschmann et al*.,* 2010; Forrester, Valmaggia, & Taylor, 2016; Ghodse, Stark, & Lawrence, 1995; Heide & Chan, 2016; Lepresle, Vidal, & Chariot, 2016; Ogloff et al., 2013). All reference lists from these reviews were manually searched for additional articles.

Subject Experts

A total of four experts and consultants within this field of research were contacted to ensure that all relevant publications were

included. Their correspondence suggested that the police custody environment is becoming considerably more prominent within the research and academic arenas, with ongoing work being carried out to evaluate the healthcare needs and general wellbeing of those detained in this environment. It was highlighted by one subject expert that a review following a systematic approach had previously taken place regarding the healthcare needs of those detained in police custody: Rekrut-Lapa and Lapa (2014). However, Rekrut-Lapa and Lapa's (2014) systematic review did not follow the processes that will be followed and implemented within this review. No design-specific criteria were set for the inclusion of studies within their literature review (Rekrut-Lapa & Lapa, 2014). This systematic review will follow pre-defined inclusion and exclusion criteria, resulting in identified references being quality assessed using checklists adapted from CASP (2016). This stringent process will ensure that only quality studies are included and used to synthesise the results.

Inclusion and Exclusion Criteria

The author, with the primary notion of examining their suitability to include in the review, assessed all references. This initial assessment was based upon the pre-defined inclusion and exclusion

criteria that were devised prior to the review taking place, as outlined in Table 1 below.

Table 1

Pre-Defined Inclusion and Exclusion Criteria

Category	Inclusion Criteria	Exclusion Criteria
Population	Those detained in police custody: including both males and females, those of all ages, detained for any offence type, and / or detained under the MHA (including S136)	Alternative populations that have not passed through police custody itself, whilst involved with the police, i.e. those who have been taken straight to an alternative place of safety by police, e.g. a hospital
Outcome Measures	Healthcare needs measured by standardised questionnaires, mental health assessments, forensic medical examiner (FME) reports, or self-reported by the detainee Healthcare needs measured by interview Healthcare needs measured by the collection of relevant data from appropriate records such as medical, FME records, police custody records, official databases Suicides and deaths in custody, whereby information regarding additional healthcare details of a detainee are provided Screening assessment results	Measures that only inform of statistics for suicides and deaths in police custody, without any indication of how the death occurred, including information relating to mental health and substance misuse concerns

	including either the initial police risk assessment or one that is relevant and designed by the researcher	
Context	Police custody suites and / or police stations	Any alternative context whereby the individual has not been detained in police custody at any point Any prison setting or correctional facility Any alternative community setting, i.e. a low-secure rehabilitation unit, a hospital, or a therapeutic community
Study Type	Primary studies including assessments with detainees and retrospective data collection	Literature reviews

An inclusion criteria pro-forma was used to monitor all relevant studies (see Appendix 3). Studies that met the defined inclusion criteria were then subjected to a quality assessment.

Quality Assessment

Assessing the quality of the included studies is one of the major factors of a systematic review (Tranfield, Denyer, & Smart, 2003). This appraisal of quality examines various elements of a study to determine its eligibility for inclusion within a final review. The quality assessment describes the minimum acceptable level of

design and considers the risk of biases to gauge overall quality. This description and evaluation is aided by the creation of bespoke quality assessment checklists supported by the CASP (2016) initiative, which assists in facilitating adequate standards of reporting (Khan, Kunz, Kleijnen, & Antes, 2003; Smith, Devane, Begley, & Clarke, 2011). The CASP checklists were developed and informed by the guides used within the medical literature (Guyatt, Sackett, & Cook, 1993) and piloted with healthcare professionals (National Collaborating Centre for Methods and Tools, 2011) prior to their publication.

For the appraisal within this review, a quality assessment checklist was created (see Appendix 4) and adapted from the guidelines proposed by the CASP initiative. It was adapted to ensure that it specifically met the needs and requirements of the current review. According to the CASP (2016) guidelines the checklist should include screening questions to determine if the evaluation should continue, then leading to additional sections reviewing any potential biases.

The quality checklist contains a total of five sections with a various number of items in each. Each item on the quality checklist requires a score, following an adapted Jadad scoring approach (Jadad et al., 1996). The scoring for all sections is as follows:

- U = Unclear / Undecided / Discuss further
- 0 = Criteria not met
- 1 = Criteria partially met
- 2 = Criteria met

All sections are then rated as 'low', 'medium', or 'high' in relation to their overall bias depending on the final score.

The initial screening section includes three questions that consider the clarity of the research aims and the environment the research has taken place in, and confirms that the study considers the healthcare needs of those detained in police custody. A maximum score of six should be achieved within this section in order for a study to progress to the quality assessment stage. The '*Sampling and Selection Bias*' section considers the risk of bias in the recruitment and selection processes within the studies, reviewing the impact of any exclusion applied to the sample (Higgins et al., 2011). A score between 0-3 in this section is considered as a high risk of bias, a score between 4-5 is medium, and a score between 6-8 is low. The third section, '*Measurement Bias for Outcomes',* was weighted more heavily than the other sections due to its significance in addressing the primary aim of the systematic review. As healthcare concerns are being measured within the included studies, the results can have a greater impact when contemplating practical and ethical issues (British Medical Journal, 2015). This

section was weighted more heavily by the use of double-scoring for each item. Scores between 0-6 suggest that this section has a high risk of bias; scores of 7-10 are considered a medium risk; and scores 11-16 are low risk. Additional issues that are reviewed include the appropriateness of the data analyses, reporting bias, and the handling of missing data (Abalos, Carroli, Mackey, & Bergel, 2001; Uman, 2011; Victor, 2008). For the final section, that reviews additional elements of the studies, a score between 0-3 indicates high risk of bias; a score between 4-7 indicates a medium risk; and a score between 8-10 indicates low risk.

Studies that were compromised by significant and considerable bias, according to the criteria outlined in the quality assessment pro-forma, were rejected. The studies had to score a minimum of 20 out of a possible 40 (50%) to be determined high enough quality for inclusion (Furlan, Pennick, Bombardier, & van Tulder, 2009). Including a pre-determined threshold of quality within this systematic review ensures that the study being assessed has been conducted with methodological rigour (Abalos et al., 2001). Methodological rigour is imperative as it increases the quality of the research being conducted. It encourages autonomy from the biases that occur in research and instils a level of confidence in applied methodology, improving evidence-based practices (Maggs-Rapport, 2001; Yang, Chang, & Chung, 2012).

A second independent reviewer - a chartered and registered forensic psychologist who had previously worked within the police custody setting - rated the quality of a total of 20% of the included publications. This second review explores the reliability in ratings. In order to test the level of inter-rater reliability, a Cohen's kappa statistic was calculated. The Cohen's kappa represents the extent of the agreement between raters from data that has been collected (Cohen, 1960, as cited in McHugh, 2012). Additionally, this statistical calculation accounts for the likelihood of variation in ratings between raters due to uncertainty, which is not included in the use of percentage agreements (McHugh, 2012). The Cohen's kappa calculation was performed in Microsoft Excel© by entering the scores determined by both reviewers for each question within the quality assessment. The percentage of agreement was calculated, followed by the subtraction of agreement due to chance (Zaiontz, 2016). A Cohen's kappa inter-rater reliability coefficient of k=.70 was achieved. Landis and Koch (1977; as cited in Sim & Wright, 2005) state that the following are standards for strength of agreement regarding the kappa coefficient: ≤0=poor, .01–.20=slight, .21–.40=fair, .41–.60=moderate, .61–.80=substantial, and .81–1=almost perfect. Therefore, the inter-rater reliability here is 'substantial'.

Data Extraction

A pre-designed data extraction form (see Appendix 5) was used to extract relevant data from the included studies. It includes information relating to study characteristics, population characteristics, recruitment procedures, outcome measures and outcomes, and analyses. Where the data was unclear, required further discussion or was missing, this was marked on the form accordingly.

Descriptive Data Synthesis

The final 27 studies that were included within this review evaluated the healthcare needs of a population that were detained in police custody.

Overall, the total number of participants in the included studies amounted to 14,801, ranging from 43 to 3,496 per study. The age of the participants ran from 13 to 91 years, with mean ages varying from 23 to 63 years. The average gender inclusion amongst these studies was 79.7% male and 20.3% female. The main methodologies used within the studies were either retrospective data collection from available records, or administration of questionnaires using convenience sampling of the desired population.

Table 2 evidences the main characteristics of each of the included studies. It shows that all of the studies examined the various healthcare needs of those detained in police custody. Additionally, the table shows the characteristics of the participants, any outcome measures used, and an array of statistical data showing the prevalence of healthcare needs within the desired population.

Table 2

Characteristics of Studies Exploring Healthcare Needs of Police Custody Detainees

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
Baksheev, G.N., Thomas, S.D.M., & Ogloff, J.R.P. (2010) Australia	*N* = 150 *Age:* Mean = 30.4 yrs *Gender:* Male = 90.5% Female = 9.5% *Recruitment:* Convenience sampling within a police station, with inclusion criteria including a requirement to be 18 years or older	Structured Clinical Interview for Diagnostic and Statistical Manual (DSM; SCID-IV) Camberwell Assessment of Need – Forensic Short Version Standard coding sheet for detainee records	*Aim:* To determine the prevalence of current psychiatric disorders and unmet needs in police cell detainees *Method:* Cross-sectional descriptive study *Assessor:* Researcher accompanied by a custodial	*Mental Health* 54.8% registered with a mental health service at some point in their lifetime 51.3% self-reported diagnosis of any current Axis-I disorder, excluding substance use disorders 43% had a history of mental health treatment 32% diagnosed with major depression 26.7% current use of psychiatric medications 25.4% had been admitted, on at least one occasion, to a psychiatric hospital 13.3% diagnosed with posttraumatic stress disorder (PTSD) 2.7% diagnosed with schizophrenia 2.7% diagnosed with schizoaffective disorder

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
		Law Enforcement Assistance Program Database Victorian Psychiatric Case Register	nurse	1.3% diagnosed with psychotic disorder Odds of meeting diagnostic criteria for psychotic disorders are 15.4 times higher than the general population (95% confidence interval = 11.55-20.64, $p<0.001$) *Substance Misuse* 21.3% were diagnosed with alcohol dependence 21.3% were diagnosed with opioid dependence 16.9% report a current use of opiate substitutes 0.7% were diagnosed with substance-induced psychotic disorder
Beaufrère, A. & Chariot, P. (2015) France	*N* = 347 over the age of 60 *Age:* Mean = 63 yrs	Standardised Questionnaire using a DSM-IV based evaluation	*Aim:* To determine the proportion of detainees over the age of 60, their medical	*Mental Health* 53% reported one somatic disorder 23% reported more than one somatic disorder 13% were diagnosed with psychiatric disorders

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
	Gender: Male = 84% Female = 16% *Recruitment:* Convenience sampling within police cells during medical examinations, with inclusion criteria requiring detainees to be over the age of 60		characteristics, and history *Method:* Data collection via survey *Assessor:* Custody physician during medical examination	Of the above 13%: 42% reported psychiatric hospitilisation 29% reported receiving continued care 24% reported previous suicide attempts *Substance Misuse* 66% reported regular alcohol drinking of which 35% reported daily alcohol consumption 40% reported daily tobacco consumption 19% reported nicotine dependence 2% reported illicit drug use 1% reported consuming cannabis 0.5% reported cocaine consumption *Physical Health* 36% reported a chronic health condition 19% reported hypertension 16% reported being diabetic 11% reported heart diseases 3% reported being asthmatic

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
Best, D., Havis, S., Strathdee, G., Keaney, F., Manning, V., & Strang, J. (2004) UK	*N* = 43 individuals who have died in police custody *Age:* Median = 32 yrs *Gender:* Male = 88.4% Female = 11.6% *Recruitment:* Data collection on individuals whose death occurred whilst in police custody	Police Complaints Authority (PCA) casework files consisting of the Investigating Officer's final report PCA internal minutes and copies of all relevant correspondence between the PCA and relevant parties. This includes: police forces, coroners, the CPS, any relevant medical experts and the family members of the deceased,	*Aim:* Examine the prevalence of mental illness among the deceased group *Method:* Retrospective data collection using a two-tier search strategy (asking staff to identify cases and searching for markers on the recording systems) *Assessor:* Researchers	*Mental Health* 41.8% were reported as suffering from mental health problems 44% had a history of anxiety or depression 27% were identified as suffering from psychosis 27% had a history of previous suicide attempts or self-harm *Of those with mental health problems* 50% had alcohol in their system detected by toxicology 44.4% had been using cocaine 44.4% had used diazepam 38.9% had been using cannabis 16.7% had been using heroin 72% of the mental health group had drug toxicity recorded as cause of death 33.3% were considered to be more likely to die in a police station

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
		along with their legal representative where applicable Individual file information that included General Practitioner (GP) diagnoses, toxicology reports, post-mortem analyses and FME reports		45% of the drug dependent population were assessed as having a psychiatric disorder *Substance Misuse* 55.8% had consumed cocaine preceding their death 87% of those who consumed cocaine consumed levels consistent with fatal toxicity suggesting this to be the cause of death 48.8% had consumed alcohol preceding their death 23.8% of those who consumed alcohol consumed levels consistent with fatal toxicity suggesting this to be the cause of death 25.6% consumed heroin / diamorphine preceding their death 63.5% of those who consumed heroin / diamorphine consumed levels consistent

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
				with fatal toxicity suggesting this to be the cause of death 11.6% of cases involved the use of methadone preceding their death 42% of the total sample showed signs of dual diagnosis
Blaauw, E., Kerkhof, A., & Vermunt R. (1997) The Netherlands	*N* = 59 individuals who have died in police custody *Age:* Mean = 33 yrs *Gender:* Male = 96.6% Female = 3.3%	Reports from the Rijksrecherche (Independent Police Force investigating deaths in law enforcement)	*Aim:* To determine whether the deceased were different from the usual detainee population *Method:* Retrospective data collection. Studying investigative reports	*Mental Health* 34% of deaths were considered to be suicides 55% of the suicide cases were known to have had mental health care and 25% of these were known to have had prior inpatient psychiatric treatment 12% were locked up temporarily as they required psychiatric treatment *Substance Misuse* 32% of deaths were considered to be the direct result of intoxication due to alcohol (26.3%), drugs (15.7%), and alcohol with other substances (52.6%)

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
	Recruitment: Data collection on individuals whose death occurred whilst in police custody		produced as the result of a death where law enforcement was involved *Assessor:* Researchers	71% of the deceased cases frequently consumed hard drugs or large quantities of alcohol *Physical Health* 14% of deaths were due to natural consequences of an illness or physical disorder *Other* 12% of deaths were accidental 8% of deaths could not be categorised
Brooker, C., Tocque, K., Mitchell, D., & Pearce, M. (2015) UK	*N* = 106 *Age:* Mean = 31.7 yrs *Gender:* Male = 76.4% Female = 23.6%	Inspection reports Minutes from the meetings between healthcare providers and the police	*Aim*: To report on a health needs assessment *Method:* Retrospective data collection from healthcare databases and	74.5% did not have a concern regarding their health whilst in custody 21.7% reported a concern with their health whilst in custody 3.8% did not answer *Mental Health* 1.9% reported a mental health concern

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
	Recruitment: Data collected from previous inspection reports and questionnaire via convenience sampling within a police station	Questionnaire Custody records	survey of detainees *Assessor:* Researchers	0.9% reported a concern with self-harm or suicide <u>*Substance Misuse*</u> 5.7% reported a concern with a drugs problem 3.8% reported a concern with alcohol <u>*Physical Health*</u> 1.9% reported a concern with an injury 1.8% reported a concern about diabetes 0.9% was five weeks pregnant 0.9% was concerned about chest pains <u>*Other*</u> 8.6% reported 'other' concerns 7.6% reported a concern with their medication
Buster, M., Dorn, T., Ceelen, M., & Das, K.	*N* = 264 *Age:* Mean = 32 yrs	Amsterdam-Amstelland Police Department	*Aim:* To describe the registered mental health,	<u>*Mental Health*</u> 39.1% received a positive score on the BJMHS for psychopathology

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
(2014) The Netherlands	*Gender:* Males = 92% Females = 8% *Recruitment:* Data collection from registration documents with a structured questionnaire survey administered via convenience sampling	Register Database Forensic Medicine Department Database Structured Questionnaire Survey Outpatient Public Mental Health Service Database (including Psychiatric Service) Brief Jail Mental Health Screen (BJMHS) Custody records	addiction and social problems and compare them to self-reported problems among a sample of detainees *Method:* Review of records and survey data *Assessor:* Researchers and specifically trained interviewers	35% scored positively on both indicators of mental health and substance misuse *Substance Misuse* 50% regularly consume alcohol or drugs 23.5% use cannabis on a daily basis 21% are excessive alcohol users 20.6% consumed more than three units of alcohol on a daily basis 17.4% used cocaine within the last month 9.4% used opiates within the last month

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
Carter, J. & Mayhew, J. (2009) UK	*N* = 188 *Age:* Unknown *Gender:* Unknown *Recruitment:* Data collection from records of those who had been transferred from custody to hospital	Case records were identified using the computerised custody record system (CEDAR) Custody records	*Aim:* To determine a baseline for timing, numbers and casemix of detainees referred to hospital for medical assessment *Method:* Retrospective review of case and custody records *Assessor:* Researchers	*Reasons for Transfer:* *Mental Health* 6.3% of those detained under S136 needed to attend hospital for further mental health assessment *Substance Misuse* 12.23% referred for overdose and poisoning 3.19% referred for having swallowed drugs *Physical Health* 18.1% referred for a head injury 12.23% were unrousable 9.0% referred due to chest pain 2.12% referred with breathing problems 1.6% referred in an acute confusional state 1.06% referred due to a query regarding deep vein thrombosis 0.5% referred due to an acute allergic reaction

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
				0.5% referred due to a diabetic problem 56% of cases transferred to hospital had a potentially serious or life-threatening problem
Ceelen, M., Dorn, T., Buster, M., Stirbu, I., Donker, G., & Das, K. (2012) The Netherlands	*N* Total = 3496 *N* = 3232 detainees consulted by FME in custody *Age:* Mean = 37.2 yrs *Gender:* Male = 86.3% Female = 13.7% *Recruitment:* Data collection from Public Health Service records	Electronic register of the Forensic Medicine Department of the Amsterdam Public Health Service Interview data (Health Survey)	*Aim:* To study the physical healthcare of police detainees *Method:* Data collection from Public Health records and administration of health interview survey to current detainees *Assessor:* Researchers and specially trained interviewers	*Consultations with the FME (5 most common):* *Physical Health* *Male* 11% diagnosed with diabetes 10% with hypertension 6% diagnosed with asthma 4% with a laceration 3% with general pain *Female* 13% with hypertension 7% diagnosed asthma 5% diagnosed with diabetes 5% currently pregnant 4% with general pain

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
	N = 264 participated in Health Survey *Age:* Mean = 32.4 yrs *Gender:* Male = 92% Female = 8% *Recruitment:* Random selection of individuals arrested and detained in police custody			*Health survey results* 15% reported to have been hospitalised for one night within the last 12 months 11% were underweight according to Body Mass Index (BMI) scores 75% were smokers 27% were non-drinkers 21% reported excessive alcohol use 24% reported daily cannabis use 18% reported use of cocaine 9% reported used of opiates 27% reported suffering at least one chronic disease
Chariot, P., Lepresle, A., Lefevre, T., Boraud, C.,	*N* = 1000 *Age:* Mean = 23 yrs	Examinations completed by physicians from the Department of Forensic Medicine	*Aim:* To characterise addictive behaviours in detainees	27% reported a current health problem 24% were undergoing treatment prior to custody

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
Barthes, A., & Tedlaouti, M. (2014) France	*Gender:* Male = 94% Female = 6% *Recruitment:* Convenience sampling within a police station, with inclusion criteria including a requirement to be 15 years or older	Standardised Questionnaire using a DSM IV-based evaluation	*Method:* Prospective descriptive study based on detainees' reports *Assessor:* Physicians	*Mental Health* 10% reported anxiety without aggressiveness 4% reported agitation or aggressiveness 1% reported confusion 1% expressed depressive symptomatology *Substance Misuse* 71% reported an addictive disorder related to psychoactive substances 62% reported a tobacco addiction 35% reported abusing cannabis with 53.8% using on a daily basis 32% reporting abusing alcohol with 33.6% using on a daily basis 5% reported addiction to opiates 4% reported addiction to cocaine 1% reported addiction to amphetamines 1% reported addiction to LSD *Other* 35% received medication whilst in custody

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
Dorn, T., Ceelen, M., Buster, M., Stirbu I., Donker, G., & Das, K. (2014) The Netherlands	*N* = 3232 *Age:* Mean = 37.2 yrs *Gender:* Male = 86.3% Female = 13.7% *Recruitment:* Retrospective data collection from databases	Electronic Registration of the Forensic Medicine Department of the Amsterdam Public Health Service	*Aim:* To systematically compare presented problems and medication use in a population of police detainees to those of regular patients in general practice *Method:* Retrospective data collection with a comparator group *Assessor:* Researchers	28% of detainees were attended to by a physician in custody *Mental Health* 49.8% diagnosed with mental health problems 11.3% suffered from anxiety 8.8% diagnosed with a psychiatric disorder 4.4% diagnosed with schizophrenia 4.0% diagnosed with depressive disorder 1.9% were displaying psychological symptomatology 1.7% diagnosed with psychosis 0.9% reported they were feeling depressed 0.5% diagnosed with organic psychosis 0.5% diagnosed with personality disorder 0.4% diagnosed with affective psychosis 0.3% reported feeling angry 0.2% suffering from acute stress reaction 0.1% previously attempted suicide

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
				Substance Misuse 50.6% were abusing drugs 14.8% chronically abused alcohol 4.9% diagnosed with acute alcohol abuse 0.1% reported abusing prescription medication *Other* 1.9% suffering from sleep disturbance
Dorn, T., Janssen, A., de Keijzer, J. C., van Rijkzwikker, G. L., Reijnders, U. J. L., Luitse, J. S. K., Vandewalle, E., Gorzeman, M. P., van Nieuwenhuizen, R. C., Ceelen, M., & Das, C.	*N* = 243 *Age:* Mean = 35 yrs *Gender:* Male = 92% Female = 8% *Recruitment:* Retrospective data collection with inclusion criteria including	Electronic Registration of the Forensic Medical Department of Amsterdam Public Health Service Emergency Departments within catchment area	*Aim:* To provide an insight into the diagnoses assigned by forensic doctors for detainees referred to an emergency department *Method:* Retrospective data collection via official	*Substance Misuse* 11.1% were referred to hospital due to acute intoxication / withdrawal *Physical Health* 88.9% were transferred to hospital due to physical health problems including injuries 66% were transferred due to an injury 65.5% were extremity injuries 27.5% were injuries to the head and / or face 21.9% had injuries inflicted by the

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
(2016) The Netherlands	a referral to an emergency department following custody		databases *Assessor:* Researchers	police 4.4% were injuries to the shoulder 4.4% had injuries inflicted by a police dog 3.8% had self-inflicted injuries 3.1% were internal injuries 1.9% were injuries to the back 1.3% were injuries to the hip 1.3% had injuries inflicted by a police horse
Greenberg, N., Lloyd, K., O'Brien, C., McIver, S., Hessford, A., & Donovan, M. (2002) UK	*N* = 178 *Age:* Mean unknown Range = 15-79 yrs 56% between 30-49 yrs *Gender:* Male = 65.7% Female = 33.2%	Monitoring Form for those detained via MHA S136 and taken into custody Information from approved social worker, custody sergeant, forensic medical examiner,	*Aim:* To investigate the pathway by which those detained under S136 come to custody and what happens afterwards *Method:* Administration of prospective survey	*Behaviours that led to the individual's detention:* *Mental Health* 35% were suicidal or engaged in self-harming activity 22% were engaging in bizarre behaviour *Substance Misuse* 15% were engaging in behaviour which appeared to be the result of being drunk or intoxicated *Other* 11% engaged in passive behaviour

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
	Recruitment: Detained under S136 of MHA and taken to police custody	attending psychiatrists and other doctors where appropriate	*Assessor:* Researchers and accompanying approved social worker	8% stated engagement in 'other' behaviour 32% of persons subject to S136 were admitted to hospital from custody for further mental health assessments 49.1% of these individuals were admitted informally
Laidlaw, J., Pugh, D., Riley, G., & Hovey, N. (2010) UK	N = 186 *Age:* Mean = 37 yrs *Gender:* Male = 55% Female = 45% *Recruitment:* Data collection if record indicated a detention under S136	Paper-based monitoring system on S136 activity held by 2gether NHS Foundation Trust	*Aim:* To study the use of S136 to reflect a more accurate and natural picture in a rural county *Method:* Retrospective analysis of data collected as part of routine monitoring of S136 activity	*Behaviour upon Arrest:* *Mental Health* 55% presented with acts or threats of deliberate self-harm 31% diagnosed with affective illnesses and anxiety disorders 13% diagnosed with schizophrenia or bipolar disorder 8% diagnosed with personality disorder *Substance Misuse* 16% intoxicated with drugs or alcohol 11% misused substances *Physical Health* 1% had other medical conditions

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
			Assessor: Researchers	*Other* 28% presented with actual or threatened violence to others 2% had a learning disability *Post-Custody:* 33% were admitted to a psychiatric hospital 46% of those admitted were detained and admitted under a further section of the MHA 61% were not admitted to hospital 22% of those not admitted were already known to community psychiatric nurses 13% were referred to community psychiatric teams 9% were referred to non-statutory agencies 4% were referred to specialist drug or alcohol services
Mahindhoratep, T.S., Lepresle, A., Chiadmi, F.,	N = 552	Data from the Forensic Medicine Unit of	*Aim:* To evaluate medical	*Drug Drivers (37.1%)* 94% had consumed cannabis 91% had a 'very good' overall health

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
Schlatter, J., Boraud, C., & Chariot, P. (2013) France	*Age:* Mean = 30 yrs *Gender:* Male = 97% Female = 3% *Recruitment:* Held in police custody for proven or suspected driving under the influence	a University Teaching Hospital in France Physical examination details and biological samples DSM-IV based evaluation of Addictive Disorders Health Indicators of the Minimum European Health Module	features and addictive behaviours of suspected drug drivers *Method:* Prospective monocentric data collection *Assessor:* Researchers	rating 7% had a chronic somatic illness 7% had a chronic health condition 5% reported daily alcohol consumption 4% reported cocaine consumption 2% were alcohol dependent 1% had a chronic psychiatric illness 1% reported heroin consumption <u>*Drink Drivers (41.8%)*</u> 80% had a 'very good' overall health rating 24% reported daily alcohol consumption 23% reported cannabis consumption 20% had a chronic somatic illness 19% had a chronic health condition 9% reported alcohol dependence 8% had a chronic psychiatric illness 1% reported cocaine consumption 0% reported heroin consumption
McGilloway, S. & Donnelly, M.	N = 382	Profile Form Screening	*Aim:* To examine administrative	<u>*Mental Health*</u> 91% were judged to have a mental illness

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
(2004) UK	*Age:* Mean = 33 yrs *Gender:* Typically male (no further information provided) *Recruitment:* Arrested and detained in police custody	Questionnaire Psychosis Screening Questionnaire Learning Disability Questionnaire (LDQ) Assessment of Risk Form Brief Psychiatric Rating Scale (BPRS) General Health Questionnaire Alcohol Use Disorder Identification Test	outcomes and psychiatric assessment data *Method:* Administration of a battery of mental health assessments *Assessor:* Researcher	75% had experienced depression during the previous month 74% had an institutional history 60% of BPRS cases were identified as having a potential mental health problem 44% had previously been psychiatric inpatients 42% had engaged in self-injurious behaviour 41% had clinical depression 11% had schizophrenia or schizophrenic / paranoid psychosis 10% displayed behaviours relating to self-harm 10% were recommended for psychiatric hospitalization or urgent psychiatric or hospital assessment 7% reported being in an anxious state 7% had personality disorder 4% were admitted to a psychiatric hospital There were statistically significant associations between harm to self, and /

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
		Drug Abuse Screening Test Marlowe-Crowne Social Desirability Scale Short-Form Interview		or others and institutional history (self-harm: $x^2=26.63$, df=10, $p<0.01$; harm to others: $x^2=20.82$, df=10, $p<0.05$) *Substance Misuse* 16% had alcohol / drug related problems *Other* 53% had a history of harming others 5% rated as having an impaired social behaviour (LDQ) 2% had a formal diagnosis of a learning disability
McKinnon, I. & Grubin, D. (2010) UK	N = 307 *Age:* Mean = 30.9 yrs *Gender:* Male = 82% Female = 18%	Police arrest records Sergeant's overall risk assessment FME consultation records	*Aim:* To determine the extent of health problems and mental vulnerability in detainees in police custody	*Mental Health* 20.5% were mental health associated referrals 13% had depression 10.7% had history of self-harm 3.9% reported mental health problems 1.9% reported recent / ongoing suicidal ideation 1.6% had possible psychotic symptoms 0.9% had bipolar disorder

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
	Recruitment: Detained in police custody		*Method:* Retrospective data collection from anonymised records *Assessor:* Researchers	0.3% had schizophrenia *Substance Misuse* 36.8% were drug related referrals 22.1% were alcohol intoxicated referrals *Physical Health* 46.9% were physical health referrals 19.8% were injury related referrals 7.8% of detainees required hospital treatment for physical health problems *Other* 0.9% had Attention Deficit Hyperactivity Disorder (ADHD)
McKinnon, I. & Grubin, D. (2013) UK	N = 237 *Age:* Mean = 33 yrs *Gender:* Male = 83% Female = 17%	Semi-Structured Clinical Interview Adapted Faculty of Forensic and Legal Medicine's Physical Pro-Forma	*Aim:* To examine the efficacy of police screening procedures *Method:* Convenience sampling of	*Mental Health* 39% had a mental health problem 22% with other disorders 19% had attempted suicide in the past 11% expressed current suicidal ideation 8% experiencing psychotic disorders 5% moderate depressive disorder

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
	Recruitment: Detainee asked to participate in the order in which they entered custody	Structured Clinical Psychiatric History and Mental State Examination with the BPRS Assessment of Intellectual Disability CAGE Questionnaire – Alcohol Screening Severity of Dependence Scale Beck Scale for Suicide Ideation	individuals detained in custody, administration of interview and assessments *Assessor:* Researcher	*Substance Misuse* 40% had consumed alcohol in the last 48 hours 22% were regular users of crack cocaine 11% were regular users of heroin *Physical Health* 25% had abdominal symptoms 19% reported cardiovascular complaint 16% reported asthma 15% described an injury (excluding head injuries) in the preceding 48 hours 5% reported diabetes mellitus 3% reported communicable diseases 2% reported epilepsy *Other* 3% had a learning disability

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
McKinnon, I., Srivastava, S., Kaler, G., & Grubin, D. (2013) UK	*N* = 248 *Age:* Mean = 33.3 yrs *Gender* Male = 83% Female = 17% *Recruitment:* Collection of prevalence data from an unselected cohort of police custody detainees	Full clinical assessment employed by a synthesis of symptom checklists adapted from the International Classification of Diseases and Related Health Problems (ICD-10), the BPRS and Clinical Judgement Beck Scale for Suicidal Ideation Custody records	*Aim:* To ascertain the efficacy of custody health screening for mental disorders *Method:* Pragmatic interviews and examinations supported by structured tools *Assessor:* Researchers	*Mental Health* 39% presented with some form of mental disorder 17.7% reported a prior suicide attempt 11% presented as mentally vulnerable Of those 11%: 46.4% presented with non-affective psychosis; 28.5% presented with a learning disability; 21.4% presented with affective psychosis; and 3.5% presented with pseudodementia 10% reported current suicidal ideation 9% presented with chronic low mood 7.6% presented with psychosis 7% presented with intoxicating effects 5% presented with moderate depressive disorder 3% reported a prior admission to a psychiatric hospital 3% presented with significant personality traits 3% presented with other symptomologies

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
Ogloff, J., Warren, L., Tye, C., Blaher, F., & Thomas, S. (2011) Australia	*N* = 614 *Age:* Mean = 30.5 yrs *Gender:* Male = 91.3% Female = 8.7% *Recruitment:* Convenience sampling of individuals detained in a police station	Interviews and Health Screen Assessment BPRS Public Mental Health Services Database – Victorian Psychiatric Case Register GP records	*Aim:* To examine psychiatric symptoms, mental health histories and psychiatric mediation use in detainees *Method:* Administration of assessments and records searched *Assessor:* Trained nurses administering assessments and researchers reviewing contact data	*Mental Health* 33.6% experienced psychiatric caseness 19.7% had previously been admitted to a psychiatric hospital 6.2% had a current psychotic illness 4.9% had an affective disorder 2.3% had more than one psychiatric disorder 2.0% had another psychiatric disorder such as a pervasive developmental disorder *Diagnosed with Affective Disorders (10.2%)* 85.7% depressive illness 14.3% bipolar affective disorder *Diagnosed with Psychotic Illness (9.9%)* 60.6% schizophrenia 24.6% drug-induced psychosis 9.8% delusional disorder *Substance Misuse* 69.7% were substance misusers 50.7% abusing multiple substances

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
				11.1% abused alcohol only 7.0% abused heroin 6.4% abused cannabis 5.5% abused amphetamines 2.5% abused benzodiazepines
Payne-James, J. J., Green, P. G., Green, N., McLachlan, G. M. C., Munro, M. H. W. M., & Moore, T. C. B. (2010) UK	*N* = 168 *Age:* Mean = 33.9 yrs *Gender:* Male = 85.1% Female = 14.9% *Recruitment:* Convenience sampling from detainees in a police station who had been seen by an FME and were over the age of 16	Questionnaire	*Aim:* Determine the level of general health issues, diseases and / or pathology for detainees in police custody *Method:* Detailed analysis of healthcare issues of a cohort of detainees *Assessor:* FMEs undertaking	*Mental Health* 24.4% had previous significant mental health or psychiatric conditions 16.7% had previously intentionally self-injured 14.2% were diagnosed with depression 13% received a mental health diagnosis 9.5% required a mental health assessment 7.4% had been admitted under one of the sections of the MHA 1.8% had previously been inpatients in psychiatric units as informal patients *Substance Misuse* 63.1% were nicotine dependent 33.9% were crack cocaine dependent 33.9% were heroin dependent 33% reported consuming alcohol in the

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
			sessional work requested by the police	Previous 24hrs 33% reported consuming illicit drugs in the previous 24hrs 25% were alcohol dependent 21.4% were cannabis dependent 17% were diagnosed with alcoholism 16.6% were benzodiazepine dependent *Physical Health* 41.7% reported active medical problems 22.6% required an injury assessment 11.9% were diagnosed with asthma 5.9% were diagnosed with gastrointestinal problems 5.9% were diagnosed with epilepsy 5.3% were diagnosed with musculoskeletal concerns 5.3% were diagnosed with hepatitis 4.7% were diagnosed with hypertension 4.7% were diagnosed with a leg ulcer 4.7% were diagnosed with diabetes 1.7% were diagnosed with cardiac problems 1.1% were diagnosed with tuberculosis

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
				0.5% were diagnosed with a thyroid problem 0.5% were diagnosed with polycythemia 0.5% were diagnosed with HIV / AIDS 0.5% were diagnosed with rickets 0.5% were diagnosed with haemorrhoids
Riordan, S., Wix, S., Kenney-Herbert, J., & Humphreys, M. (2000) UK	*N* = 492 *Age:* Mean = 34 yrs *Gender:* Male = 76% Female = 24% *Recruitment:* Including all individuals who were referred to the Diversion at the Point of Arrest (DAPA) Scheme	Semi-Structured Interview Standardised Profile Form West Midlands Forensic Database Psychiatric Assessments	*Aim:* To provide further description of all referrals to the DAPA scheme *Method:* Interviewing individuals with positive referrals and data collection from electronic databases *Assessor:* Community	*Mental Health* 85% of referrals involved individuals who had a significant mental health problem 67% received psychiatric care at some point in their life 20% unclear regarding their primary psychiatric diagnosis 16% were diagnosed with schizophrenia 15% displayed no evidence of mental disorder 13% were diagnosed with a neurotic disorder 10% were diagnosed with an affective illness 4% were deemed mentally impaired

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
			psychiatric nurse	*Substance Misuse* 14% had a drug and / or alcohol dependency *Physical Health* 1% were suffering from an organic disorder
Sadiq, K. T., Moghal, A., & Mahadun, P. (2011) UK	*N* = 45 S136 assessments reviewed *Age:* Mean = 39.9 yrs *Gender:* Male = 53.3% Female = 46.7% *Recruitment:* If individual was assessed under S136 after being detained	Questionnaire pro-forma incorporating standards from the Code of Practice for S136 Assessment used when reviewing said assessments	*Aim:* To ascertain a trend of the S136 assessments and their outcomes *Method:* Retrospective data collection using developed pro-forma *Assessor:* Researchers collecting data	*Mental Health* 66.7% were previously known to mental health services 35.5% were detained for threats of self-harm 11.1% were detained for bizarre behaviour 8.9% were detained for acts of self-harm 6.7% were detained for stating abnormal thoughts 22.2% had a mood disorder 20% had a personality disorder 4.4% had a psychotic disorder 2.2% had no mental illness

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
			on assessments completed by approved doctors, mental health practitioners, and FMEs	*Substance Misuse* 31.3% were intoxicated 17.8% had drug and alcohol problems *Other* 22.2% detained for aggressive behaviour 8.9% not documented 4.4% detained due to a threat to others *Outcome of S136 Assessment* 37.7% discharged to primary care 26.6% formally admitted 15.5% referred to community mental health services 11.1% informally admitted 4.4% referred to medic on call 2.2% referred to drug and alcohol team 2.2% referred back to police
Scott, D., McGilloway, S., & Donnelly, M. (2006)	*N* = 1089 positively screened detainees	Screening of custody record Mental Health Assessment	*Aim:* Examine the prevalence of mental health needs of people with a	*Mental Health* 61% attained above the threshold on the BPRS 56% had a history of self-harm 47% used mental health medication

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
UK	*Age:* Typically in their 20s (no further information provided) *Gender:* Typically male (no further information provided) *Recruitment:* If custody record forms are positive for evidence of a mental health problem or learning disability	consisting of: Assessment of learning disability, risk, psychosis, psychiatric morbidity, and alcohol or drug abuse	learning disability detained in police custody *Method:* Screening of custody records by community mental health nurses and a mental health assessment completed for all positively screened cases *Assessor:* Community mental health nurses (CMHNs)	39% had previously been in psychiatric inpatient care 22% displayed self-harming behaviour *Substance Misuse* 56% reported consuming harmful levels of alcohol 27% reported abuse of drugs *Other* 65% presented as a 'moderate' or 'serious risk' to themselves or others 63% had a history of harming others 24% displayed physically aggressive behaviour
Scott, D., McGilloway, S., & Donnelly, M.	*N* = 217 *Age:*	Profile Form Screening	*Aim:* To describe the population of	*Mental Health* 91% had a mental illness 82% experienced depression during the

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
(2009) UK	Mean = 34 yrs *Gender:* Female = 100% *Recruitment:* If custody record forms are positive for evidence of a mental health problem or learning disability and the detainee is female	Questionnaire LDQ Assessment of Risk BPRS General Health Questionnaire Alcohol Use Disorder Identification Test Drug Abuse Screening Test	female detainees referred to the service by examining administrative outcomes and psychiatric assessment data *Method:* Screening of custody records by community mental health nurses and a mental health assessment completed for all positively screened cases *Assessor:* CMHNs	previous month 76% used mental health medication when arrested 61% had depression 54% had self-harmed 41% had previously received psychiatric inpatient care 29% displayed callousness 28% had self-harmed and harmed others 15% displayed self-harming behaviour 13% reported psychotic symptoms 9% had anxiety 9% had a personality disorder 3% had schizophrenia Self-harm was significantly associated with drug abuse ($p<.0001$) and alcohol abuse ($p<.0001$) *Substance Misuse* 23% had alcohol and / or drug related problems

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
				Other 31% displayed aggressive behaviour
Scott, D., McGilloway, S., & Donnelly, M. (2016) UK	*N* = 158 *Age:* Mean = Unknown Typically, late 20s or early 30s *Gender:* Typically, male *Recruitment:* Convenience sampling from a police station after detention	Profile Form Screening Questionnaire LDQ Assessment of risk BPRS Self-Report Questionnaire Custody records	*Aim:* To describe and evaluate a police mental health liaison service *Method:* Prospective follow-up design *Assessor:* CMHNs and researchers	*Mental Health* 84% reported experiencing symptoms indicative of depression during the previous month 79% had previous contact with psychiatric services 46% had a previous admission to psychiatric inpatient care 62% reported that at some stage, had been treated by a psychiatrist *Substance Misuse* 48% scored within the most severe category for self-reported alcohol abuse *Physical Health* 21% self-reported sustaining a head injury in the past *Other* 26% responded positively to one or

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
				more of the three LDQ key questions 88% of those report having difficulty in reading or writing 54% indicated receiving additional help at school due to difficulties in learning 9% were assigned a formal learning disability
Vincent, R., Beaufrère, A., & Chariot, P. (2015) France	*N* = 600 *Age:* Mean = 26.3 yrs *Gender:* Male = 93.3% Female = 6.7% *Recruitment:* Detainees arrested for the first time and who had requested a medical examination	Information from forensic physicians during medical examinations Standardised Questionnaire	*Aim:* To describe the characteristics of detainees arrested for the first time and who had a medical examination in custody *Method:* Retrospective analysis of data *Assessor:* FMEs and researchers	*Mental Health* 11% had a chronic somatic disorder 6.6% had a chronic psychiatric disorder 6.6% had a psychiatric history 4.6% with functional limitations 3.8% required hospitilisation 3.3% required psychiatric follow-up 2.6% had a history of suicidal attempts 2% suffered from a depressive episode *Substance Misuse* 27.3% had a nicotine dependence 25.6% consumed cannabis regularly 18.1% abused alcohol 6% consumed alcohol on a daily basis 3.1% were alcohol dependent 2.6% were receiving opioid substitution

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
				therapy 2.3% consumed cocaine regularly 1.1% were receiving addition treatment 0.8% consumed heroin regularly *Physical Health* 23.6% had observed injuries
Young, S., Goodwin, E. J., Sedgwick, O., & Gudjonsson, G. H. (2013) UK	*N* = 200 *Age:* Mean = 27.5 yrs *Gender:* Male = 92.5% Female = 7.5% *Recruitment:* Convenience sampling of individuals	Barkley Scales for ADHD in Childhood and Adulthood Diagnostic Interview for ADHD in Adults (DIVA) Learning Disability Screening Questionnaire Custody records	*Aim:* Investigate the prevalence of learning disabilities and ADHD among suspects detained in a police station *Method*: Interview and screening tools *Assessor:* Researchers	*Mental Health* 10% reported that they had tried to harm themselves at some point in their life 9% reported experiencing mental health problems or depression *Substance Misuse:* 24.5% had consumed alcohol in the last 24 hours 11.5% reported dependency to substances *Other* 76.3% screened positive for conduct disorder during childhood

Author(s), Year and Location	Participants	Outcome Measures	Aims and Method of Study	Findings
		Custody record risk assessment screening tool		32.1% screened positive for ADHD in childhood 23.5% displaying current symptoms of ADHD 12% completed the DIVA Of those 12%: 79.2% had persisting ADHD symptoms 58.3% had syndromatic persistence 6.7% screened positive for learning disability 4% reported requiring help with their reading and / or writing

The studies were conducted across a wide range of geographical locations and were inclusive of persons who had been detained in police custody. An array of measures was used across all studies such as questionnaires and the inspection of relevant records. A total of 15 studies had direct contact with detainees via the administration of psychometric assessments and structured interviews, with the remaining 12 studies retrospectively collecting data from an assortment of available records and databases. Due to the combination and variety of methods used with the data collection, generalisability to areas beyond those explored in the studies may not be to the desired extent. However, this systematic review aims to provide a wider view of the healthcare needs of this specific population. The included studies primarily explored mental health issues (historic and current), physical health issues, and substance misuse issues, with information regarding learning disabilities also included. The findings from the studies are detailed below, with the emerging themes presented.

RESULTS

The search for articles to include within this systematic review returned a total of 6,243 hits. Of these, 2,200 were duplicates and were subsequently removed. Of the remaining 4,043 hits, 3,924 were deemed irrelevant for review upon scrutiny of their title and abstract. This left a total of 119 potentially relevant articles. When considering the pre-defined inclusion criteria, 75 studies did not meet these requirements and six publications were literature reviews and therefore excluded. A total of 11 studies were excluded due to quality reasons, providing a final total of 27 primary studies for inclusion within the review (see Figure 1 for the search and inclusion process).

Table 3 provides a list of the final studies included within this systematic review and what areas of healthcare needs they have included within their research. A total of 24 studies (88.89%) covered mental health concerns, 26 studies (96.3%) included substance misuse issues, and 13 (48.1%) reviewed the physical health needs of those detained in police custody.

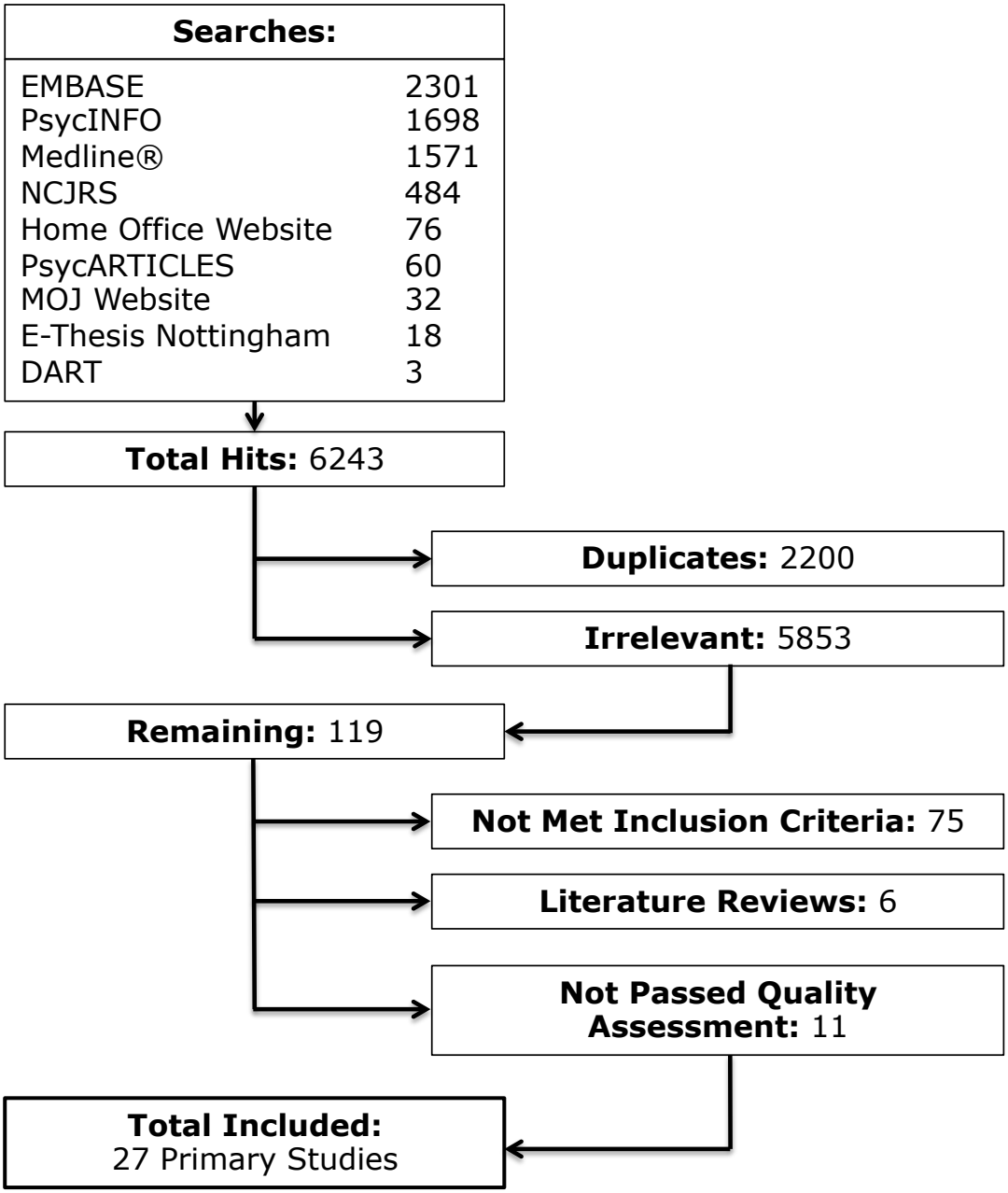


Figure 1. Search and inclusion process. This figure illustrates the process taken from initial search to final inclusion.

Table 3

Final Systematic Review Studies with Research Areas Covered

Study	Mental Health	Substance Misuse	Physical Health
Baksheev et al. (2010)	Yes	Yes	No
Beaufrère and Chariot (2015)	Yes	Yes	Yes
Best et al. (2004)	Yes	Yes	No
Blaauw et al. (1997)	Yes	Yes	Yes
Brooker et al. (2015)	Yes	Yes	Yes
Buster et al. (2014)	Yes	Yes	No
Carter and Mayhew (2009)	Yes	Yes	Yes
Ceelen et al. (2012)	No	Yes	Yes
Chariot et al. (2014)	Yes	Yes	No
Dorn et al. (2014)	Yes	Yes	No
Dorn et al. (2016)	No	Yes	Yes
Greenberg et al. (2002)	Yes	Yes	No
Laidlaw et al. (2010)	Yes	Yes	Yes
Mahindhoratep et al. (2013)	No	Yes	No
McGilloway and Donnelly (2004)	Yes	Yes	No
McKinnon and Grubin (2010)	Yes	Yes	Yes
McKinnon et al. (2013)	Yes	No	No
McKinnon and Grubin (2013)	Yes	Yes	Yes
Ogloff et al. (2011)	Yes	Yes	No
Payne-James et al. (2010)	Yes	Yes	Yes

Riordan et al. (2000)	Yes	Yes	Yes
Sadiq et al. (2011)	Yes	Yes	No
Scott et al. (2006)	Yes	Yes	No
Scott et al. (2009)	Yes	Yes	No
Scott et al. (2016)	Yes	Yes	Yes
Vincent et al. (2015)	Yes	Yes	Yes
Young et al. (2013)	Yes	Yes	No

Mental Health Concerns

Out of the 27 publications included within this review, a total of 24 (88.8%) considered the mental health issues of those detained in police custody. Up to 91% of the sample in two studies (McGilloway & Donnelly, 2004; Scott et al., 2009) were judged to be displaying symptomatology associated with a mental illness whilst detained. The remaining studies include a wide variety of statistical data relating to the mental health of detainees and as a result of this, in addition to assuring the information is reviewed appropriately, the protruding themes have been further divided into sub-sections for this review.

The articles that studied mental health issues used a variety of standardised and non-standardised measures to collect their data, with 16 studies (66.6%) using a minimum of one standardised

measure (Baksheev et al., 2010; Beaufrère & Chariot, 2015; Buster et al., 2014; Chariot et al., 2014; McGilloway & Donnelly, 2004; McKinnon & Grubin, 2010; 2013; McKinnon et al., 2013; Ogloff et al., 2011; Riordan et al., 2000; Sadiq et al., 2011; Scott et al., 2006; 2009; 2016; Vincent et al., 2015; Young et al., 2013). Furthermore, a total of eight studies (33.3%) used a non-standardised health survey as a measure (Brooker et al., 2015; Buster et al., 2014; McGilloway & Donnelly, 2004; Ogloff et al., 2011; Payne-James et al., 2010; Riordan et al., 2000; Scott et al., 2009; 2016).

Use of Mental Health Services

This section will consider the results that relate to those detainees who have previously used mental health services, who are currently engaging with mental health services, and those who were deemed to necessitate immediate use of services. This information and its source are outlined in Table 4, with each section's percentages displayed in descending order.

The culmination of these results from 15 studies (55.5%) shows a considerably high prevalence of past and current usage of mental health and psychiatric services by those who have been detained in police custody. Additionally, three studies reported that 26.7% (Baksheev et al., 2010), 44% (Scott et al., 2006), and 79% (Scott

et al., 2009) of their sample required the current use of psychiatric medication.

Table 4

Detainees and Use of Mental Health Services

Use of Mental Health Service	Study	Percentage of Detainee Sample (n)
History of Mental Health Treatment	Scott et al. (2016)	79 (124)
	Baksheev et al. (2010)	43 (64)
	Payne-James et al. (2010)	7.4 (12)
	Vincent et al. (2015)	6.6 (39)
Previous Admission to a Psychiatric Hospital	McGilloway and Donnelly (2004)	74 (282)
	Riordan et al. (2000)	67 (329)
	Scott et al. (2016)	62 (97)
	Scott et al. (2009)	41 (88)
	Scott et al. (2006)	39 (424)
	Baksheev et al. (2010)	25.4 (38)
	Blaauw et al. (1997)	25 (14)
	Payne-James et al. (2010)	24.4 (41)
	Ogloff et al. (2011)	19.7 (120)
	Vincent et al. (2015)	3.8 (22)
	McKinnon et al. (2013)	3 (7)
	Payne-James et al. (2010)	1.8 (3)
	Beaufrère and Chariot (2015)	1.5 (5)
Registered with a Mental Health Service	Sadiq et al. (2011)	66.7 (30)
	Blaauw et al. (1997)	55 (32)
	Baksheev et al. (2010)	54.8 (82)
	Laidlaw et al. (2010)	22 (40)
Requires Formal	Laidlaw et al. (2010)	33 (61)

Assessment of Mental Health	Greenberg et al. (2002)	32 (57)
	McGilloway and Donnelly (2004)	10 (38)

Mental Illnesses

Out of the 17 publications (62.9%) that evaluated the prevalence of mental health within their research, a total of 14 mental illnesses emerged amongst the various samples of police custody detainees. The three most dominant mental illnesses affecting detained individuals are depression, anxiety, and schizophrenia. This information is presented in Table 5 in descending order.

Table 5

Combined Data from Publications Reporting on Mental Illness Prevalence

Mental Illness	Percentage of Detainees from *N* = 8426 (n)
Depression	11.1 (938)
Anxiety	6.1 (510)
Schizophrenia	3.9 (331)
Psychiatric Disorders	3.9 (329)
Psychosis	3.1 (259)
Somatic Disorders	3 (250)
Personality Disorders	1.1 (94)
Other	0.8 (71)
Neurotic Disorders	0.8 (64)
Chronic Low Mood	0.3 (22)
PTSD	0.2 (20)

Bipolar	0.1 (11)
Delusional Disorder	0.1 (6)
Schizoaffective Disorder	0 (4)
Abnormal Thoughts	0 (3)

Additionally, Best et al. (2004) reported that 44% (n=19) of their sample were recorded as having a history of anxiety or depression. Two sources, Sadiq et al. (2011) and Greenberg et al. (2002), stated that "bizarre behaviour" was displayed amongst 11% (n=5) to 22% (n=39) of their detainee sample.

Suicide

Blaauw et al.'s (1997) study discovered that 34% of deaths that occurred within police custody were the result of completed suicides. A further six studies (seven in total; 25.9%) reported on previous suicide attempts and current suicidal ideation. Table 6 shows that up to 19% of detainees reported having previously attempted suicide with up to 11% currently expressing a desire to complete suicide (McKinnon & Grubin, 2013). When combining the data for the seven studies, 2.2% (n=110) of detainees reported previously attempting suicide, with 1.1% (n=57) expressing thoughts of current suicidal ideation.

Table 6

Percentage of Detainee Sample Reporting Previous Suicide Attempts and Current Suicidal Ideation

Study	Percentage reporting Previous Suicide Attempts (n)	Percentage reporting Current Suicidal Ideation (n)
Beaufrère and Chariot (2015)	0.9 (3)	0*
Dorn et al. (2014)	0.1 (3)	0*
McKinnon and Grubin (2010)	0*	1.9 (6)
McKinnon and Grubin (2013)	19 (45)	11 (26)
McKinnon et al. (2013)	17.7 (44)	10 (25)
Vincent et al. (2015)	2.6 (15)	0*

Note. *No relevant data was provided within this study

Whilst both aspects were reported on in an exclusive manner in the aforementioned studies, Best et al. (2004) and Greenberg et al. (2002) combined 'history of previous suicide attempts' and 'previous self-harm' together, with 27% (n=11) to 35% (n=62) of their samples reporting engagement in either behaviour.

Self-Harm

Within the final included studies, a total of five (18.5%) reported information relating to detainees' self-reports of acts of historical self-harm, with seven studies (37%) covering current acts of self-harm. Table 7 displays all of the data obtained, relevant to self-

harm amongst police custody detainees. It shows that over half (56%, n=609) of the detainees in one study self-reported a history of self-harm (Scott et al., 2006), with similar results (55% of the detainee sample n=102) engaging in current self-harming behaviour (Laidlaw et al., 2010).

Table 7

Percentage of Detainee Sample Reporting Previous and Current Self-Harm

Study	Percentage reporting Historical Self-Harm (n)	Percentage reporting Current Self-Harm (n)
Brooker et al. (2015)	0*	0.9 (1)
Greenberg et al. (2002)	0*	35 (62)
Laidlaw et al. (2010)	0*	55 (102)
McGilloway and Donnelly (2004)	0*	42 (160)
McKinnon and Grubin (2010)	10.7 (33)	0*
Payne-James et al. (2010)	16.7 (28)	0*
Sadiq et al. (2011)	0*	8.9 (4)
Scott et al. (2006)	56 (609)	22 (239)
Scott et al. (2009)	54 (117)	15 (33)
Vincent et al. (2015)	10 (20)	0*

Note. *No relevant data was provided within this study

A total of three studies reported on detainees exhibiting behaviours that are commonly associated with self-harm, with between 10 - 22% demonstrating such behaviours. However, these studies did

not expand on these behaviours, providing no additional information to describe these actions (McGilloway & Donnelly, 2004; Scott et al., 2006; 2009).

When combining the data for the relevant studies, 33.9% (n=807) of detainees reported historically harming themselves, with 27.3% (n=601) expressing current thoughts of self-harm.

Substance Misuse Concerns

A total of 26 (96.3%) out of the 27 final articles included within this systematic review contained results and information relating to the misuse of substances from those detained, or those who have died in police custody. Five out of the 26 studies (19.2%) used specific substance misuse-related standardised measures to collect this data; however, the same measures were not used across these studies (Mahindhoratep et al., 2013; McGilloway & Donnelly, 2004; McKinnon & Grubin, 2013; Scott et al., 2006; 2009). A total of 14 studies (53.8%) used detainee records (Baksheev et al., 2010; Beaufrère & Chariot, 2015; Brooker et al., 2015; Buster et al., 2014; Carter & Mayhew, 2009; Greenberg et al., 2002; Laidlaw et al., 2010; Mahindhoratep et al., 2013; McKinnon & Grubin, 2010; McKinnon & Grubin, 2013; Sadiq et al., 2011; Scott et al., 2006; 2016; Young et al., 2013); 11 (42.3%) used additional reports such as GP and risk assessment paperwork (Best et al., 2004; Blaauw et

al., 1997; Brooker et al., 2015; Ceelen et al., 2012; Greenberg et al., 2002; McKinnon & Grubin, 2010; Ogloff et al., 2011; Riordan et al., 2000; Scott et al., 2006; Vincent et al., 2015; Young et al., 2013); and five (19.2%) obtained substance misuse information via interviews (Baksheev et al., 2010; McGilloway & Donnelly, 2004; McKinnon & Grubin, 2013; Ogloff et al., 2011; Riordan et al., 2000).

The outcome of the included studies demonstrates that detainees have concerns relating to their misuse of substances. Ogloff et al. (2011) reported that 69.7% of their detainee sample was misusing both drugs and alcohol, with a further six studies reporting this concern among 14 – 58.9% of their sample (Blaauw et al., 1997; McGilloway & Donnelly, 2004; McKinnon & Grubin, 2010; Riordan et al., 2000; Sadiq et al., 2011; Scott et al., 2009). Furthermore, Sadiq et al. (2011) reported that 31.3% of their sample were presenting with symptoms associated with intoxication and / or withdrawal from substance misuse; Laidlaw et al. (2010) reported similar findings for 16%; Greenberg et al. (2002) reported 15%; and Dorn et al. (2016) reported 11.1% respectively.

Drugs

A total of six substances were documented as being problematic for detainees: amphetamines, benzodiazepines, cannabis, cocaine,

heroin, and LSD. From the 11 studies (40.7%) that obtained information relating to the misuse of illicit substances, it was identified that cannabis use is the most prevalent amongst detainees (40.69%, n=1725), with LSD the least prevalent (0.2%, n=10). Figures for the misuse of substances are presented in Table 8, in descending order. Additionally, Blaauw et al. (1997) discovered that 5.2% (n=3) of detainees were misusing prescription medication. With regard to treatment for dependency on illicit substances, three studies recorded that 16.9% (n=25) (Baksheev et al., 2010), 11.6% (n=5) (Best et al., 2004), and 2.6% (n=15) (Vincent et al., 2015) were previously or currently receiving opiate substitution therapy.

Table 8

Combined Data from Publications Reporting on the Misuse of Illicit Substances

Illicit Substance	Percentage of Detainees from *N* = 4239 (n)
Cannabis	40.6 (1725)
Cocaine	20.5 (873)
Heroin	12.2 (519)
Amphetamines	1.1 (48)
Benzodiazepines	1.1 (43)
LSD	0.2 (10)

Best et al. (2004) reported that cocaine, heroin, and methadone played significant parts in the deaths of some individuals whilst detained in police custody.

Whilst not considered an illicit substance, although an unhealthy addiction (Benowitz, 2010), between 27.3 - 75% of four study samples reported nicotine dependence (27.3% (n=164), Vincent et al*.,* 2015; 59% (n=205), Beaufrère & Chariot, 2015; 62% (n=620) Chariot et al., 2014; 63.1% (n=106) Payne-James et al., 2010; 75% (n=198) Ceelen et al., 2012).

Alcohol

With regard to the misuse of alcohol, Blaauw et al*.* (1997) reported that a total of 26.3% (n=15) of deaths were caused by fatal consumption of alcoholic substances, with Best et al. (2004) finding that 48.8% (n=21) of persons who died in police custody had consumed alcohol prior to their death. An additional 16 studies (18 in total; 66.6%) reviewed information relating to alcohol misuse. The data obtained from these studies shows that 23% (n=2182) of detainees self-reported that they drink alcohol to an excessive level; 9.6% (n=907) reported regularly drinking alcohol; a total of 5.8% (n=553) drank on a daily basis, and 3.4% (n=320) had received a diagnosis of being alcohol-dependent. Additionally, amongst 11.1 - 56% of detained individuals, the levels of alcohol

consumed were deemed to be harmful (Greenberg et al., 2002; McKinnon & Grubin, 2013; Ogloff et al., 2011; Sadiq et al., 2011; Scott et al., 2006).

Physical Healthcare Concerns

There was a total of 13 studies (48.1%) that reported the physical healthcare needs of those detained in police custody. Physical healthcare needs and concerns include diseases, injuries, physical bodily states, and problems that are not recorded as being directly caused by substance misuse. A total of seven studies (53.8%) used detainee records as a source of data, with four studies (30.7%) using official records to obtain any relevant data, seven studies using self-report information (53.8%), and three studies (23%) using standardised physical healthcare measures. A total of 25 individual healthcare concerns were reported. Table 9 outlines on the data collected from the 13 studies reviewing healthcare needs and presents them in descending order. It reveals that the highest percentage of detainees presented with an injury (8%, n=506), 6.5% (n=410) had hypertension concerns, and 6.4% (n=407) were diabetic.

Table 9

Combined Data from Publications Reporting on Physical Healthcare

Physical Healthcare Concern	Percentage of Detainees from *N* = 6323 (n)
Injury	8 (506)
Hypertension	6.5 (410)
Diabetic	6.4 (407)
Underweight	5.6 (355)
Asthmatic	3.6 (299)
Laceration	1.8 (111)
Serious or Life-Threatening Concern	1.7 (105)
Chest Pains	1 (63)
Sleep	1 (61)
Abdominal	0.9 (59)
Heart Diseases	0.6 (41)
Required Hospital	0.4 (24)
Unable to Rouse	0.4 (23)
Pregnancy	0.4 (23)
Communicable Diseases	0.3 (20)
Epilepsy	0.2 (15)
Gastrointestinal	0.2 (10)
Musculoskeletal	0.1 (9)
Leg Ulcer	0.1 (8)
Organic	0.1 (5)
Breathing Problems	0.1 (4)
Deep Vein Thrombosis	0 (2)
Acute Allergic Reaction	0 (1)

Additionally, a total of 16.7% (n=1056) of detainees reported a diagnosed chronic health condition; however, further details were not provided; and 1.6% (n=101) of detainees reported that they were suffering from general pain.

Additional Healthcare Concerns

Upon reviewing the data from the included studies, further healthcare concerns were reported in addition to the above. These include exhibitions of violent behaviour from the detainees and evidence of learning disabilities[1]. A total of 13 studies (48.1%) included such information in their research (Brooker et al., 2015; Chariot et al., 2014; Greenberg et al., 2002; Laidlaw et al., 2010; McGilloway & Donnelly, 2004; McKinnon & Grubin, 2010; 2013; McKinnon et al., 2013; Sadiq et al., 2011; Scott et al., 2006; 2009; 2016; Young et al., 2013). Table 10 outlines this data showing that up to 66.8% (n=1281) of detainees exhibited some form of violent behaviour; 32.4% (n=358) required medication whilst in custody; 25.4% (n=154) presented with difficulties relating to their reading and / or writing ability; 9.8% (n=50) of detainee's behaviour was consistent with ADHD; and 3.5% (n=55) were considered to have a learning disability.

[1] The terms learning disability and intellectual disability are often used interchangeably. By definition, either term refers to a person with a significant impairment of intellectual functioning, a significant impairment of social functioning, with significant impairment present from childhood (onset during the development period) (Royal College of Psychiatrists, 2014b).

Table 10

Combined Data on Additional Healthcare Needs

Healthcare Concern	Number of Detainees (n)	Combined Sample of Detainees (n)	Percentage (%)
Violent behaviour	1281	1919	66.8
Received medication whilst in custody	358	1106	32.4
Difficulty with reading and / or writing	154	606	25.4
ADHD	50	507	9.8
Learning Disability	55	1545	3.5

Study Quality

All of the studies used similar designs in the execution of their research as their aims were very much the same, i.e. determining the prevalence of various healthcare needs amongst police custody detainees. The studies utilised data available within records both from official authority establishments and personal documentation such as detainee records, GP reports, etc. In addition, further use was made of standardised measures, interviews, and questionnaire surveys to obtain specific healthcare data. Mixtures of samples were used, inclusive of those who had died whilst in police custody, and those who were currently detained. Within the review of the study characteristics, it was revealed that quality standards were

not necessarily dictated by sample, i.e. the top-rated studies differed in their populations. Although, the higher-rated studies in terms of their quality did not place limitations upon their sample, and for a more stringent approach in their data collection used standardised measures. The studies with the highest ratings (40/40) were McGilloway & Donnelly (2004), Ogloff et al. (2011), and Scott et al. (2016). Further methodological considerations including the study design and execution of this were reviewed, to take into consideration the impact that this may have had upon the reliability of the findings.

The studies varied in their sample sizes with the smallest being a sample of 43 (Best et al., 2004) and the largest a sample of 3,496 (Ceelen et al., 2012). Those studies that actively included current detainees had an average of 573 participants, with those reviewing records averaging 512. Findings from studies containing a smaller sample size should be considered with caution, as their findings may not be appropriately translated, therefore reducing the level of generalisability (Button et al., 2013).

Participants from the included studies were recruited in a variety of ways. Whilst all of the participants had, at some point, been arrested and detained in police custody, not all were detained at the time of the research. The majority of the studies did not apply

exclusion criteria with regard to their sample. The most common exclusion criteria being that of age, i.e. participants having to be over the age of 18 years. Whilst some studies chose to focus on specific populations, such as those who had received a S136 assessment, again, no further exclusion criteria were applied. Reducing the number of exclusions allows for the study to be more reflective of the hugely varying population that passes through police custody.

A mixture of retrospective and prospective data were collected within the included studies. Some studies considered historical records of participants whilst others used clinical interviews to obtain current data about individuals upon their detention within police cells. The majority of the data that has been collected within the included studies was been based upon self-reported information. Self-reporting relies on the honesty and introspective ability of those completing the questionnaire. Dishonest, inaccurate, or biased responses could have a considerable impact upon the results interpreted from the data (Austin, Deary, Gibson, McGregor, & Dent, 1998; Hoskin, 2012). Therefore, an element of caution should be applied as good practice (Weiten, 2011). McGilloway and Donnelly's (2004) study was the exception in its explicit attempt to control for biased responding by administering a standardised social desirability measure.

A higher quantity of studies actively considered the limitations of using self-reported data within their methodological design. In an attempt to address this, they incorporated additional resources for their data collection (such as detainee records, official databases, etc.), so as not to solely rely on self-reported information. For example, McGilloway and Donnelly (2004) and McKinnon and Grubin (2013) used a battery of mental health assessments in combination with reviewing detainee records; Sadiq et al. (2011) reviewed assessments completed by FMEs and mental health practitioners.

The quality of the outcome measures is also a critical aspect in determining overall study quality, as it directly impacts upon the reliability and validity of the studies' findings. The multiplicity of the measures being used amongst the included studies introduces complexities when making direct comparisons between studies. In addition, the use of non-standardised measures decreases the ability to replicate or generalise outwards. This is due to there being little or no process carried out to determine if that measure could produce accurate results amongst another sample.

Reviewing the clinical construct of generalisability is essential for studies with results that can aid in developing quality of care for a wider target population. Evaluating generalisability begins with the

sample selection, incorporates the inclusion and exclusion criteria, and is concluded with inferences from obtained results (Kukull & Ganguli, 2012). By placing restrictions upon those to be included within the study, in addition to the healthcare needs that are to be measured and reviewed, this subsequently reduces the level of generalisability. With a diverse detainee population in police custody, it would be ideal for the study sample to be similar in nature. A total of six studies (22.2%) did not apply any exclusion criteria when recruiting for their sample, with the remaining 21 studies (77.8%) restricting their sample according to various factors including age, behaviour, and language ability. Additionally, 20 studies (74.1%) did not apply any restrictions upon the healthcare needs they examined, with seven studies (25.9%) including limitations. For example, restricting their review of healthcare needs to psychological concerns or those who misuse substances. However, by specifying a sample and providing clarity regarding the healthcare concerns included, the study can apply the 'sample to population' generalisation model (Firestone, 1993; Polit & Beck, 2010).

With the research only recently expanding in the unique environment of police custody and its unparalleled population, the quality of the studies within this review was partly dictated by the feature of a control or comparison group. Such a characteristic

reduces bias and discrimination (Foulkes, 2008), in addition to providing valuable parameters to guide practice amongst a population that can essentially belong to both a community sample and one of incarcerated offenders. A total of ten (37%) of the included studies did not include a comparison or control group, with the remaining 17 (63%) either using internal comparison groups, or comparing the police custody sample with the general population.

There are numerous confounding variables in any study or research project conducted (Pourhoseingholi, Baghestani, & Vahedi, 2012), and the included studies provided evidence acknowledging this. These additional variables varied from study to study, although greater consideration was given to the reason for arrest, criminal history, social circumstances, and mental health history. The majority of studies also acknowledged further confounding variables such as gender, age, ethnicity, and the specific assessments that took place whilst detained.

Table 11 shows the quality assessment and final quality scores of the included studies. The studies have been arranged into descending order of overall quality rating (i.e. the better-quality research is presented first).

Table 11

Quality of Studies Exploring Healthcare Needs of Police Custody Detainees

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
McGilloway, S. & Donnelly, M. (2004) UK	Sampling methods were appropriate. There were no exclusions regarding the recruitment of participants.	A battery of several mental health assessments was used. Detainee records were searched. No limitations were placed upon the healthcare needs reviewed.	A comparison group was included: attenders and non-attenders. Measures were taken to control for confounding variables.	Missing data were included.	Appropriate analysis was used and the results were displayed clearly throughout.	Threshold: 6 / 6 Unclear: 0 / 16
Score: Bias:	8 / 8 Low	16 / 16 Low	10 / 10 Low			Total: 40 / 40 High Quality

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
Ogloff, J., Warren, L., Tye, C., Blaher, F., & Thomas, S. (2011) Australia	Sampling methods were appropriate: included convenience sampling. There were no exclusions regarding the population.	Standardised assessments were used to collect healthcare information. Detainee records were searched. No limitations were placed upon the healthcare needs being reviewed.	Comparison groups were included. Aspects of controlling for confounding variables displayed in statistical analyses.	Missing data were included.	The statistical analyses used were appropriate. Results were displayed clearly throughout.	Threshold: 6 / 6 Unclear: 0 / 16
Score: Bias:	8 / 8 Low	16 / 16 Low	10 / 10 Low			Total: 40 / 40 High Quality
Scott, D., McGilloway, S., & Donnelly,	Sampling methods followed a prospective	A battery of several standardised measures was	A comparison group was included: data from another	Missing data were included.	Appropriate analyses were used and the	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
M. (2016) UK	follow-up design. There were no exclusions regarding the recruitment of participants.	used. Detainee records were searched. No limitations were placed upon the healthcare needs reviewed.	police station without the service. Measures were taken to control for confounding variables.		results were displayed clearly throughout.	
Score: Bias:	8 / 8 Low	16 / 16 Low	10 / 10 Low			Total: 40 / 40 High Quality
Beaufrère, A. & Chariot, P. (2015) France	Sampling method was appropriate. Sample restricted to those over the age of 60. No further	Data was collected via a standardised questionnaire. Medical history and medical examination records	A comparison group included: those 60 and above were compared to arrestees under 60.	Missing data were not included; although, patterns were examined and acknowledged.	Appropriate analyses were used and the results were displayed clearly throughout.	Threshold: 6 / 6 Unclear: 1 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
	exclusions.	reviewed. No limitations were placed upon the healthcare needs reviewed.	Information unknown regarding confounding variables.			
Score: Bias:	6 / 8 Low	16 / 16 Low	8 / 10 Low			Total: 36 / 40 High Quality
Ceelen, M., Dorn, T., Buster, M., Stirbu, I., Donker, G., & Das, K. (2012) The Netherlands	Sampling method was appropriate and used randomisation. No exclusions were placed upon the sample.	No standardised measures were used. Data collected via a Public Health database and an interview / health survey was conducted; however, this was not informed or	Control group was included. Evidence to suggest that there was adjustment for some confounding variables.	No mention of handling missing data.	Statistical analyses were appropriate and the results were displayed clearly within the text and in tabular format.	Threshold: 6 / 6 Unclear: 1 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
		established by a Health Authority. Detainee records were searched. No limitations were placed upon the healthcare needs considered.				
Score: Bias:	8 / 8 Low	12 / 16 Low	8 / 10 Low			Total: 34 / 40 High Quality
Baksheev, G.N., Thomas, S.D.M., & Ogloff, J.R.P.	Convenience sampling from two police stations. Age	Standardised measures were used: Structured Clinical Interview and	Control and comparison groups were included. Evidence of	Missing data was not included but acknowledged.	Appropriate statistical analyses were used and the results were	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
(2010) Australia	restrictions were in place, as well as time spent in custody required to be over 12 hours. Those who were intoxicated were not included within the study.	Camberwell Assessment of Need. Detainee records were searched. Few limitations were placed upon healthcare needs reviewed: somatoform and personality disorders were excluded.	the inclusion of statistical adjustment controlling for confounding variables.		displayed clearly throughout.	
Score: Bias:	3 / 8 High	14 / 16 Low	10 / 10 Low			Total: 33 / 40 High Quality
Best, D., Havis, S., Strathdee, G., Keaney,	Sampling method was appropriate.	Standardised measures were not used to obtain data.	The study used internal comparison groups.	Lack of clarity regarding missing data.	The statistical analyses were	Threshold: 6 / 6 Unclear: 1 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
F., Manning, V., & Strang, J. (2004) UK	Only deaths that had been supervised by the Police Authority and involving drugs were considered. No further exclusions were applied within the sample.	No limits were placed upon healthcare needs. Information obtained from official report records and correspondence with relevant staffs informed the data collected.	Evidence to suggest that the report considered confounding variables.		descriptive in nature. The results were displayed clearly throughout.	
Score: Bias:	7 / 8 Low	12 / 16 Low	8 / 10 Low			Total: 33 / 40 High Quality
McKinnon, I. & Grubin, D. (2013)	Sampling methods were appropriate and there were no exclusions regarding	A battery of standardised assessments was used to collect healthcare	Comparison groups were included. Evidence of analyses	Missing data was acknowledged, but a lack of clarity on its handling.	The statistical analyses used were appropriate for the data	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
UK	gender or age. Those who were deemed too high risk were not assessed. Individuals who could not provide informed consent, nor possessed an adequate grasp of the English language were automatically excluded.	information. Healthcare needs were assessed more than once and detainee records were searched. Limitations were placed upon healthcare needs to be reviewed, after focus group results.	accounting for confounding variables.		and results were displayed clearly.	
Score: Bias:	6 / 8 Low	12 / 16 Low	9 / 10 Low			Total: 33 / 40 High Quality

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
Brooker, C., Tocque, K., Mitchell, D., & Pearce, M. (2015) UK	Sampling methods were appropriate with no exclusions regarding those to be included within the sample.	Minutes of meetings, a semi-structured interview, and a questionnaire were used to obtain healthcare-related information. Detainee records were reviewed.	No comparison or control group was included. There was no clear information regarding statistical adjustments for confounding variables.	Lack of clarity regarding missing data.	The statistical analyses used were appropriate for the data and results were displayed clearly with tables and graphs.	Threshold: 6 / 6 Unclear: 2 / 16
Score: Bias:	8 / 8 Low	14 / 16 Low	4 / 10 Medium			Total: 32/ 40 High Quality
Buster, M., Dorn, T., Ceelen, M., & Das, K. (2014)	Sampling methods were appropriate with no exclusions regarding	Healthcare information obtained from official databases relating to the	No comparison or control group was included. There was no	Lack of clarity regarding missing data.	The statistical analyses used were appropriate for the data	Threshold: 6 / 6 Unclear: 2 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
The Netherlands	those to be included within the sample.	police and forensic medicine. In addition, interview data obtained. Detainee records were searched.	clear information regarding statistical adjustments for confounding variables.		and results were displayed clearly with tables.	
Score: Bias:	8 / 8 Low	14 / 16 Low	4 / 10 Medium			Total: 32/ 40 High Quality
Laidlaw, J., Pugh, D., Riley, G., & Hovey, N. (2010) UK	Sampling method was appropriate. Only detainees who had been assessed under S136 were included. No further	No standardised measures were used, although data was collected from official sources, i.e. police records and NHS database.	Comparison groups were included. Evidence to show confounding variables were considered.	Missing data were included within the study.	Statistical analyses were descriptive in nature. Results were displayed in an appropriate	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
	exclusions were applied.	Detainee records were searched. There were no limitations placed upon the healthcare needs to be reviewed.			and clear manner.	
Score: Bias:	7 / 8 Low	10 / 16 Medium	9 / 10 Low			Total: 32 / 40 High Quality
McKinnon, I., Srivastava, S., Kaler, G., & Grubin, D. (2013) UK	Prevalence data was obtained from an unselected cohort. Detainees were required to be over the age of 18.	Standardised measures were used to obtain healthcare data. Detainee records were searched. The study focused on psychiatric	A comparison group was included: sample compared to police screen. No evidence of accounting for potentially	No clarity on how missing data was handled.	Statistical analyses were descriptive in nature. Results were displayed in an appropriate	Threshold: 6 / 6 Unclear: 1 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
		morbidity.	confounding variables.		and clear manner.	
Score: Bias:	6 / 8 Low	14 / 16 Low	6 / 10 Medium			Total: 32 / 40 High Quality
Scott, D., McGilloway, S., & Donnelly, M. (2009) UK	Database screening combined with specific inclusion criteria led to the inclusion of participants: female, with evidence for mental health and / or learning difficulty. No further restrictions on age.	Several standardised assessments were used to collect healthcare needs, supplementing information obtained from a questionnaire. Detainee records were screened. No limitations were placed upon healthcare	No comparison or control group was included. Evidence of measures taken to account for potentially confounding variables.	Missing data were included.	Appropriate statistical analyses were used, with results displayed clearly within the text and in tables.	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes needs reviewed.	Confounding variables	Missing data	Other queries	Quality assessment
Score: Bias:	4 / 8 Medium	16 / 16 Low	6 / 10 Medium			Total: 32 / 40 High Quality
Carter, J. & Mayhew, J. (2009) UK	The sampling method was appropriate for the research needs. Only those individuals who had been transferred to hospital from police custody were included. No further exclusions were made.	No standardised measures were used. Data was collected via electronic searching amongst a custody record system, with custody records were examined retrospectively. No limitations were placed	Comparison groups were included: inclusive of different time categories of transfers to hospital. Evidence to suggest adjustments were considered for potentially confounding variables.	Missing data were excluded.	The statistical analyses were descriptive in nature. The results were displayed clearly within the text in addition to graphs.	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes upon the healthcare needs considered.	Confounding variables	Missing data	Other queries	Quality assessment
Score: Bias:	7 / 8 Low	8 / 16 Medium	10 / 10 Low			Total: 31 / 40 High Quality
McKinnon, I. & Grubin, D. (2010) UK	Sampling methods were appropriate. Only those who had been examined by an FME after entering police custody were included. No further restrictions were applied.	Data was collected from resources using standardised measures. Detainee records were searched. No limitations were placed upon healthcare needs reviewed.	Two comparison groups were included: data collected from FME and data from police records. No evidence of accounting for potentially confounding variables.	A lack of clarity on how missing data were handled.	Appropriate analysis was used and the results were displayed clearly within the article.	Threshold: 6 / 6 Unclear: 1 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
Score: Bias:	6 / 8 Low	14 / 16 Low	5 / 10 Medium			Total: 31 / 40 High Quality
Scott, D., McGilloway, S., & Donnelly, M. (2006) UK	Sampling methods were appropriate. Custody records showing evidence of possible mental illness or learning disability were included. No further exclusions were applied.	Standardised assessments were used to collect further information regarding healthcare needs. Detainee records were screened, but not utilised to obtain information. No limitations were placed upon healthcare needs reviewed.	No comparison or control group was included. No statistical adjustments or evidence presented for the controlling of possible confounding variables.	Missing data were addressed and included.	Statistical analyses were descriptive in nature and presented clearly in the text, with one table.	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
Score: Bias:	7 / 8 Low	12 / 16 Low	6 / 10 Medium			Total: 31 / 40 High Quality
Greenberg, N., Lloyd, K., O'Brien, C., McIver, S., Hessford, A., & Donovan, M. (2002) UK	Sampling methods were appropriate. Only those who had been assessed under S136 upon arrest were included. No further exclusions were applied.	No standardised assessment was used, although the information obtained was retrieved from a standardised measure for data collection. Detainee records were searched. No limitations were placed upon healthcare needs.	Comparison groups were included, in addition to the prevalence of an overall population. Measures were taken to control for potential confounding variables.	Lack of clarity regarding missing data.	Statistical analyses were appropriate. Results were displayed clearly throughout.	Threshold: 6 /6 Unclear: 1 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
Score: Bias:	7 / 8 Low	10 / 16 Medium	7 / 10 Medium			Total: 30 / 40 High Quality
Mahindhoratep, T.S., Lepresle, A., Chiadmi, F., Schlatter, J., Boraud, C., & Chariot, P. (2013) France	Sampling method was appropriate. Only those who were proved, or suspected of, driving under the influence were included. Detainees were required to be over the age of 18. Those who refused to provide samples (urine	Standardised assessments were used to collect healthcare information. Detainee records were not searched. Partial limitations were placed upon the healthcare needs reviewed. The study only included the evaluation of addictive disorders and	Three groups in total for comparison with one control group. Evidence that a variety of confounding variables were accounted for.	Missing data were removed.	Appropriate statistical analyses were used and the results were displayed clearly throughout the article.	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
	or blood) to the police were not included in the study.	global health indicators.				
Score: Bias:	4 / 8 Medium	10 / 16 Medium	10 / 10 Low			Total: 30 / 40 High Quality
Young, S., Goodwin, E. J., Sedgwick, O., & Gudjonsson, G. H. (2013) UK	Convenience sampling utilised. Exclusions included detainees that were intoxicated and / or violent.	Standardised measures were used to obtain information relating to detainee healthcare needs. Detainee records were reviewed. Healthcare needs were limited to ADHD	No comparison or control group was used. Statistics did not adjust for confounding variables.	Missing data were acknowledged but no information regarding its handling was provided.	Appropriate statistical analyses were used and the results were displayed clearly throughout the article.	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes and learning disabilities.	Confounding variables	Missing data	Other queries	Quality assessment
Score: Bias:	6 / 8 Low	13 / 16 Low	4 / 10 Medium			Total: 29 / 40 Medium Quality
Riordan, S., Wix, S., Kenney-Herbert, J., & Humphreys, M. (2000) UK	Sampling methods were appropriate. Only those detainees who had been referred to the DAPA scheme were included.	A standardised profile form was completed post-interview, with additional information from Psychiatric Assessment forms. Detainee records were not reviewed.	A comparison or control group was not included. The publication did not confirm if any statistics had adjusted for potential confounding variables.	Lack of clarity regarding missing data.	The analyses were descriptive in nature and appeared appropriate for the data collected. The results were displayed clearly.	Threshold: 6 / 6 Unclear: 2 / 16
Score: Bias:	7 / 8 Low	12 / 16 Low	4 / 10 Medium			Total: 28 / 40 Medium Quality

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
Chariot, P., Lepresle, A., Lefevre, T., Boraud, C., Barthes, A., & Tedlaouti, M. (2014) France	The study followed a prospective design. Individuals were required to be 15 years or older. Only those detainees who had received a 'fitness for detention' examination were included. Excluded patients who had insufficient knowledge of French or English and / or displayed	Standardised questionnaire was used for the medical examination. Detainee records were not searched. Healthcare needs were limited to substance misuse.	A comparison or control group was not included. Evidence stating that the statistics used adjusted for any confounding variables.	Missing data was dealt with appropriately.	Analyses were appropriate for the data presented. Results were presented clearly within the text and within tabular format.	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
	aggressive or threatening behaviour.					
Score: Bias:	5 / 8 Medium	8 / 16 Medium	8 / 10 Low			Total: 27 / 40 Medium Quality
Sadiq, K.T., Moghal, A., & Mahadun, P. (2011) UK	Sampling methods were appropriate. The sample only contained those who had been assessed under S136. No further exclusions were put into place.	No standardised measures were used to collect healthcare needs data, although pro-forma informed by Standards of Practice was used to collect data retrospectively. Detainee records were searched.	No control or comparison group included. Evidence to suggest that confounding variables were considered.	No clarity on how missing data were handled.	Statistical analyses were appropriate. Descriptive in nature. Results presented in a clear and appropriate manner.	Threshold: 6 / 6 Unclear: 1 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
Score: Bias:	7 / 8 Low	8 / 16 Medium	6 / 10 Medium			Total: 27 / 40 Medium Quality
Vincent, R., Beaufrère, A., & Chariot, P. (2015) France	A retrospective analysis of data collected by a forensic physician. Detainees are to be aged 13 or older. Only inclusive of those who had been arrested for the first time and whom a physician had examined.	Information obtained from a medical examination that utilised a standardised questionnaire. Detainee records were not searched.	Both a comparison and a control group were included. The publication did not confirm if any statistics had adjusted for potential confounding variables.	Missing data were not included.	Statistical analyses were appropriate. Results were displayed clearly throughout the publication.	Threshold: 6 / 6 Unclear: 1 / 16
Score: Bias:	5 /8 Medium	8 / 16 Medium	8 / 10 Low			Total: 27 / 40 Medium Quality

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
Dorn, T., Ceelen, M., Buster, M., Stirbu I., Donker, G., & Das, K. (2014) The Netherlands	Sampling was appropriate. Data collected from official databases. Only consultations including psychological information.	Standardised measures used to obtain data. Detainee records were not reviewed. Healthcare needs were limited to psychological concerns.	Comparison group included. Statistics adjust for confounding variables.	It is unknown if missing data has been dealt with appropriately.	Statistical analyses were appropriate. The results were displayed clearly throughout.	Threshold: 6 / 6 Unclear: 1 / 6
Score: Bias:	5 / 8 Medium	6 / 16 High	8 / 10 Low			Total: 25 / 30 Medium Quality
Blaauw, E., Kerkhof, A. & Vermunt R. (1997)	Sampling was appropriate. The sample only included records of	Standardised measures were not used. Only one method of data	Comparison groups were included. Evidence of controlling for	No specificities were reported regarding missing data.	One-way analysis of variance was appropriate. Results were	Threshold: 6 / 6 Unclear: 1 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
The Netherlands	those individuals who had passed through custody and were now deceased, although no further exclusions were put into place.	collection was used (review of reports from an Independent Investigation establishment). Detainee records were not searched. No limitations were placed upon the healthcare needs reports.	confounding variables.		clearly displayed throughout.	
Score: Bias:	8 / 8 Low	4 / 16 High	8 / 10 Low			Total: 24 / 40 Medium Quality
Dorn, T., Janssen, A., de Keijzer, J. C., van Rijkzwikker,	Sampling was appropriate. Only those requiring	Data collected from an electronic database. No use of	Comparison or control groups were not included.	Exploration for missing data was carried out.	Statistical analyses were appropriate.	Threshold: 6 / 6 Unclear: 0 / 16

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
G. L., Reijnders, U. J. L., Luitse, J. S. K., Vandewalle, E., Gorzeman, M. P., van Nieuwenhuizen, R. C., Ceelen, M., & Das, C. (2016) The Netherlands	hospital treatments were included. Reviews of referrals that were initiated by forensic physicians and nurses only.	standardised measures. Detainee records were not reviewed.	Partial evidence of controlling for confounding variables.		Results were displayed clearly avoiding reporting bias.	
Score: Bias:	6 / 8 Low	6 / 16 High	6 / 10 Medium			Total: 24 / 40 Medium Quality
Payne-James, J. J.,	Sampling was appropriate.	Standardised measures were	Comparison or control groups	No specificities were reported	Statistical analyses	Threshold: 6 / 6

Study	Sampling and selection	Measurement bias for outcomes	Confounding variables	Missing data	Other queries	Quality assessment
Green, P. G., Green, N., McLachlan, G. M. C., Munro, M. H. W. M., & Moore, T. C. B. (2010)	Sample only included those who were seen by an FME. Excluded detainees below the age of 16.	not used. Detainee records were not searched. No limitations were placed upon the exploration of healthcare needs.	were not included. The publication did not confirm if any statistics had adjusted for potential confounding variables.	regarding missing data.	were appropriate. Results were displayed clearly avoiding reporting bias.	Unclear: 2 / 16
UK Score: Bias:	6 / 8 Low	4 / 16 High	4 / 10 Medium			Total: 20 / 40 Medium Quality

DISCUSSION

This systematic review aimed to evaluate the healthcare needs and concerns of those detained within police custody. The final 27 studies included revealed that up to 79% of detainees had a history of mental health treatment; up to 74% had previously been admitted to a psychiatric hospital; up to 66.7% were currently registered with a mental health service; and up to 33% required a formal assessment of their current mental health state whilst detained. Such figures highlight that mental health concerns have a considerable presence amongst police custody detainees. This corroborates recent findings from Rekrut-Lapa and Lapa (2014), whose accumulative search of current literature also indicated a high prevalence. The systematic review presented in this chapter revealed that depression, anxiety, and schizophrenia were shown to be the most common mental illnesses amongst police custody detainees. In comparison to these findings, the Survey of Mental Health and Wellbeing (McManus, Bebbington, Jenkins, & Brugha, 2016) identified that amongst the general population in England: 4.7% of people are diagnosed with anxiety; 2.6% are diagnosed with depression; and 1% are diagnosed with schizophrenia. Additionally, the Prison Reform Trust (2016) assessed that anxiety and depression are the most common mental illnesses amongst those in prison custody. The police custody population and their

associated mental health concerns are reflective of both the prison and community populations; this would be appropriate given the context of police custody. Furthermore, the high occurrence of mental health problems is somewhat expected, given the extensive research supporting a link between mental illness and criminal behaviour (Hodgins, Mednick, Brennan, Schulsinger, & Engberg, 1996; Marzuk, 1996). However, the broader social context of such a link should always be taken into consideration (Draine, Salzer, Culhane, & Hadley, 2002).

Up to 56% of detainees self-reported a history of self-harm; 55% commented that they are actively engaging in self-injurious behaviours; and up to 22% exhibited behaviours associated with self-harm whilst detained. Studies have identified that detention in police custody can exacerbate and increase the risk of self-harm, with these incidents commonly occurring during the earlier hours of detention and during prolonged periods (over six hours; Association of Chief Police Officers, 2006; Cummins, 2008). The police take many precautions (HM Government, 1984) to provide safeguards for vulnerable detainees (Cummins, 2008), with the view of reducing incidents of self-harm in cells. However, Cummins (2008) concluded that the provisions available require further development to adequately deal with the presenting mental health concerns.

With a confirmed high prevalence of mental illnesses amongst police custody detainees (via literature exploration and this systematic review of primary studies), the co-operation of the police and local mental health services is essential in providing appropriate support to those who require it (Rekrut-Lapa & Lapa, 2014). This is also in line with the recommendations and conclusions from Cummins' (2008) research. One of the dominating factors that can facilitate this support is the economic status and availability of funding within the local community. The Association of Police and Crime Commissioners (2015) report an acknowledgement and recognition of required budget cuts in order for the police service to play their part in reducing public spending. This will lead to changes in the police service's structure and role, which could impact on the local service provided. With an additional amount of funding leading to a roll out of L&D services within police custody suites across England, this could relieve some pressure from the police and the local services. Whilst this specific expansion will provide services to the areas in most need, coverage across all forces is subject to further evaluation (DoH, 2016). Furthermore, with a current plan to cut the budget spending that goes towards general mental health services across the UK (Gibbons, 2016), this creates additional difficulties. Although the L&D services can provide elements of mental health support to a detainee during their detention, one aspect of their role is to divert the need (post-custody) towards

appropriate care that is often provided by services within the local area. This can include access to crisis services, counselling, psychological services, and outreach teams. Such services may receive an influx in referrals due to the increase of L&D teams that are subsequently identifying mental health concerns.

The misuse of substances is also a major health concern, with up to 69.7% of detainees misusing a combination of illicit drugs and alcohol, both of which are often directly related to the initial arrest (Rekrut-Lapa & Lapa, 2014). Up to 31.3% of the samples in the included studies presented with symptoms associated with intoxication and / or withdrawal. These induced states can increase the difficulty in administering treatment due to a potential absence of understanding from the detainee and the increased likelihood of exhibited unpredictable behaviours. With a reported 56% of detainees consuming alcohol at harmful levels, it suggests that this healthcare concern is not one to be ignored. According to the Crime Survey for England and Wales, offenders under the influence of alcohol accounted for 53% of the violent offences committed between 2013-14 (Office for National Statistics, 2015). Cannabis was the most popular drug of choice amongst detainees, with up to 40.6% reporting recent use of the drug. This is reflective of the usage amongst England and Wales' adult general population, with

just under 33% previously using cannabis (Office for National Statistics, 2017). There is evidence to suggest that the frequency of cannabis use is significantly associated with the use of other illicit substances (DeSimone, 1998; Fergusson, Boden, & Horwood, 2006; Kandel & Yamaguchi, 1993). Additionally, the misuse of prescription medication was observed within 5.2% of Blaauw et al.'s (1997) study, similarly observed within 7.5% of the population questioned as part of the Crime Survey of England and Wales (Home Office, 2016b). The identification of detainees misusing substances would allow for the implementation of early intervention opportunities, subsequently targeting additional risk factors that are associated with both the misuse of illicit drugs including cannabis, in addition to the misuse of prescription medication.

The majority of the physical healthcare concerns identified amongst detainees would require long-term treatment and management; including heart disease, gastrointestinal, and musculoskeletal problems. The three most prevalent physical healthcare concerns identified include injuries, hypertension, and diabetes. Injuries caused by the police during the arrest procedure, or self-inflicted by the detainee, may require immediate treatment. This treatment could be facilitated in custody by medical practitioners, or may necessitate hospital treatment. Both options require an increase in

staff and resources to be adequately carried out. Health concerns such as diabetes require specific medication (Diabetes UK, 2016) and according to medico-legal guidelines presented by the Faculty of Forensic and Legal Medicine (2016):

> sufficient medication should be prescribed, where appropriate and possible, to last until such time as the prescriber considers the detainee to require further clinical review by a forensic physician, or other healthcare professional, or is due to leave police custody.

Studies reviewing those with learning disabilities identified that approximately 3.5% had a pre-existing diagnosis. Scott et al. (2009) reported that these detainees did not have the majority of their healthcare needs met and that this impacted negatively upon their rates of recidivism (Rekrupt-Lapa & Lapa, 2014). Reasons for this influence may be investigated in future research; however, at this time, highlight a potential area for improvement in communications between appropriate adults, the police, and any available healthcare teams within custody. Additionally, 25.4% of detainees were shown to have difficulties with reading and / or writing. They may also require the support of the aforementioned services to ensure their understanding of the various processes carried out within police custody.

Information relating to healthcare needs can be obtained via risk assessment and / or via observational assessment should the detainee not wish to respond to this process. The NSPIS risk assessment is carried out by a custody officer when a detainee arrives into police custody. It includes information about a detainee's general wellbeing, their mental health needs, risk of self-harm and / or suicide, and physical health. Furthermore, they assist officers in their decision-making when considering appropriate levels of observations and intervention for a detainee. The final decisions are based upon forecasted levels of harm to individuals, the public, other detainees, or property (HMIC, 2015). The data obtained is largely based upon self-report information with minimal opportunity for extended dialogue. Additionally, recent reviews identified considerable discrepancies in the quality of the completed risk assessment (Adebowale, 2013; McKinnon & Grubin, 2014). Although not specifically reviewing the NSPIS risk assessment, Baksheev et al.'s (2012) review of psychiatric disorders and unmet needs in Australian police cells recognised that such tools may result in high false negative rates, particularly in relation to the identification of mental disorders. Due to the differences in national context between studies, caution should be applied if making direct comparisons. However, they do highlight that in similar environments, i.e. police custody, tools used to identify healthcare needs require review.

McKinnon and Grubin (2014) reported that these risk assessments are not clinically relevant, and it has been identified that officers are conducting them with minimal or no awareness training relating to the healthcare needs identified. Acknowledging the results from this systematic review, i.e. the high prevalence of mental illnesses, substance misuse and various physical health concerns, adaptations to the current risk assessment may support more appropriate referrals and an increase in the identification levels of such concerns (McKinnon & Grubin, 2014). McKinnon and Grubin (2014) successfully demonstrated that a redesigned assessment improves the rates of detection of health morbidity. Whilst there is evidence supporting an enhanced risk assessment, the feasibility of implementing this raises many questions, of which future research may provide the answers. Challenges of implementation include the knowledge and skill level of those administering the measure and similarly, their ability to interpret the outcome of the measure. Familiarisation and bespoke training can aid in supporting these actions, in addition to reducing the overall administration time (McKinnon & Grubin, 2014). The benefits of this systematic review reveal the importance of taking into consideration the healthcare needs of detainees, with recent publications emphasising the deleterious effect of the police custody environment, particularly for those individuals with such needs.

Overall Completeness and Applicability of Evidence

Overall, the included studies positively addressed the primary aim of this systematic review. The aim was achieved by ensuring that all included studies contained samples of individuals that had been detained in police custody, even if they were later transferred to hospital. Furthermore, a range of outcomes that were related to an individual's health, whether that be mental health, physical health, or the misuse of substances, were reviewed. The evidence obtained from the studies is highly relevant to the initial objective of this review: providing vital descriptive and statistical information to aid and enhance current practices within police custody. This review has achieved the systematic compilation of results from 27 studies, extending the external validity of the original projects. A plethora of statistical evidence demonstrates the considerable presence of outstanding (and likely untreated) healthcare needs amongst those who are detained. This review supports the theoretical and practical indications that there are higher rates of illness amongst such a population, with subsequent indications of the presence of complex needs and ongoing difficulties. It may be suggested that there is a lack of acknowledgement that the custody environment can act as a trigger in exacerbating such illnesses. Concurrently, there may also be an absence of recognition for the potential to engage individuals with far-reaching complexities in treatment,

whilst detained. In current practice, some police forces complete the NSPIS risk assessment and query self-reported healthcare issues. Empirical studies have described that attempting to obtain such information via current routine screening methods can result in both high false negative rates, in addition to failing to identify substantial amounts of morbidity (Baksheev et al., 2012; McKinnon & Grubin, 2014). The evidence supplied by the included studies can support changes in practice by implementing optimal treatment strategies in a uniquely challenging environment. Recommendations on practical and research levels will be presented below.

Quality of the Evidence

All but one of the studies included in this review were above the desired minimum quality score that was pre-defined prior to the reviewing process. Initially, the inclusion and exclusion criteria remained relatively broad, with the view of attempting to gather as much relevant evidence as possible, as the scoping exercise identified a scarcity in such research. Obtaining the relevant data to achieve the desired aims was completed, although not without limitations. A minority of studies were selective in their sample, i.e. only assessing S136 cases, however, the results of these studies

are still able to considerably contribute to this systematic review by producing evidence that supports a proportion of the police custody population. Further limitations include the restricted samples obtained via actively acquiring data from detainees. The detainees who consented to take part may have different healthcare needs from those who declined, therefore introducing an element of bias. Even when it is records that are searched (either active or historical), there is a reliance upon the quality of these records and a dependency upon the accuracy of the diagnostics they contain. Whilst a minority of studies placed restrictions upon the healthcare needs they were reviewing, the majority reviewed mental, and physical health, in addition to substance misuse, retaining the key areas of interest. The use of non-standardised measures may contribute to a level of measurement bias; however, it was reported that some standardised measures were timely in their administration, restricting what could be measured. All statistical analyses were appropriate for the studies conducted. They were largely descriptive in nature, but further analyses did not contribute to a reduction in quality, or introduce additional biases.

Potential Biases in the Overview Process

This review attempted to use a comprehensive, thorough, and systematic search strategy to ensure that all relevant publications relating to the topic of interest were included. All efforts were completed to ensure relevant publications were included, with both published and unpublished articles sought to reduce publication bias. As previously discussed, research regarding police custody is largely geographically contained, with the results often obtained from one police station, in one county. This method of data collection may present a natural bias with research being selective, reducing the factor of generalisability. The results from each singular piece of research are essentially only reflective of that police custody suite. It has only been via the systematic approach that the accumulation of this data has provided an overall picture of the healthcare needs of police custody detainees. However, this systematic process does not take into consideration confounding variables. Multi-site research would be a viable option to overcome this bias, although brings with it additional challenges. Such a research project would likely require additional time and resources to carry out. Furthermore, it would require all forces included holding a consensus in relation to their goals. Preparation and advice should be provided on how staff should conduct their duties and it may require the development and conduction of a training

package to ensure consistency in the completion of assessments. Consideration has to be given towards the disruption a research project could cause within a custody suite and their daily proceedings.

RECOMMENDATIONS

Practical

From the results within the included studies it would appear that a standardised measure that is quick to administer, that covers a wide range of healthcare needs to suit all those entering custody, and that can suitably inform a plan of action whilst the individual is detained would be of considerable value for both the police, and the detainee and their needs. This measure should allow for a combination of self-reported information, providing the detainee with the opportunity to contribute to their treatment, in addition to supplementing this with official documentation and / or reports (both active and historical) where appropriate. It is recommended that this measure be completed concurrently, or introduced within the police's mandatory risk assessment, and administered upon the detainee's arrival into custody. The combination of research evidence and the implementation of such a measure would allow police forces to prepare, i.e. having a supply of relevant medication readily available at the police station, and execute more effective information exchanges between agencies. This would all be with the view of reducing risk and minimising distress and to further focus on the custody and impending legal proceedings. Police custody staff have not always received awareness training (particularly in mental health) and so are often unable to recognise

symptomatology and presentations of common healthcare needs, subsequently leading to a delay in treatment. The identification of healthcare needs, as has been completed in this review, can inform the training of police staff and civilian staff in custody suites.

Research

Other studies that have a greater inclusion of the general population that arrive into police custody would be valuable, again with the view of providing a more generalisable overview of healthcare needs and issues. Valuable follow-up research would include piloting a standardised healthcare measure, inclusive of a review of its effectiveness with police detainees. This review would include examining the enhanced assessment's ability to accurately detect a variety of healthcare needs with a view of suiting each individual arriving into custody, its effectiveness at managing any identified needs within custody, and how treatment was implemented both within custody and upon release. Furthermore, investigating the previously highlighted practical feasibility of an enhanced risk assessment is essential.

CONCLUSION

Overall, the studies evaluating the healthcare needs of those detained in custody highlight the considerable presence of mental health, physical health, and substance misuse amongst this vulnerable population. Consideration should be given to the level of risk that untreated healthcare needs can have, with the potential for them to considerably impact upon behaviour within police cells and in the community. Healthcare needs appear to be overlooked, and at present there is no consistent measure implemented to identify and appropriately manage such concerns in this unique environment. The introduction of a standardised measure to successfully identify healthcare needs of detainees would be of considerable value to the police, the detainees, and support services both within custody and in the community. The police could enhance their management practice by training their custody staff to recognise more predominant healthcare concerns (e.g. depression, anxiety, cannabis misuse, alcoholism, diabetes) and how to appropriately relay information to healthcare services to increase access to treatment. The efficacy of the implementation of a standardised healthcare measure within custody should be evaluated. Further research similar in nature to the included studies should be carried out to further increase external validity.

Rationale for Chapter Three

Chapter Two has identified that there is a considerable prevalence of healthcare needs amongst those who are detained in police custody, supporting a conclusion that suggests the introduction of a standardised healthcare measure could provide greater accuracy in the identification, assessment, and treatment of healthcare needs. A number of the healthcare needs identified have a link with impulsivity, including depression, schizophrenia, in addition to offending behaviour itself. Reviewing this from a psychological perspective, thought was given to these associations and how this can be given consideration in the police custody environment. Combining the healthcare link with impulsivity, in addition to giving consideration towards the implementation of a psychological tool in custody, Chapter Three addresses a need that can aid in the risk assessment procedure by way of critiquing the Barratt Impulsiveness Scale (BIS-11).

CHAPTER THREE

CRITIQUE OF A PSYCHOMETRIC MEASURE: THE BARRATT IMPULSIVENESS SCALE WITH FORENSIC POPULATIONS

INTRODUCTION

This review examines a psychometric assessment in its 11th revision, by Patton et al. (1995). The BIS-11 is a questionnaire designed to assess the personality and behavioural constructs of impulsiveness (Patton et al., 1995). The BIS-11 is widely used for both clinical and research purposes amongst a variety of populations ranging from college students to offenders, and substance abusers to individuals who meet the criteria for psychopathy. This assessment will be reviewed by evaluating the psychometric properties of the BIS-11 including internal and test re-test reliability, along with the face, concurrent, predictive, content, and construct validities.

Literature Review

Impulsivity is considered to be one of the most important psychological constructs, serving as the centrepiece in etiological theories of personality psychopathology (Lynam, 1996; Newman & Wallace, 1993); theories of crime (Gottfredson & Hirschi, 1990; Moffitt, 1993); psychiatric disorders (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001); suicidal behaviours (Brezo, Paris, & Turecki, 2006); and theories of substance misuse (Wills, Vaccaro, & McNamara, 1994; as cited in Lynam & Miller, 2004).

The definition of impulsivity varies across studies, but the common interpretation of this construct incorporates: the predisposition to act quickly without adequate thought or conscious judgement for the consequences (Moeller et al., 2001, as cited in Stanford et al., 2009); the failure to resist urges and / or temptations emerging from internal or external stimuli (American Psychiatric Association (APA), 2013, as cited in Fields et al., 2015); and engaging in acts that are harmful, inappropriate, and counterproductive in their nature, and negatively impact upon the individual and / or others (Ruiz, Skeem, Poythress, Douglas, & Lilienfeld, 2010; Stanford et al., 2009; Vasconcelos, Sergeant, Corrêa, Mattos, & Malloy-Diniz, 2014). This general definition contains predominantly negative behaviours and consequences. However, Dickman (1990) proposed a functional and positive aspect of impulsivity. This is in reference to adventurous, risky, and quick decision-making that provides a positive outcome for that individual. The various constructs of impulsivity have been explored with much debate and various developments manifesting in academic and empirical research over the years.

Originally, Barratt (1959) considered impulsiveness to be a uni-dimensional construct but his subsequent studies, in combination with research in the realms of both personality and neuropsychology, consistently prove impulsivity to be

multidimensional in nature (Vasconcelos et al., 2014). Barratt and colleagues' (Barratt, 1993; Patton et al., 1995) multidimensional conceptualisation was formulated via consideration of the medical, psychological, behavioural, and social perspectives, ultimately producing a three-factor theoretical model (Whiteside & Lynam, 2001). These three factors include (1) attentional deficits (cognitive / attentional impulsivity) and the tendency to make quick decisions; (2) motor impulsivity (prepotent behaviour / disinhibition) and acting without thinking; and (3) non-planning (immediate reward), i.e. a lack of forethought or thought for the future (Barratt, 1985, as cited in Patton et al., 1995; Steinberg, Sharp, Stanford, & Tharp, 2013; Vasconcelos et al., 2014; Whiteside & Lynam, 2001). Such a stance regarding the construct of impulsivity, within practice, has allowed for the identification and exploration of differences and extremities in personality pathologies (Pechorro, Maroco, Ray, & Gonçalves, 2015).

Specifically focusing on cognitive impulsivity, Lynam and Miller (2004) commented that the absence of the factor of contemplation removes the deterrent of negative consequences (Arce & Santisteban, 2006), with an additional inability to weigh-up consequences. This construct of impulsivity has been measured via the Iowa Gambling Task - an experiment designed to assess risk preferences using uncertainty, rewards, and penalties (Bechara,

Damasio, Damasio, & Anderson, 1994; Buelow & Suhr, 2009; Upton, Bishara, Ahn, & Stout, 2011). Studies utilising this measure concluded that non-healthy individuals (i.e. those with addictions) had a diminished ability to consider any short-term consequences against any long-term consequences (Brevers, Bechara, Cleeremans, & Noël, 2013; Whitlow et al., 2004). This would suggest that these individuals could be more inclined to act in an impulsive manner. When considering motor impulsivity, this domain has been measured with a variety of instruments, including reversal-learning tasks (Izquierdo & Jentsch, 2012) and stop tasks (Avila, Cuenca, Félix, Parcet, & Miranda, 2004, as cited in Arce & Santisteban, 2006). The latter tasks demonstrate that when inhibitory control is challenged, an increase in motor impulsivity is observed. Although, Caswell, Morgan, and Duka (2013) discovered that the engagement of inhibitory control alone does not prevent impulsive decision-making.

In relation to non-planning impulsivity, Ainslie (1975) highlighted that impulsive behaviour can be explained via the negative correlation between rewards and their attractiveness over time (as cited in Arce & Santisteban, 2006). The aspect of delayed gratification was examined within the 'Marshmallow Test' developed by Mischel, Ebbesen, and Raskoff Zeiss (1972). This test was completed with four-year old children whereby they were presented

with a marshmallow. The children had two options: (a) ring a bell at any point to gather the experimenters and be allowed to eat the marshmallow; or (b) wait until the experimenters return (approximately 15 minutes later) and receive two marshmallows. Longitudinal studies report that those who delayed their gratification to receive the two marshmallows obtained higher educational achievements later in life, and had developed better social and emotional coping skills in adolescence (Ayduk et al., 2000; Shoda, Mischel, & Peake, 1990). The non-planning construct of impulsivity with the delayed gratification is outlined within the dual-process theory and subsequently developed models. This highlights that within the decision-making process, there is an imbalance in tendencies to respond to either internal or external factors and to inhibit prepotent responses (Carver & White, 1994). The biopsychosocial perspective argues that people can often act against their self-interest, even when they are aware of the consequences to their actions (Arce & Santisteban, 2006). This theory proposes that the inability to translate cognitions into actions is the problematic aspect of impulsivity.

The heterogeneous construct of impulsivity is exhibited in the diversification of externalised behaviours, many of which underlie multiple psychological disorders (APA, 2013; Vasconcelos, Malloy-Diniz, & Correa, 2012). Behaviours include aggression (Critchfield,

Levy, & Clarkin, 2004; Houston, Stanford, Villemarette Pittman, Conklin, & Helfritz, 2003; Pechorro et al., 2015); substance abuse (Perry & Carroll, 2008; Swann, Dougherty, Pazzaglia, Pham, & Moeller, 2004, as cited in Stanford et al., 2009); participation in risky sexual behaviours (Donohew et al., 2000; Krueger, Markon, Patrick, Benning, & Kramer, 2007); and engagement in self-injurious behaviours (Herpertz, Sass, & Favazza, 1997; McCloskey, Look, Chen, Pajoumand, & Berman, 2012; Paris, 2005). In fact, impulsivity represents the most common diagnostic criteria within the DSM-IV (APA, 2013; Whiteside & Lynam, 2001).

Research-supported theories infer that impulsivity is a principal component of personality trait constellations, often subsumed within broad personality dimensions (Barratt, 1965; Lynam & Miller, 2004; Tellegen, 1985 as cited in Haden & Shiva, 2008; Zuckerman, 2010). Empirical research from a collective of psychologists attempted to explain the concepts and developmental aspects of personality, reviewing such broad dimensions. McCrae and Costa (1990) presented the culmination of this research as the Five Factor Model (FFM) of Personality. The dimensions include openness to experience, extraversion, agreeableness, conscientiousness, and neuroticism (Block, 2001; Digman, 1997; Soto & John, 2012). Whiteside and Lynam's (2001) analysis of the FFM discovered that four distinct personality facets had an association with impulsive-

like behaviour. These traits include high urgency and sensation seeking (affectivity component), low premeditation (cognitive component), and low perseverance (behavioural component; Ruiz et al., 2010; Whiteside & Lynam, 2001). In addition, they identified that the FFM accounts for a total of 66% of the variance within impulsivity instruments, suggesting that various aspects of personality are predictive of impulsivity traits. Arce and Santisteban (2006) also arrived at a similar conclusion, remarking that personality is a reliable predictor of risky decision-making. However, following from the identification of methodological flaws and the limited scope of the FFM (Paunonen, Haddock, Forsterling, & Keinone, 2003), alternative theories became more influential. One empirically based trait theory is that of Eysenck (1967), who proposed a three-factor model that includes the personality dimensions of psychoticism, extroversion, and neuroticism (Eysenck & Eysenck, 1976). This model was based upon the results of personality questionnaires and offers a more causal explanation to personality. Additionally, Tellegen's (1982, 1985) model of the personality system proposes that impulsivity is one of the three factors that determine the manner and intensity by which an individual responds to emotional stimuli. This corroborates with Helmers, Young, and Pihl (1995) who conclude that the impulsivity construct is in the repetition of the negative behaviours, as opposed to the behaviour itself.

Taking into consideration the above traits, in combination with the exhibition of previously mentioned negative behaviours, it can be inferred that impulsivity encompasses many disorders and mental health issues. Likewise, impulsivity can be a principal diagnostic feature, e.g. within histrionic, antisocial, and borderline personality disorders; or a commonly associated feature of a disorder, e.g. bipolar, ADHD, and suicidal behaviours (Helmers et al., 1995; Vasconcelos et al., 2014). Furthermore, researchers have shown that impulsivity plays a heavily prevalent role in understanding both forms of anxiety (Barratt, 1959, as cited in Stanford et al., 2009; Zhou et al., 2014) and psychopathy (Hart & Dempster, 1997, as cited in Whiteside & Lynam, 2001; Ireland & Archer, 2008; Lynam, 1996).

It is the construct of impulsivity that underlies the association between externalising and internalising disorders, supporting the elucidation of the link between such disorders and offending behaviour (Zhou et al., 2014). Impulsivity levels are generally elevated amongst forensic populations, with a direct and interactive relationship amongst acts of aggression, violence, and general offending behaviour (Haden & Shiva, 2008; Miller & Lynam, 2001). The general theory of crime (Gottfredson & Hirschi, 1990) focuses on the aspect of self-control and suggests that an absence or lack of this factor is the dominant catalyst for engagement within offending

behaviour. Meta-analyses have confirmed that self-control is a predictor of crime (Engel, 2012; Pratt & Cullen, 2000). However, Wikström and Treiber (2007) consider beyond this theory. They propose that self-control is a situational concept, as opposed to a personality trait, and that various environmental influences such as morality, impact upon the deliberation to engage in a criminal act (Wikström & Treiber, 2007). Considering the significant function that impulsivity plays in personality constructs, mental illnesses, and offending behaviour, further understanding and assessing its role with a reliable measure is of paramount importance.

BIS-11 OVERVIEW

Ernest S. Barratt developed the original BIS measure in 1959 as an endeavour to discover items orthogonal to anxiety, with the additional view of relating these to psychomotor efficiency, viewing impulsivity as a uni-dimensional construct (Barratt, 1959; Haden & Shiva, 2009; Stanford et al., 2009). Since this original version, the BIS has undergone many revisions, with the earlier versions produced to operationalise behaviour and personality predispositions thought to reflect impulsivity (Ruiz et al., 2010). A primary reason for revisions of the original measure was due to the developments in impulsivity research: conclusions determined impulsivity to be a multidimensional construct and so subsequent revisions of the BIS shifted to incorporate this new information (Ireland & Archer, 2008). Whilst there is minimal information available regarding the earlier versions of the BIS, extensive revisions of theoretical items produced the 10th version (BIS-10) in 1985 (Vasconcelos et al., 2012) - a version wholly redesigned to measure cognitive impulsiveness, motor impulsiveness, and non-planning impulsiveness (Barratt, 1985, as cited in Patton et al., 1995). The BIS-10 was subjected to a factorial structure analysis of the existing items amongst undergraduates, comparing their scores to prisoners and psychiatric inpatients. The analyses resulted in the discontinuation of four items due to an absence of item-correlation.

The remaining items were subject to further statistical tests and conclusively included in the final, and current, version of the BIS, the BIS-11 (Patton et al., 1995; Vasconcelos et al., 2012). A fourth-grade reading level is required to complete the BIS-11 assessment (Ruiz et al., 2010). However, where the respondent's literacy skills do not match this level, the administrator may facilitate the completion by reading the items aloud. Caution is recommended when both the respondent's first language is not English and when interpreting outcomes from translated assessments (Stanford et al., 2009). Nevertheless, Stanford et al. (2009) report the internal consistencies from the 11 known translated versions as falling within a satisfactory range (0.71-0.83; Ireland & Archer, 2008).

The BIS-11 is a self-report measure specifically designed to define the subtraits of impulsiveness and to assess an individual's tendency to respond impulsively in specified contexts (Holland, Ireland, & Muncer, 2009; Stanford et al., 2009). It contains 30 statements and the respondent is asked to rate each statement on how often they think or act using a four-point Likert-type scale: 1 – Rarely / Never; 2 – Occasionally; 3 – Often; and 4 – Almost Always / Always. Through the administration of this in clinical practice, the assessment takes approximately 15 minutes or less to complete. Whilst it is desirable to have an experienced professional

administering the measure, there are no obtainable minimum requirements for administration and the tool is available free of charge, online. All of the necessary scores can be obtained by adding the respective items, with marked items scored in reverse order to avoid a response bias (Pechorro et al., 2015). When scoring the assessment, the raw scores do not need to be translated into T-Scores or percentiles. Stanford et al. (2009) suggest that overall scores falling between 52 and 71 should be considered within the 'normal' range for impulsivity. Scores above 71 demonstrate high trait impulsivity, with scores below 52 potentially indicating extreme inhibition or dishonesty (Barratt, Lijffijt, & Moeller, 2005, as cited in Hollander & Berlin, 2008). The greater the total score, the higher the indication of the presence of impulsivity (Hale, 2008).

There are difficulties in acquiring specific recommendations regarding scoring ranges and interpretation for the three second-order factor scores, although there are means and standard deviations available for comparison within selected populations taken from the use of the BIS-10. These populations include mixed adult population (normal), college students, felons (half-way house), cocaine abusers, psychiatric patients, substance abusers (other than cocaine), and prisoners. Stanford et al. (2009) present

descriptive statistics for 47 previously published adult clinical samples, so these are available as guidelines for clinicians.

All of the 30 items within the BIS-11 are categorised into three subscales: (1) Attentional Impulsiveness (attention and cognitive instability dimensions) defined as: poor concentration, lack of present focus, lack of attentional sustainability, thought interruptions / intrusions, and easily distracted; (2) Motor Impulsiveness (motor and perseverance dimensions) outlined as: acting without thinking or without inhibition and possessing the tendency to engage in spur-of-the-moment behaviours; and (3) Non-Planning Impulsiveness (self-control and cognitive complexity dimensions) described as: an orientation towards the present, rather than the future, with an inability to delay reward-related responses (Pechorro et al., 2015; Snowden & Gray, 2011; Vasconcelos et al., 2012; Zhou et al., 2014). Attentional impulsiveness contains eight items, with motor impulsiveness and non-planning impulsiveness containing 10 items each.

There are a number of ways to measure impulsivity including self-report questionnaires and laboratory tasks. Various psychometric instruments are reported to measure the construct of impulsivity, either as a unique construct or as part of personality psychopathology measure. Upon review, a number of existing

measures were considered unsuitable for general administration and administration for research purposes due to the literature highlighting concerns regarding their psychometric properties. As an example, the Emotionality, Activity, Sociability, and Impulsivity measure (EASI-III; Buss & Plomin, 1975) was reported to have limited data relating to its construct validity. The model was found to have poor goodness of fit via a confirmatory factor analysis and only unpublished data supports the psychometric properties (Braithwaite, Duncan-Jones, Bosly-Craft, & Goodchild, 1984).

With various definitions of impulsivity presented it was important to consider what aspect of impulsivity the instruments report to measure. Dickman's Impulsivity Inventory (DII; Dickman, 1990) is based on his two-dimensional concept of impulsivity. Whilst this somewhat corresponds with the literature that reports impulsivity as a multifaceted construct, it is limited to two functional types of impulsivity, as opposed to behavioural types (Claes, Vertommen, & Braspenning, 2000). Specifically considering risk and the forensic population, the assessment of functional impulsivity may not appropriately support the aims of this thesis. However, may be beneficial clinically if directly considering treatment planning. Similarly with the I-7 Impulsiveness Questionnaire (Eysenck, Pearson, Easting, & Allsopp, 1985), in addition to measuring impulsivity, it also measures venturesomeness and empathy.

Although aspects of the psychometric properties have been considered 'very satisfactory', the literature reports that venturesomeness should not be thought of as an aspect of impulsivity (Luengo, Carillo-De-La-Peña, & Otero, 1991). Furthermore, there are no conclusions as to the effectiveness of this measure when using the scales independently.

The UPPS Impulsive Behaviour Scale (Whiteside & Lynam, 2001) was created as an amalgamation of existing measures of impulsivity. This was with the view of creating an instrument corroborating with the perspective that impulsivity encompasses four distinct facets of personality. Upon face value, this would be an appropriate instrument to administer; although, at present, there is only a small body of research examining the structure of the UPPS (Magid & Colder, 2007). The limited evidence available regarding the psychometric properties and its efficacy amongst various populations impacted upon the decision to consider it for research purposes within this thesis.

Due to the reasons presented above, a decision was made to critique a more established instrument; one where numerous studies are available reporting the psychometric properties and one that is theoretically-informed regarding its capability in identifying the different dimensions of impulsivity. An added benefit of using

the BIS-11 is that it provides an overall impulsiveness score in addition to the subtraits. This element of the psychometric permits further exploration of potential relationships between these various constructs of impulsivity and other factors such as substance misuse, offending behaviour, and self-harm (Meule, 2013).

As one of the most commonly used instruments that measures impulsiveness, the BIS-11 has been examined amongst a variety of populations and included within various empirical research projects. An opportunity to collate this information, to provide a thorough and comprehensive critique, allows for researchers to make a well-informed choice as to whether this instrument should be used within their studies. Additionally, reviewing this instrument may aid clinicians' considerations of its use for identifying treatment needs and future treatment planning.

BIS-11 NORMATIVE DATA

The normative data for the BIS-11 is available within the published article by Patton et al. (1995). It shows data for the overall impulsivity score that can be obtained via this measure. The normative data was collected from an American sample, with four different sub-groups and this is outlined in Table 12.

Table 12

Normative Data for the BIS-11 Total Score

Groups	Males		Females		Total Group	
	M	*SD*	*M*	*SD*	*M*	*SD*
Undergraduates	64.94	10.19	63.32	10.16	63.82	10.17
Substance Abuse Patients	69.00	10.21	69.78	10.51	69.26	10.28
General Psychiatric Patients	69.74	11.54	72.78	13.43	71.37	12.61
Prison Inmates	76.30	11.86				

Notes – Undergraduates (m 130, f 279); substance abuse patients (m 110, f 54); general psychiatry patients (m 39, f 45); prison inmates (m 73).

The data indicates significant differences between groups[1], within-sex differences between males and females, but no significant within-group sex differences. The undergraduate population scored lower than both psychiatric patient groups, with these three groups

[1] $F(3,657) = 27.49$, $p<.0001$

scoring significantly lower than the prison inmates in relation to their overall impulsivity score. Females in the undergraduate population had the lowest overall mean impulsivity score, with the prison inmates obtaining the highest (Patton et al., 1995). There is no normative data available for the BIS-11 subscales - only data obtained from the use of the BIS-10. Stanford et al. (2009) published descriptive statistics from 47 published studies that used the BIS-11 amongst a variety of adult clinical samples. These included individuals with substance use disorders, Axis I disorders[2], suicide attempters, forensic populations, Axis II disorders, Axis I/II mixed samples, and neurodegenerative disorders and traumatic brain injuries. Six years ago, Stanford et al. (2009) produced updated normative data with the view of obtaining data reflective of the general population. The total sample of adults living in America (*N* = 1577: 1184 females, 393 males) was obtained by combining information from two ongoing unpublished studies. The first study consisted of college students (*N* = 1178: 912 females, 266 males), and the second comprised of healthy adults[3] (*N* = 399; 272 females, 127 males). The latter normative data indicated that male adults score higher than females for their attentional, motor and

[2] Prior to the publication of the DSM-V, previous editions used a multiaxial distinction between various disorders. Axis I included all psychological diagnostic categories expect mental retardation and personality disorder, with Axis II including personality disorders and mental retardation. The DSM-V has now moved to a nonaxial documentation of diagnoses, combining Axes I, II, and III (APA, 2000; 2013; Widiger & Shea, 1991).

[3] To be deemed suitable to participate within this study, healthy was defined as the absence of any DSM-IV-TR Axis I psychiatric disorder; or a positive drug urine test, alcohol test, or pregnancy test (Stanford et al., 2009).

total impulsivity subscale scores, with both genders scoring the same for their non-planning impulsiveness score. Overall, the psychiatric patients score significantly higher than the general population in relation to their propensity to exhibit impulsive behaviour in various contexts. Males display higher scores than females amongst the general population sample, with females scoring higher within the general psychiatric and substance abuse samples.

USE OF BIS-11 WITH FORENSIC POPULATIONS

Whilst normative data were originally established amongst a male-only forensic population (as described in the previous section), the BIS-11 has been used across adolescent, adult, male, female, and inpatient forensic samples (e.g. Dolan & Fullam, 2004; Enticott, Ogloff, Bradshaw, & Fitzgerald, 2008; Gordon & Egan, 2011; Haden & Shiva, 2008; 2009; Holland et al., 2009; Ireland & Archer, 2008; Kamphuis, Dijk, Spreen, & Lancel, 2014; Kirkpatrick et al., 2007; Komarovskaya, Loper, & Warren, 2007; Pechorro et al., 2015; Ruiz et al., 2010; Smith, Waterman, & Ward, 2006; de Tribolet-Hardy, Vohs, Mokros, & Habermeyer, 2014; Warren & South, 2006; Zhou et al., 2014). The research conducted within forensic populations has largely considered impulsivity in combination with various other constructs such as aggression, or alongside mental illnesses, i.e. personality disorders. This is predominantly with the view of evidencing accurate clinical characteristics that may catalyse problematic behaviour. Elevated levels of impulsivity have consistently been demonstrated amongst forensic populations, e.g. Iliceto et al. (2012). This study reported female prisoners to have significantly higher impulsivity levels than their community sample, supporting Warren and South's (2006) findings, in addition to Dolan and Fullam's (2004) research with a male sample. Haden and Shiva (2008) stated that male psychiatric forensic patients scored highest

on the non-planning subscale, as did juvenile offenders, significantly differing from the controls (Zhou et al., 2014).

Dolan and Fullam (2004) discovered similar elevations amongst offenders with a history of violent offences and a diagnosis of personality disorder: increased levels of impulsivity led to an inclination towards engagement in reactive violence whilst incarcerated. They further identified that such individuals with offences consisting primarily of instrumental violence had lower trait impulsivity, with a greater ability to restrain their responses in behavioural tasks in comparison to those whose offences were reactively violent. Smith et al. (2006) used high motor and non-planning impulsiveness scores to categorise violent and non-violent offenders (Zhou et al., 2014). This observation is further supported by Gordon and Egan's (2011) study, demonstrating significant correlations between the motor impulsiveness subscale and total convictions, non-violent convictions, and violent prison breaches; the non-planning subscales and total convictions, and non-violent convictions; and total BIS-11 score with non-violent convictions, amongst adult male offenders in the UK. The combined results of these studies provide evidence proposing impulsivity levels to be a significant risk factor in predicting violent recidivism amongst offenders (Haden & Shiva, 2008). Specifically with male juveniles, statistically significant associations were established between

impulsivity levels and age of crime onset, and crime seriousness (Pechorro et al., 2015).

In addition to behavioural aspects, Dolan, Anderson, and Deakin's (2001) findings linked BIS-11 scores to increased trait anxiety and depression among male offenders. Conducting investigations into the structure of the BIS-11 amongst forensic populations yielded interesting results. Ireland and Archer (2008) found the original model to be lacking in appropriate conformity for both males and females, and proposed an alternative three-factor model for males (cognitive planning skills, behavioural impulsivity, and distractibility), with a two-factor model for females. Ruiz et al. (2010) questioned the generalisability of the BIS-11 to their targeted forensic population (Caucasian and African American offenders), suggesting that the content of the measure may differ across cultures. However, collated evidence from an assortment of studies surmised the construct of impulsivity to operate differently between offender and non-offender populations. Given the moderate availability of research regarding the BIS-11 measure amongst forensic samples, throughout the exploration of psychometric properties of the tool in this report, additional evidence from non-forensic populations will be provided.

PSYCHOMETRIC PROPERTIES

Reliability

Internal Reliability

Internal reliability is the extent to which a measure is consistent within itself (Weiner, 2007). The purpose of considering this aspect of reliability is to determine whether several items within the measure produce similar scores when their overall intention is to measure the same general construct (Cohen & Wollack, 2004). Internal reliability can be measured in a number of ways (Revelle & Zinbarg, 2009). However, the Cronbach's alpha methodology is the most commonly used in practice due to its ease of administration and interpretation (Santos, 1999). In 1951, Lee Cronbach developed his alpha model to specifically provide a measure of the internal consistency of a test or scale (Tavakol & Dennick, 2011). The reliability score is calculated and expressed as a number between zero and one. The higher the score the greater the internal reliability and as the estimate of reliability increases, the fraction of the test score attributable to error will decrease (Nunnally & Bernstein, 1994; Tavakol & Dennick, 2011).

When dealing with psychological constructs, Kline (2000) suggests that good internal reliability ranges from a Cronbach's alpha

coefficient of 0.7 and above. Nevertheless, Streiner (2003) suggests that extremely high levels of reliability (0.95 or higher) are not necessarily desirable, as this may mean that only a portion of the construct has been measured and that the items could be overly redundant (Briggs & Cheek, 1986; Neuendorf, 2011). The original data from which the BIS-11 was developed, including general, psychiatric, and forensic populations obtained alpha coefficients all above .79, with a maximum of .83 (Patton et al., 1995). Stanford et al.'s (2009) update of norms and internal consistency combined two unpublished studies including populations of college students and healthy adults. This showed alpha coefficients above 0.6 for all scales and subscales except for motor impulsivity (α = .59). This score for motor impulsivity demonstrates poor internal consistency and items within a test that yield such scores should either be removed or re-written (McCrae, Kutrz, Yamagata, & Terracciano, 2011); identification of a score less than α= .6 may highlight that the internal consistency has been compromised by a number of items. The rectification of any such compromises is essential in ensuring that the scale is measuring what it was initially designed for. Vasconcelos et al.'s (2012) systematic review of the BIS-11 showed overall impulsivity to have alpha coefficients between .69 and .80, suggesting acceptable homogenous quality.

Many translated versions of the BIS-11 including the Italian, Chinese, Arabic, German, Japanese, Portuguese, and Hebrew versions, show alpha coefficients ranging from .74 to .80 indicating good internal reliability (Ellouze, Ghaffari, Zouari, Zouari, & M'rad, 2013; Fossati, Di Ceglie, Acquarini, & Barratt, 2001; Glicksohn & Nahari, 2007, as cited in Leshem & Glicksohn, 2007; Hartmann, Rief, & Hilbert, 2011; Malloy-Diniz et al., 2010; Someya et al., 2001; Yao et al., 2007). Haden and Shiva (2008) found that the motor and attentional impulsivity scales displayed low internal consistency (α= .45, α= .49) amongst their forensic inpatient sample, although the non-planning subscale and overall impulsivity levels were acceptable. Aside from the above study, the internal reliability for all scales and subscales amongst juvenile and adult offenders is considered good, with alpha coefficients ranging from .68 to .85 (Haden & Shiva, 2008, 2009; Ireland & Archer, 2008; Patton et al., 1995; Pechorro et al., 2015; Ruiz et al., 2010). A comprehensive overview considers the BIS-11 to be an internally reliable measure when applied to populations inclined to possess elevated impulsivity levels (Ireland & Archer, 2008).

Test-Retest Reliability

Test-retest reliability assesses the external consistency of a scale, measuring the stability of a test over time. The level of stability is

determined by administering the same measure on two separate occasions to the same participant, by the same administrator, under the same test conditions (Bland & Altman, 1986). Careful consideration is required in determining the length of duration between testing periods to avoid learning, recall, or carry-over effects (Allen & Yen, 1979). Statistical analysis is used to determine the level of test-retest reliability, using correlations to generate a figure that determines the quality of the test-retest reliability (Field, 2005; Shuttleworth, 2009a; Vaz, Falkmer, Passmore, Parsons, & Andreou, 2013). A sufficient test-retest coefficient should be .70 or higher according to Nunnally (1978). Vasconcelos et al.'s (2012) systematic review of the BIS-11 reported 'fair to good' test-retest correlation coefficients, with the Spearman's rho (ρ) ranging from .66 to .83 amongst 21 studies for the total impulsivity score produced within the measure. In addition, translated versions support this with coefficients ranging from .66 to .88 (Ellouze et al., 2013; Fossati et al., 2001; Glicksohn & Nahari, 2007, as cited in Leshem & Glicksohn, 2007;; Hartmann et al., 2011; Malloy-Diniz et al., 2010; Someya et al., 2001; Yao et al., 2007). Such scores tended to remain stable over time (retest period ranged from one month to seven months) with the subscale scores' reliability considered fair (attentional: ρ = .61, motor: ρ = .67, non-planning: ρ = .72) (Matusiewicz, Reynolds, & Lejuez, 2012). Natural limitations of test-retest reliability such as retest

duration, maturation, and participant exposure must be taken into consideration (Drost, 2011). The test-retest reliability of the BIS-11 is yet to be explored amongst forensic populations.

Validity

Face Validity

Face validity is whereby the items within a test appear, at face value, to measure what they claim (Nevo, 1985). Whilst Smither, Reilly, Millsap, AT&T, and Stoffey (1993) created a five-item scale to measure face validity, it is often measured via the judgement and scrutiny of leading experts (Babbie, 2007; Gatewood, Feild & Barrick, 2010; Polit & Beck, 2008; Svyantek & Bott, 2004). However, it is expected to withstand this scrutiny and critique with a 'reasonable' level of agreement required amongst the raters. An inspection of the items and instructions regarding the BIS-11 identifies a tool that can adequately measure constructs relevant to impulsivity. Strakowski et al. (2010) reported that BIS-11 provides a measurement of 'real life' trait impulsiveness and were undeterred in their conclusions by the possible constraints of self-report methods.

A considerably prevalent constraint regarding such a construct of

validity is that of social desirability. Fossati et al. (2001) took this into consideration during their research and administered the Minnesota Multiphasic Personality Inventory (MMPI) K scale (a measure of defensiveness; McKinley, Hathaway, & Meehl, 1948) alongside the BIS-11 measure. Their results for a non-clinical sample reported a significant negative correlation between the MMPI K scale and BIS-11 total score. This could potentially be explained by the desire to suppress the identification of impulsive traits, as these are generally perceived as being non-desirable due to their preponderant association with negative actions, thoughts, and behaviours (Fossati et al., 2001).

In a forensic inpatient sample, Haden and Shiva (2008) revealed a significant positive correlation between BIS-11 scores and negative impression management (as ascertained by the administration of the Personality Assessment Inventory (PAI)), and a significant negative correlation between BIS-11 scores and positive impression management. They concluded that impulsive forensic patients endeavoured to portray themselves as having a greater degree of psychopathology than actually present. Social desirability may play a role in the BIS-11 scores, varying amongst the population in consideration. Such a limitation can potentially compromise the results of a measure, particularly if it is to be used for clinical

purposes.

Concurrent Validity

Concurrent validity is demonstrated when a test correlates well with a measure that has previously been validated, or with a contemporary criterion such as a psychiatric diagnosis (Cronbach & Meehl, 1955). An absence of a 'gold standard' instrument to measure the personality trait of impulsivity affects the concurrent validity for the BIS-11. Orozco-Cabal, Rodriguez, Herin, Gempeler, and Uribe (2010) suggest that a clinically diverse sample be included in studies that wish to report on this aspect of validity, to somewhat compensate for the lack of 'gold standard' measure. Despite this absence, the following studies report acceptable and good levels of concurrent validity. These conclusions largely arise from translated versions of the BIS-11 that review their association to the original measure, e.g. Gülec et al. (2008) reviewing the Turkish version of the BIS-11, and Fossati et al. (2001) the Italian version. Gülec et al. (2008) substantiated acceptable concurrent validity amongst a Turkish population (mixed sample of psychiatric outpatients (n = 83) and college students (n = 237)) via analyses of BIS-11 total scores and Buss and Perry's (1992) Aggression Questionnaire (AQ), the Eysenck Personality Questionnaire Revised Abbreviated Form (EPQR-A; Francis, Brown, & Philipchalk, 1992),

and the State-Trait Anger Expression Inventory (STAXI; Spielberger, Jacobs, Russell, & Crane, 1983). Specifically, significant correlations were discovered between BIS-11 total scores and four out of the six AQ subscales (AQ Total, AQ Physical Aggression, AQ Anger, AQ Indirect Aggression); all of the EPQR-A subscales minus Extraversion; and the Anger-Trait, Anger-Out, and Anger-Control subscales of the STAXI. Emphasising the multidimensional nature of impulsivity, additional scales used to investigate concurrent validity for the BIS-11 include the Buss-Durkee Hostility Inventory (BDHI; Buss & Durkee, 1957) - a measure aimed to identify aggressive and hostile behaviours; and the Wender Utah Rating Scale (WURS) - an aid in the retrospective diagnosis of childhood ADHD (Ward, Wender, & Reimherr, 1993, as cited in Fossati et al., 2001). These measures of personality traits correlate significantly with impulsiveness, and this effect was further replicated among the 763 Italian college students in Fossati et al.'s (2001) study. The BIS-11 total score positively correlated with both Aggressiveness and Hostility and shared a positive moderate correlation with the WURS (Vasconcelos, Teodoro, Malloy-Diniz, & Correa, 2015).

When considering behavioural measures the BIS-11 score correlates with greater displays of aggression, greater probability of

involvement in self-mutilating behaviours, and shoplifting offences. Additionally, physiological differences are observed with indications of low baseline arousal that suggests good external validity (Houston & Stanford, 2005; Mathias & Stanford, 2003, as cited in Stanford et al., 2009). Amongst a juvenile forensic population, Pechorro et al. (2015) reported significant correlations with the age of crime onset, crime seriousness, alcohol and drug use, and conduct disorder, concluding the concurrent validity justifies the use of this measure amongst such a population.

Predictive Validity

Predictive validity takes into consideration the accuracy by which an independent criterion will occur in the future (Cronbach & Meehl, 1955). The construct of impulsivity is largely associated with dysfunctional behaviours and, theoretically, it would be expected that all three factors of impulsivity contribute equally in their affiliations to negative actions. The majority of studies have considered impulsivity and its predictive validity with a variety of aggressive behaviours. Results have shown the BIS-11 total scores to be significantly correlated with both instrumental and expressive acts of aggression (as measured by the Expagg questionnaire; Campbell, Muncer, & Coyle, 1992) amongst adult male prisoners (Holland et al., 2009). Similar findings were produced in Haden and

Shiva's (2008) study using forensic male psychiatric patients, whereby they also discovered a significant association between increased impulsivity and increased aggression. However, this association was weak for verbal aggression and completely unrelated to physical aggression. Environmental variability and psychiatric diagnoses may explain differences in results here. Wang and Diamond (1999) reported additional constructs such as anger and antisocial personality style, in combination with impulsivity, to be strong predictors of aggression amongst offender samples. Similarly, the described aggression is verbal aggression and may be explicated by the consequences on incarcerated individuals should they engage in physical aggression, with any self-reporting of such incidences being low.

Where environmental variability may have less of an impact is when impulsive acts are committed in the community. Haden and Shiva (2008) found that impulsivity was significantly associated and positively correlated with criminal charge classifications, with Gordon and Egan (2011) reporting impulsivity to moderately postdict all measures of criminal convictions. When the three constructs of BIS-11 impulsivity are considered separately amongst college students, it was found that motor and attentional impulsivity are primarily related to impulsive aggression (Barratt, Stanford,

Dowdy, Liebman, & Kent, 1999). This is to be expected among college students, as their levels of planning and forward thinking (as would be measured by the non-planning impulsivity subscale) should be at a normal to high level, with cognitive processes actively engaged in making choices about participating in such negative behaviours. Surprisingly, similar findings were revealed within juvenile offenders, although there was greater significant association with motor impulsivity (Zhou et al., 2014). Amongst younger populations, Chahin, Cosi, Lorenzo-Seva, and Vigil-Colet (2010) found motor and non-planning impulsivity to be strongly related to dysfunctional aspects of impulsivity that are the best predictors of addictions and aggression. Continuing with addictions, Doran, Spring, McChargue, Pergadia, and Richmond (2004) reported impulsivity, as measured by the BIS-11, to predict a more rapid relapse to smoking ($\beta = .39$, R^2 change $= .147$, $p<.05$). Additionally, Vasconcelos et al.'s (2012) systematic review observed numerous significant associations between BIS-11 scores and binge eating, gambling, getting drunk to cope, and drug-taking (Stanford, Greve, Boudreaux, Mathias, & Brumbelow, 1996). Hair and Hampson (2005) found impulsivity to be a better predictor than conscientiousness for greater alcohol consumption.

Many studies have also considered impulsivity as an associate of

mental illness. For example, impulsivity has been found to relate to increased suicide ideation among forensic psychiatric patients (Haden & Shiva, 2008), and attentional and non-planning subscale scores are predictive of both greater anxiety and depression severity (Zhou et al., 2014). The presence of a lack of forward thinking, lack of focus, thought intrusions, and suffering from depression and / or anxiety can be expected amongst the mentally disordered, and so these results make theoretical sense. If formal diagnoses are examined, antisocial personality disorder symptoms are predicted by motor impulsivity (Fossati et al., 2004), with relatively weak associations to the non-planning subscale (Ruiz et al., 2010), as well as elevated impulsivity predicting the onset of bipolar disorder (Alloy et al., 2008, as cited in Muhtadie, Johnson, Carver, Gotlib, & Ketter, 2013). There is an abundance of evidence reporting significant correlations and associations between psychopathic traits as measured by the Psychopathy Checklist Revised (PCL-R; Hare, 1991) and impulsivity, particularly amongst adult male offenders with personality disorder diagnoses (Pechorro et al., 2015), and both male and female offenders (Ruiz et al., 2010). Such an association is to be expected considering the mutual multifaceted relationship between the two constructs. Snowden & Gray (2011) suggest that the strongest significant association is between the PCL-R total score and the motor factor of the BIS-11.

Practically, it may be claimed that impulsivity is not a predictable measure, as impulsive individuals often possess inhibition deficits and do not predict consequences (Chahin et al., 2010): the pure nature of impulsivity as a construct is that it is not predictable in its manifestations. What can be inferred from the studies above is that the BIS-11 possesses adequate predictive validity when reviewed and analysed for this purpose. The significance fluctuates amongst the populations examined and the context, and this should remain in the mind of future researchers using the BIS-11 as a potential predictor. In addition, caution should be applied when using the BIS-11 measure for this purpose as it was not originally intended as a predictor measure alone.

Content Validity

Content validity is the estimate of how much a test or scale represents every aspect of a specific construct. Taking this into consideration, a clear definition of a measure's construct and boundaries is critical (Miller et al., 2009). Should content validity be at a weak level or absent from a measure, the inclusion of irrelevant elements can introduce potential biases (Shuttleworth, 2009b). As previously identified in the literature review section of this report, impulsivity is a multidimensional construct and although definitions vary amongst studies, they reach shared conclusions.

Using a theoretically coherent perspective inclusive of the three-factor model of impulsivity, the BIS-11 was developed with the aim of encompassing all relevant factors of the construct. This measure takes into account the multidimensionality of the construct, in addition to overall general impulsivity. Practically, Stanford et al. (2009) supported the argument that using three separate constructs help with the interpretation of the BIS-11 and are more effective than considering the impulsivity total score alone. However, Meyer et al. (2001) suggests that the BIS-11 is limited in its content validity due to its self-report nature, which ultimately results in restrictions such as an individual's potential to accurately judge themselves (as cited in Vasconcelos et al., 2012). Ruiz et al. (2010) claim that the content validity of the BIS-11 is low, as it does not represent the affective processes of impulsivity, i.e. emotional reactions, urgency, and sensation-seeking (Whiteside & Lynam, 2001). The lack of exact communality amongst the definitions may impact upon the production of a fully comprehensive measure. The BIS-11 is designed to measure prolonged, trait-like impulsivity and would not necessarily consider the changing affective processes, despite these having a paramount role in externalised behaviours catalysed by impulsivity. Furthermore, Lawshe (1975) developed a scale by which subject matter experts rate how 'essential' an element is to the identified construct. There is no evidence that this technique of determining

content validity has been used in relation to the BIS-11. Taking this into consideration, the use of an additional emotional urgency measure in combination with the BIS-11 may improve the understanding of an individual's impulsivity levels.

Construct Validity

Construct validity refers to the operational definition of a variable and whether this accurately captures the theoretical meaning of the construct (Cronbach & Meehl, 1955; Shuttleworth, 2009c). The construct validity can be compromised in numerous ways. These include hypothesis guessing by participants and the potential for behavioural change, evaluation apprehension, researcher bias, poor construct definition, construct cofounding, and mono-method and mono-operational biases (Shuttleworth, 2009c). There are a number of ways by which construct validity can be measured. However, factor analysis and correlational methods are the most popular (Cronbach & Meehl, 1955). Factor analyses have been conducted on the BIS-11 measure with the view of reporting the construct and structural validity. Whilst various populations have been taken into consideration, not all research has supported the original three-factor structure, suggesting that this model fits poorly in comparison to a two-factor structure (Fossati, Barratt, & Acquarini, 2002; Haden & Shiva, 2008; Ireland & Archer, 2008;

Ruiz et al., 2010; Yao et al., 2007). All studies proposing a two-factor structure identify the two remaining scales as the motor and non-planning impulsiveness scales. Ireland and Archer (2008) and Fossati et al. (2002) in particular argue that this two-factor model is supported within a male forensic inpatient sample and a control sample of Italian high school students. Therefore, whilst there is supporting evidence for both models, research frequently advocates, maintains and replicates the original three-factor structure, reporting adequate construct validity (Hartmann et al., 2011; Someya et al., 2001; Yao et al., 2007). These studies further propound the motor, non-planning, and attentional impulsiveness scales to capably represent the multidimensionality of the impulsivity construct.

Vasconcelos et al.'s (2012) systematic review of the BIS-11 identified six studies that reproduced the three factors but showed a different organisation of the individual items. Similarly, new labels for the factors were suggested: distractibility, behavioural impulsivity, and cognitive planning (Li & Chen, 2007 as cited in Vasconcelos et al., 2012; Ireland & Archer, 2008). Whilst all individual studies are confident in their findings, the research deliberating construct validity is divergent, suggesting the recommendation of further research.

DISCUSSION

This psychometric critique provides support for the use of the BIS-11 among a variety of populations, with evidence suggesting adequate validity and reliability. Whilst the BIS-11 is one of the most widely used psychometric instruments used for a considerable amount of explorations in addition to impulsivity, a large proportion of the research has been carried out amongst student populations. Although research using selected forensic populations has grown in recent years, more is required. The development of the BIS into its 11th version has provided identification and advancements regarding the multidimensionality of impulsivity, although, as previously reported, there may be additional aspects of impulsivity that the BIS-11 does not completely represent. Practically, the BIS-11 can be used for a number of purposes including the assessment of treatment needs and treatment change, providing additional evidence to support diagnoses and potentially aid in risk management. In regard to the self-report nature of the BIS-11, it can be seen as a simple and inexpensive test to administer; the evidence of the satisfactory validity supports its use in clinical settings (Hawkshead & Krousel-Wood, 2007); and participants answering in an independent manner can allow for a more accurate reflection of social and behavioural factors (Hawshead & Krousel-Wood, 2007; Miller & Hays, 2000). However, when participants are

asked rate their own perceptions of their impulsiveness, they may be compromised by recall and social desirability biases, leading to errors in their self-observations (Gagne & Godin, 2005; LaFleur & Oderda, 2004). Taking the latter factors into consideration, it is recommended that the BIS-11 should not be solely relied upon to make such assessments and decisions, particularly if consideration is given to the potential for impression management when responding to questions regarding a trait that is highly associated with negative behaviours. The use of file reviews, functional analyses, observational data, and results from additional psychometric measures may be valuable alongside the BIS-11. The BIS-11 is a measure that is uncomplicated in its use for the clinician and participant, cost-efficient (available free online), and quick to administer and interpret.

CONCLUSION

Further research will continue to explore the psychometric properties among forensic populations. This will increase generalisability to a population likely to have elevated levels of impulsivity, and who are at a greater risk of exhibiting this in a negative manner. This may come in the form of further administrations of the BIS-11 in its original form, as well as a two-factor version, to the selected forensic population. The evidence regarding the BIS-11's reliability and validity is supportive, although evidence considering the effectiveness of the BIS-11 in decision-making would be beneficial. To gain the most accurate understanding of an individual's levels of impulsivity and how to use this information effectively, the BIS-11 should be used in conjunction with other data, such as additional psychometric data, clinical judgment, and behavioural observations.

Rationale for Chapter Four

Chapter Three accentuated the complications that can arise when administering psychometric assessments in clinical practice. A wide variety of external factors can impact upon the validity of the assessment, creating further repercussions should the assessment dictate treatment. With the BIS-11 in particular, it was highlighted that cultural and contextual factors play a role and that these must remain in the mind of the researcher. A principal recommendation from the critique in Chapter Three stated that the BIS-11 must not be used as a predictive measure alone, but used in conjunction with other data such as clinical judgement, and behavioural observations. Chapter Four explores the prevalence of impulsivity, self-harm, and situational aggression amongst those detained in police custody. In addition, the predictive validity of the current police risk assessment (predicting risky and / or problematic behaviour) will be reviewed, with consideration given to the implementation of psychological measure to increase the predictive validity.

CHAPTER FOUR

IMPULSIVITY, SELF-HARM, AND SITUATIONAL AGGRESSION AS PREDICTORS OF PROBLEMATIC BEHAVIOURS IN POLICE CUSTODY

ABSTRACT

One of the primary targets with police custody is to reduce the risk exhibited by those who are detained. This is with the view of reducing harm to the custody staff themselves, but also to the detainees. The NSPIS risk assessment has not previously been reviewed to consider its direct predictive validity in preventing risk in the custody environment. This research project aimed to improve the predictive validity by implementing psychometric testing and structured clinical assessments. The sample consisted of 45 individuals who had been detained in police custody, upon suspicion of a variety of offences. Participants were asked to complete the BIS-11 impulsivity measure, and if they disclosed previous engagement in self-harm, the adapted Inventory of Statements about Self-Injury (ISAS) measure. In addition, a demographic pro-forma, risk assessment scoring sheet, a detention log scoring sheet, and up to three DASA assessments (measuring situational aggression) were completed retrospectively by the researcher to support with the primary research aim. The literature suggests that there are considerable links between impulsivity, aggression, and self-harming behaviours, and supports the review of these factors amongst this specific population. The results show that the combination of the NSPIS risk assessment, the BIS-11 total score and the initial DASA assessment increase the level of

predictability by 21%, in comparison to the NSPIS risk assessment alone. Future research would include a pilot project to implement this enhanced risk assessment to further consider its efficacy in predicting risky behaviour within police custody.

INTRODUCTION

Police stations and custody suites function as a gateway to the criminal justice process and are the first, and sometimes only, point of contact individuals have with the CJS (Ceelen et al., 2012; Jones, 2007). Police custody is where suspects are taken upon arrest and are detained within a cell. During detention, the police, or those working for the CPS, are required to reach a decision regarding how to deal with the suspect in relation to their alleged offending (Skinns, 2011; CPS, n.d.). Suspects arrested for indictable offences can be detained without charge for a maximum of 24 hours or 36 hours depending upon the seriousness of the offence and the depth of the initial investigation process (UK Government, n.d.). It is part of the police force's duty of care to ensure that suspects are not spending unnecessary time in police custody (Skinns, 2011). Such an environment has been identified as an important but neglected area of scholarly research (Skinns, 2011); with 43 local police forces within England and Wales, and 896,209 [1] people being arrested between 2015-2016 (Home Office, 2016a) it should no longer be overlooked. The Bradley Report (DoH, 2009) - a review of people with mental health problems and / or learning disabilities in the criminal justice system - highlighted this general absence of

[1] The Home Office (2016a) states that these arrest rates only relate to notifiable offences.

research on police custody, further prompting scholarly researchers to investigate (Brooker et al., 2012).

Rapley and Sandberg (2011) found within their collaborative pilot study in Lambeth custody suites that a total of 68% of detainees displayed a wide range of mental illnesses, substance dependency (particularly drugs), and suffered from serious physical illnesses. Additional empirical evidence has supported these findings reporting that up to 79% have a history of receiving mental health treatment (Scott et al., 2016), up to 33% of detainees require psychiatric treatment inclusive of a formal mental health assessment (Laidlaw et al., 2010), up to 85.7% of detainees have depression, up to 69.7% are misusing both illicit substances and alcohol (Ogloff et al., 2011), and the most prevalent physical healthcare concern within police custody is injuries (Dorn et al., 2016). These observational studies have provided us with vital information regarding the general characteristics of those who present in police custody. The development of such a profile is naturally informative for future research.

Taking into consideration the profile of those who present at police custody, combined with the research that has shown that the custody environment is not designed, nor can it hope to meet the needs of individuals who are experiencing distress (Cummins, 2008;

Skinns, 2011), police protection procedures and policies (Dorset Police P09, 2010) identify that mental illness, frustration of an over-bearing environment, substance misuse, and experience of extreme negative emotions are factors that can significantly contribute to violent and aggressive behaviour from an individual. Violent and aggressive behaviour can manifest itself in a number of ways, including acts of behaviour that can range from verbal abuse to the destruction of property, and can include behaviour that is directed towards others and also cause harm to the self (Gabbey & Jewell, 2013). Ultimately, the safety of others and the detained individual falls under the responsibility of the police custody staff (Wyant, 2014). Code C of the PACE Codes of Practice outlines these requirements in further detail, stating that assessments within custody are initiated to determine whether the detainee is likely to present with specific risks, including a risk towards custody staff or themselves (Home Office, 2012). The PACE guidelines further inform that the custody officer is responsible for implementing actions relating to the response to any specific risk assessment, including reducing opportunities for self-harm (Home Office, 1984). One way this can be accomplished is via the utilisation of the NSPIS risk assessment, which some forces include in the reception screening of detainees. This assessment evaluates detainees' level of risk and obtains information relating to their general wellbeing,

their mental health needs, risk of self-harm and / or suicide, and physical health.

Empirical research indicates that self-injurious behaviour is presented as a specific form of inwardly directed aggressiveness, associated with problems of impulse control (Herpertz, Steinmeyer, Marx, Oidtmann, & Sass, 1995; McCloskey et al., 2012). Acts of self-harm are less likely to involve planning, with many individuals taking action less than one hour after the initial urge or thought (Lloyd-Richardson, Perrine, Dierker, & Kelley, 2007). This subsequently increases the difficulty in predicting self-injurious behaviours and why a proactive as opposed to reactive approach is advantageous when aiming to reduce the occurrence of such acts. The police custody staff can aim to achieve this via practically reducing such opportunities for a detainee to self-harm at their first convenience, and additionally, utilising the information obtained from the NSPIS risk assessment. However, the closed questioning style and environment with which the assessment is administered, i.e. at the custody desk in the presence of staff and potentially other detainees, could impact upon the answers provided. Due to these potential difficulties, acquiring a more in-depth profile of detainees who self-harm could, in turn, provide them with greater levels of support throughout the entirety of their detention.

Additionally, this supplements an increase in levels of awareness for the detention staff.

Di Pierro et al. (2014) investigated the specific association between impulsivity and the affect regulation process of self-harm. They found that impulsivity traits have a direct influence on the functional success that the self-harming behaviour provides for that individual. Their research concluded that highly impulsive individuals are shown to continue experiencing negative high-arousal affects after self-harming, with the self-harming act not having the desired outcome (Di Pierro et al., 2014). This in turn could lead to the individual engaging in other behaviours to achieve a regulated emotional state, subsequently increasing the level of risk. Impulsivity is reported as being significantly higher amongst those who self-harm in comparison to those who do not, and has consistently been confirmed as holding a strong association with self-harm (Evans, Platts, & Liebenau, 1996; Favazza & Conterio, 1989; Haw, Hawton, Houston, & Townsend, 2001; Herpertz et al., 1997).

Impulsivity can be a principal diagnostic feature amongst a variety of mental health concerns, e.g. within histrionic, antisocial, and borderline personality disorders, or a commonly associated feature of a disorder, e.g. bipolar, ADHD, and suicidal behaviours (Helmers

et al., 1995; Vasconcelos et al., 2014). Additionally, researchers have shown that impulsivity plays a prevalent role in understanding forms of anxiety (Barratt, 1959, as cited in Stanford et al., 2009; Zhou et al., 2014) and psychopathy (Hart & Dempster, 1997, as cited in Whiteside & Lynam, 2001; Ireland & Archer, 2008; Lynam, 1996). Furthermore, impulsivity is also found to influence offending behaviour (Jones & Lynam, 2009; Palmer & Humphries, 2016). Impulsivity levels are generally elevated amongst forensic populations, with a direct and interactive relationship amongst acts of aggression, violence, and general offending behaviour (Haden & Shiva, 2008; Miller & Lynam, 2001).

With aggression, impulsivity, and self-harm sharing a relationship, combined with the nature and profile of those presenting in police custody, it can be suggested that this triad of factors is likely to be highly prevalent and pose the greatest levels of risk (Wichmann, Marksteiner, Juen, Singewald, & Ruepp, 2015). Gabbey and Jewell (2013) stated that those individuals who display aggressive behaviour tend to be irritable, impulsive, and restless. Irritability and restlessness are behaviours that are considered to be a response to the current environment, with impulsiveness a part of an individual's personality traits (Siever, 2002).

Aiming to reduce and prevent incidents of self-harm, violence and / or aggressive behaviour within police custody is of paramount importance to the police and to the detainee themselves. Furthermore, the acquisition of relevant information and an appropriate skillset to reduce and prevent risk supports the various targets of the NSPIS risk assessment.

Empirical evidence and personal clinical experience of working within police custody suggests a considerable prevalence of disclosures from detainees regarding their behaviour. This includes engagement in previous self-harming behaviour, current thoughts of engaging in such behaviour, and occasional prevalence of acting in an aggressive manner. The majority of research conducted in this area has been related to the prevalence of problematic behaviour (particularly that of self-harm). The majority of results have been determined via documented information such as reports and records, as opposed to direct contact with detainees. A literature search reveals no prior investigations into the area of the preventative / predictive validity of the current NSPIS risk assessment, nor considering the additional implementation of psychometric tools and comparative risk assessments. However, a recently published pilot study by McKinnon and Grubin (2014) reviewed the NSPIS risk assessment, with the view of considering the welfare of those detained in police custody in the UK and their

need for a healthcare professional. Their results showed that the implementation of a structured screening assessment could improve the pick-up rate of detainees with health problems, compared to the NSPIS assessment. This subsequently aided the overall detection of higher risk detainees (McKinnon & Grubin, 2014). This research has provided evidence that additional tools, psychological in nature, provide valuable results relating to police custody detainees.

Study Aims

This study will contribute to the continued growth in the literature relating to police custody procedures and police custody detainees within England and Wales, and any additional custody suites that follow similar processes. Moreover, it aspires to provide useful and valuable information to those working within police custody with a view to reducing the level of risks. The results of this study could aid detention officers in their working practice, specifically relating to their contact with detainees who have disclosed information relating to self-harm, and whom present with problematic behaviours.

The overall aims of this study include: (a) examining the prevalence of risk, problematic, and violent behaviours in the police custody environment; (b) the prevalence of self-harming behaviours and the functions of such behaviours; (c) the prevalence of impulsivity and

the specific subtraits of impulsivity that detainees' identify with; (d) the predictive validity of the current NSPIS risk assessment; and (e) the predictive validity of additional psychological measures when considering risk as appropriate to police custody.

Hypotheses

The following inferences are hypothesised:

1. Psychological tools and psychologically structured risk assessments will be a more significant predictor of problematic behaviour compared to the current NSPIS risk assessment used in police custody.
2. The completed adapted ISAS measure (Klonsky & Glenn, 2009) will show the most prevalent functions of self-harming behaviour amongst detainees to be 'affect regulation' and 'marking distress'.
3. The completed BIS-11 (Patton et al., 1995) assessment will show the most prevalent scale of impulsiveness to be that of 'non-planning impulsiveness'.

METHOD

Sample

Stratified random sampling, via a convenience volunteer method, was employed to obtain the final sample for this study. This method, combined with the purpose of the study, divided the population into four strata: (1) males reporting no self-harming behaviour; (2) males reporting engagement in self-harming behaviour; (3) females reporting no self-harming behaviour; and (4) females reporting engagement in self-harming behaviour. Data routinely collected from the Criminal Justice Liaison and Diversion Team based in police custody reported their population to represent the following in relation to the above strata: (1) 56.7%, (2) 25.2%, (3) 8.7%, and (4) 9.5%.

The concept of sample size and statistical power estimation is now a crucial factor of design sensitivity (Prajapati, Dunne, & Armstrong, 2010). This information can be obtained by conducting a power analysis. A power analysis determines the minimum sample size required to achieve acceptable statistical power (Kabacoff, 2014). Here, an *a priori* prospective power analysis was conducted using the G* Power application (Faul, Erdfelder, Lang, & Buchner, 2007). This specific application allows for the criterion related to the statistical analyses to be selected, which then determines an

adequate sample size. The statistical test conducted was determined by the purpose of the study, i.e. levels of prediction. Subsequently, for linear multiple regression a minimum sample size of 45 is required. The alpha error probability was set at the 5% level (α = .05), power set at 0.8 (π = 0.80) (Cunningham & McCrum-Gardner, 2007), an effect size of 0.3 (Cohen, 1988), and four predictor variables (BIS-11, DASA assessment, adapted ISAS, and NSPIS risk assessment).

Individuals who were currently detained in police custody in one police station, were recruited to take part in a series of paper assessments. No specific inclusion criteria were exercised aside from their current detention. However, the exclusion criteria excluded individuals who were not able to provide informed consent. Individuals who met this criterion included those who were under the age of 18 and whereby the consultation of their parents or a guardian was unavailable (Nijhawan et al., 2013); those who were under the influence of illicit substances and / or alcohol, as such a state diminishes capacity to comprehend and communicate information (NHS England, 2013); those who have learning disabilities that would require the support of an appropriate adult; those whose mental health concerns require a formal mental health assessment; and those whom the custody sergeant deemed to be of too high risk due to their exhibited behaviours at the initial

request of participation. This behaviour could include both verbal and physical aggression, and / or consist of explicit threats or acts of violence.

Measures

Adapted Inventory of Statements about Self-Injury (ISAS)

The ISAS (Klonsky & Glenn, 2009) is a two-part self-report measure. It initially assesses lifetime frequency of 12 non-suicidal self-injurious behaviours that are performed 'intentionally and without suicidal intent'. This initial section was adapted for the purposes of this study and so participants were requested to report their engagement in such behaviours as positive or negative response, as opposed to a numerical frequency. In addition to the above, this section also includes three additional questions (reduced from five for this study) that assess descriptive and contextual factors of engagement in self-harm with multiple-choice options. The second and final section measures the function of the individual's self-harming behaviour using 39 questions that are in response to the initial statement of: "When I self-harm, I am…". The participant's response is rated on a scale from 0-2: 0 – the statement is not relevant for you at all; 1 – the statement is somewhat relevant for you; and 2 – the statement is very relevant for you. Glenn and Klonsky's (2011) findings suggest the ISAS has good test-retest reliability for the behaviour scales =.68, with both

the interpersonal functions and intrapersonal functions having excellent reliability at =.87, and =.80 respectively (Klonsky & Glenn, 2009). The researcher calculates the score upon its completion. With prior experience of administering this assessment, it takes no longer than 15 minutes to complete.

Barratt Impulsiveness Scale (BIS-11)

The BIS-11 was originally developed by E. S. Barratt in 1959 as an endeavour to discover items orthogonal to anxiety. The latest version is the result of various revisions and remains the version to be used for research purposes today (Patton et al., 1995). The BIS-11 is a self-report measure specifically designed to define the subtraits of impulsiveness and to assess the manner in which an individual tends to respond in specified contexts (Holland et al., 2009; Stanford et al., 2009). It contains 30 statements whereby the respondent is asked to rate each statement on how often they think, or act, using a four-point Likert-type scale: 1 – Rarely / Never, 2 – Occasionally, 3 – Often, and 4 – Almost Always / Always. With prior experience of administering this assessment, it takes no longer than 15 minutes to complete. The researcher calculates the score after the assessment is complete. Stanford et al. (2009) suggest that overall scores falling between 52 and 71 should be considered within the 'normal' range for impulsivity. Scores above 71 demonstrate high trait impulsivity, with scores below 52

potentially indicating extreme inhibition or dishonesty (Barratt et al., 2005 as cited in Hollander & Berlin, 2008). The greater the total score, the higher the indication of the presence of impulsivity (Hale, 2008).

The availability of research regarding the use of the BIS-11 amongst forensic populations suggests adequate reliability as a measure of impulsiveness, in addition to associated behaviours such as depression and aggression (Dolan, Anderson, & Deakin, 2001). For a more detailed description and reporting of the psychometric properties of the BIS-11, please refer to the critique in Chapter Three.

Dynamic Appraisal of Situational Aggression (DASA)

The DASA assessment was developed with the aims of ascertaining whether a risk assessment system, utilising a structured clinical judgment approach, would be effective in identifying individuals at risk of exhibiting aggressive behaviour (Ogloff & Daffern, 2006). The research incorporating this appraisal reported modest levels of predictive validity for aggression and self-harm amongst personality disordered patients (AUC=.65 for aggression, .67 for self-harm; Daffern & Howells, 2007), with a study in New Zealand revealing the strongest predictive accuracy for physical aggression towards staff (=.80; Barry-Walsh, Daffern, Duncan, & Ogloff, 2009). The

DASA consists of seven sections of risk: irritability, impulsivity, unwillingness to follow directions, sensitivity to perceived provocation, easily angered when requests are denied, negative attitudes, and verbal threats. For this study, these seven sections are to be scored retrospectively by the researcher based upon information recorded by the police in an electronic detention log, i.e. no direct contact with the detainee is required. A score of 1 is provided should the item be present and a score of 0 if the item is absent. The total of the scores then deduces the level of risk: Score 0-1 = Low; 2-3 = Moderate; >3 = High. The DASA also provides the opportunity to record specific acts of aggression including physical aggression against objects, and verbal and physical aggression against other people.

Demographic Pro-Forma

The demographic pro-forma was completed for each participant by the researcher (see Appendix 6). This data is obtained via the information provided on the electronic NSPIS risk assessment. This includes: a marker for previous self-harm (yes or no), and if 'yes', the method (a total of 16 methods are included, including options for other and unknown); gender; age; reason for arrest (a total of 46 offences are included); restraining equipment used (yes or no), and if 'yes', further description; and demeanour upon arrival.

NSPIS Risk Assessment

The NSPIS risk assessment can be incorporated into the detainee-screening process. Whilst not all police forces use this specific assessment, it would be a custody officer that would carry out the administration. In England, Wales, and Northern Ireland, this role is incorporated in situ (Home Office, 2009). Although there is no equivalent framework currently existing in Scotland, a recent report by HMIC for Scotland (2008) suggests that in the main, the management of detainees there reflects practices elsewhere in the UK. There is no standard risk assessment model for the British Police Service; however, the NSPIS risk assessment was designed to consider aspects of risk that are relevant to those based in police custody, guided by the National Decision Model and its Code of Ethics (College of Policing, 2014). The administration of such an assessment aims to provide an overview of a detainee's risk. The NSPIS assessment includes information about a detainee's general wellbeing, their mental health needs, risk of self-harm and / or suicide, substance misuse, and physical health. The information obtained further assists officers in their decision-making when considering appropriate levels of observations and intervention for a detainee. The information obtained is reliant upon self-reported information disclosed by the detainee, in addition to information already held within the police databases. The final decisions are based upon forecasted levels of harm to individuals, the public,

other detainees, and / or property (HMIC, 2015). The custody officer booking the detainee into custody completes this risk assessment as soon as is practicable. The initial 'Self-Assessment' section contains a total of 17 questions that review capacity, injuries, medical conditions, mental health problems, attempts to self-harm, current feelings, consumption and dependency of illicit substances and alcohol, requests for support for substance misuse concerns, allergies and dietary requirements, and an opportunity to present any other issues. The 'Custody Officer' assessment contains seven questions that ask if the detainee has been taken straight to a cell upon arrival into custody, does the detainee appear injured or unwell, does the detainee appear under the influence of either illicit substances or alcohol, are there any indications of self-harm, was incapacitant or force used upon the detainee at any point, are there any other detention related issues, and is this the first time the detainee has been in police custody. The final section of the risk assessment records the initial observation level that can be set at visitations every 60 minutes, every 30 minutes, the detainee to be visited and roused, constant observation, or physical supervision in close proximity at all times. The 'Pre-Release Risk Assessment' section is only completed when the detainee is due to be released from custody. The researcher viewed the completed assessment in electronic format, on police computers.

Detention Log

The detention log is an electronic document available to view on police computers. The log records every movement, interaction, and observation from all staff in custody of all detainees during their time in custody.

Design

A longitudinal study design was used whereby several observations of each participant were completed over the entirety of their detention. All volunteering participants completed the BIS-11 psychometric. Those who self-reported previous or current engagement in self-harming behaviour (in either their NSPIS risk assessment or disclosed to the researcher) completed an adapted ISAS psychometric. A demographic pro-forma and a minimum of one DASA assessment were completed for each participant.

Procedure

All data were collected from one police custody suite. The researcher carried out an initial review of electronic detention logs and NSPIS risk assessments. This review included revising any information relating to the pre-defined exclusion criteria. If a detainee met any of the exclusion criteria at this stage they would be deemed unsuitable for approach. Report of an individual being under the influence of either illicit substances or alcohol would be

reviewed a later stage, as the impact of the substance may decrease over time. Upon identification of potentially suitable individuals, the researcher approached the custody sergeant on duty to request if any of the proposed detainees would be suitable to take part in the research study. The researcher then approached the detainee, provided a brief synopsis of the research study and requested the permission of the individual regarding their participation. Should agreement to participate be obtained, the assessments would take place in an interview room or in the detainee's individual cell. The location would predominantly be dictated by the custody sergeant, followed by the researcher's clinical judgment. To begin, the detainee would be provided with an information sheet (see Appendix 7) that informed them of the participation time, any advantages and disadvantages, and aspects of confidentiality; a consent form for The University of Nottingham (see Appendix 8); a consent form for the local police force (see Appendix 9); and the appropriate assessments based upon the detainee's information. Upon completion of the appropriate psychometric assessments, the detainee was provided with a debrief form (see Appendix 10) and given the opportunity to ask any questions. The demographic pro-forma was completed retrospectively by the researcher (as permission had then been obtained from the participant), and up to three DASA assessments were completed, dependent upon the length of time the detainee

spent in custody. The initial DASA was completed a minimum of one hour from the detainee's initial arrival in custody. The second would be completed after a minimum of six hours, with the final assessment reviewing the whole duration of time spent in custody. Prior to the detainee being released from custody, a copy of both consent forms, the debrief sheet, and a self-injury help and advice leaflet were left in the detainee's property. Figure 2 outlines the study procedure.

Treatment of Data

All aspects of the data were collated, coded, and anonymised. No further translation of data was required for the BIS-11, adapted ISAS, and DASA assessments. The data within these measures are numerical, with only the DASA requiring the ratings to be equated to a risk level, which is a standard part of this assessment.

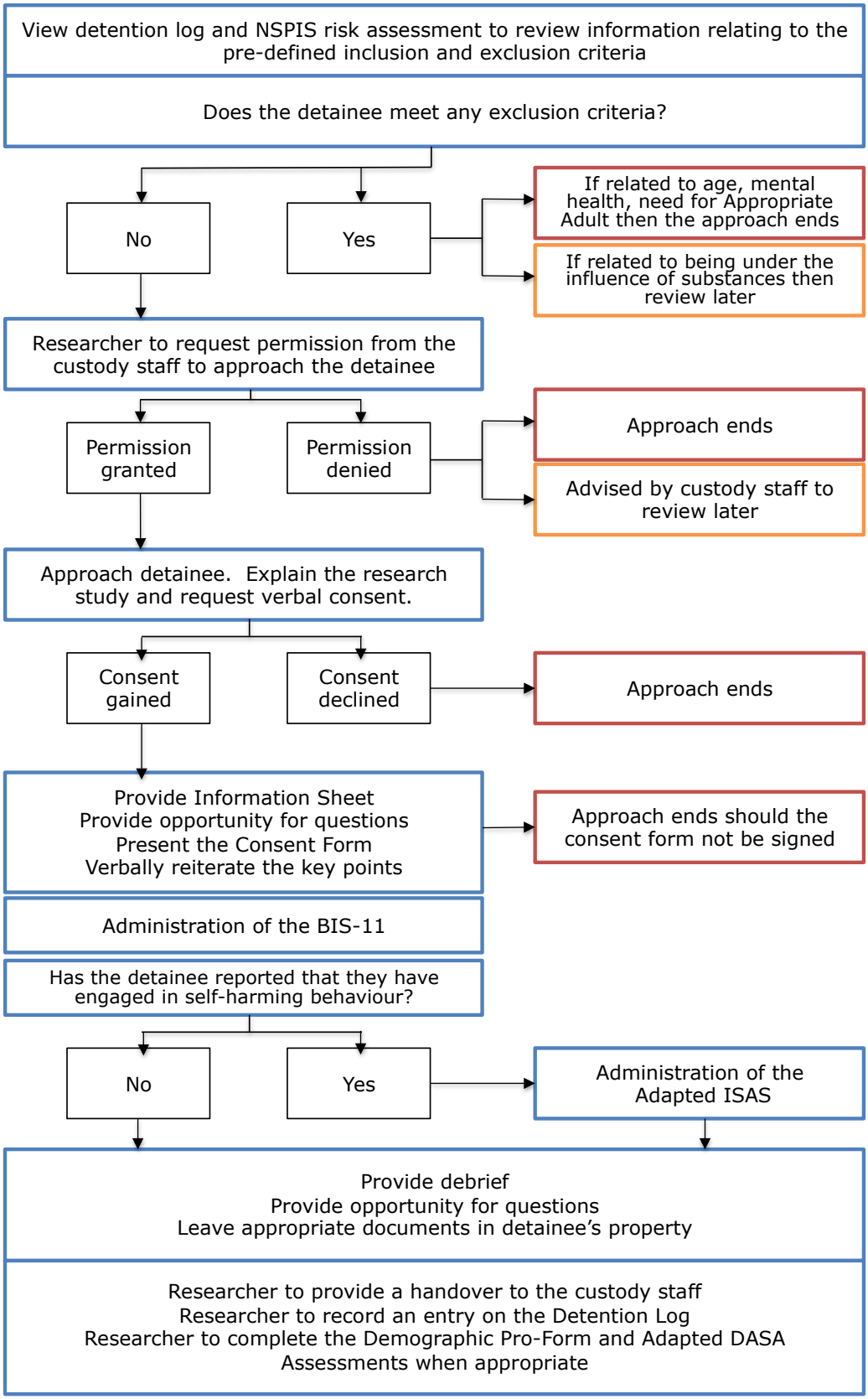


Figure 2. Study procedure. This figure illustrates the procedure taken by the researcher to carry out and obtain the data for the purposes of this study.

The data obtained from the NSPIS risk assessment required translation from verbal statements to numerical data in preparation for statistical analysis. For this specific assessment, a total of 14 questions required a 'yes' or 'no' response. A 'yes' would score 1, as this would increase the potentiality of risk, with a 'no' response scoring 0. The outstanding questions require a level of frequency and a severity rating, multiplied together in order to produce a score. The researcher, to quantify what information would translate to what score, produced an information scoring sheet. For example, if a detainee reported one injury that required ambulance assistance, this would warrant a score of 4, for 'severe'. As there is only one injury, this would result in the severity score of 4 being multiplied by the frequency of 1, producing a final score of 4. For the 'Observation Level' section of the risk assessment, the lower the level of observation, the lower the score.

To translate the data from the detention logs, a similar process was undertaken. Based upon clinical experience and acquired knowledge regarding what information the police base their risk assessments upon, a total of six categories were produced: aggression, capacity, medical, mental health, overall welfare, and self-harm. A scoring sheet was produced that identified what information would be appropriate to place in the various categories. Similarly, the information obtained was to then to be rated on a

level of severity and multiplied by its frequency to equate to a score. The scores for all the categories would then be totalled to reach one final score.

A second independent reviewer, a chartered and registered forensic psychologist, assessed a total of 20% of the completed assessments with a view to exploring reliability in ratings. A Cohen's kappa inter-rater reliability coefficient k=.62 was achieved. Landis and Koch (1977; as cited in Sim & Wright, 2005) state that the following are standards for strength of agreement regarding the kappa coefficient: ≤0=poor, .01–.20=slight, .21–.40=fair, .41–.60=moderate, .61–.80=substantial, and .81–1=almost perfect. Therefore, the inter-rater reliability here is 'substantial'.

Analytical Approach

Descriptive analyses will be used to obtain the numerical frequency of information obtained from the demographic pro-forma, e.g. age, gender, and reason for arrest; and for the data within the individual NSPIS risk assessments. Furthermore, the same analyses are to be administered to aid with one of the original hypotheses of observing the prevalence of problematic, risky, violent and / or aggressive behaviours. The prevalence of any such behaviour upon arrival into custody will be presented, along with the frequency of detainees who have an identified risk in the pre-defined risk categories.

Additionally, the outcomes of the psychometric assessments will also be informed via descriptive analyses. Reporting on the frequency and prevalence of these aspects allows for the development of a profile of individuals who arrive into police custody.

Bivariate correlations allow for the exploration of a strength or linkage between variables. The correlation coefficient value informs of a positive relationship, negative relationship, or no relationship at all (Houdmont, n.d.; Statistics Solutions, 2016a). These specific analyses will be conducted to examine the potential presence of a relationship between the NSPIS risk assessment and the initial observation level, the detention log total, the DASA assessment, the BIS-11 psychometric total score, and the adapted ISAS psychometric. Examining the relationship between these variables allows for inferences to be made relating to how the outcome of each variable is informed and to what extent. Furthermore, evidencing an absence of a relationship is extremely informative and provides the platform for additional considerations.

Linear regression analyses will be computed to support with the study's hypotheses. This particular analysis provides support by forming an explanation for the relationship between two variables, whilst assuming a causal relationship. The regression describes the

data, analyses the correlation and directionality of the data, estimates the model by finding the 'line of best fit' within the data points, and provides the opportunity to evaluate the validity and usefulness of the overall model (Statistics Solutions, 2016b). The primary purpose of using this analytical technique is to aid in understanding the predictive validity of the current NSPIS risk assessment. Additionally, it is also used to consider whether the level of predictive validity can be increased via the supplementation of psychological questions.

All analytical analyses were conducted using the Statistical Package for Social Sciences (SPSS) Version 22.0 (IBM Corp., 2013).

Ethical Considerations

The study was initiated upon the ethical approval from The University of Nottingham, the Assistant Chief Constable of the local Police, and the Head of Custody. This level of ethical approval was a requirement as outlined by the OHRN (see Appendix 11), a collaboration between several universities based at The University of Manchester. The research project was conducted in accordance with the guidelines provided by The University of Nottingham and Nottinghamshire Police and in line with professional codes of conduct regulated by the British Psychological Society (2009) and the Health and Care Professions Council (2012).

Ensuring the participants' expectations of taking part in the research study were managed appropriately, they were provided with detailed information and debriefing sheets in addition to being provided with multiple opportunities to ask questions. As the participants were asked if they had engaged in any self-harming behaviour, they were made aware that if they disclosed information that was contrasting with the police records, the police would have to be made aware. A leaflet that provided support information regarding self-harming behaviour was added to each participant's property. Standard custody procedures would be adhered to should the following information be disclosed: behaviour that is against custody rules (i.e. disclosing smuggling of items), illegal acts that the police are not already aware of (i.e. acts in addition to their suspected offending behaviour), previous / recent engagement in self-harming behaviour that is not recorded on the police records, current engagement or expression of self-harming and / or suicidal ideation that the police are unaware of, and verbal expressions containing the intent to harm others.

The participant information sheet was explicit in stating that participation in the research project was entirely voluntary and this was also verbally expressed to the participant. In addition, it was explained to the participant that they are able to withdraw from the study at any point, without negative consequences, and that their

participation would not impact upon their custody proceedings or outcomes.

The process for obtaining informed consent from participants was in accordance with all authoritative establishment requirements. Two consent forms were signed and dated by the participant prior to the completion of the assessments, consent forms were kept separately to the assessment results, and the participant received a copy of both forms (they would be left in their property to collect upon their release from custody). Any contact with a detainee related to the participation in the research project was recorded on the individual's detention log, via a police computer, to account for their movements whilst in custody. An example entry on the detention log would be as follows:

> Detainee visited by Grace Thorley (University of Nottingham Research Project / CJL Mental Health Team) for the purpose of taking part in a Research Project. Detainee consented to taking part and assessments took place in an interview room. All assessments were completed and there were no concerns outlined or identified. The detainee was returned to their cell and appropriate documentation left in their property.

An entry would be logged on the detainee's detention log if they did not wish to take part, to inform custody staff of this contact with

the detainee. Verbal handovers would take place in both circumstances between the researcher and custody staff.

Each participant was assigned a unique participation identity code and this was used on all forms and assessments aside from the consent forms. All documentation was held securely in a locked cabinet, classified as 'restricted access', and accessible to only the researcher and the researcher's supervisor. Only the minimum amount of data were obtained for the purposes of this research project. All data held electronically was held securely and password protected.

RESULTS

Within this results section, the frequencies and descriptives of the data will be presented first, followed by the findings and results obtained for the original research questions and hypotheses.

Sample

A total of 45 participants were recruited within this research study. The sample consisted of 37 male participants (82.2%) and eight female (17.8%). The average age of the participants equated to 34 years old (SD = 12.93, range 18 – 69). The most common primary reasons for arrest were common assault (n=8, 17.8%), burglary (n=8, 17.8%), actual bodily harm (n=6, 13.3%), and theft (n=6, 13.3%). A total of 33 individuals (73.3%) did not require restraints upon arrest. Less than one-fifth (n=8, 17.8%) of the sample had markers on their police records for prior engagement in self-harming behaviour, with only one individual (2.2%) having their risk of self-harm marked as 'raised' upon their arrival. The most frequent mental health issues reported were depression (n=9, 20%), a combination of anxiety and depression (n=3, 6.7%), and personality disorder (n=2, 4.4%). A total of 12 detainees (26.7%) reported that they had taken drugs prior to their detention, eight (17.8%) had consumed alcohol, and one (2.2%) had consumed a combination of illicit substances and alcohol. For the majority of the

sample (n=43, 95.6%), this was not the first time that they had been detained in police custody.

Risky, Problematic, and Violent Behaviours

One of the primary aims of this study was to observe and report the prevalence of problematic, risky, violent, and / or aggressive behaviours exhibited within police custody. The NSPIS risk assessment information reported that there were no detainees who engaged in aggressive behaviour upon their arrival, although one individual was recorded as being 'uncooperative'. A total of 29 detainees (64.4%) had their initial observation level set at 'Visit every 30 minutes', 14 (31.1%) set at 'Visit every 60 minutes', one (2.2%) set at 'Visit and Rouse'; and one (2.2%) set at 'Constant Observation'.

All participants were considered to have some level of risk, as recorded within their NSPIS risk assessment, with the final scores obtained from data translation ranging from 1 – 30 (mean score = 9.6). A total of 37 individuals (82.2%) had identified risks within the medical category, 16 (35.5%) within the mental health category, 16 (35.5%) within self-harm, nine (20%) in overall welfare, two (4.4%) in the capacity category and none in aggression. Information obtained from detention logs reported that 18 detainees (40%) engaged in some form of aggressive behaviour

throughout their detention in custody. These behaviours included: shouting aggressively, verbally abusing officers, and banging and kicking furniture. The average severity of these acts of aggression equalled 1.5 (a score of 1 includes slamming doors, shouting angrily, using foul language; with a score of 2 including kicking furniture, throwing objects, directing foul language towards someone), with the average frequency being 1.5 per detainee. A DASA was completed at least once for each individual detained. The initial assessment was completed after a minimum of one hour in detention. A total of 42 detainees (93.3%) received a low risk rating, two (4.4%) were considered to be of medium risk, and one individual (2.2%) was considered at high risk of exhibiting aggressive behaviour based upon information already observed. An additional DASA was completed should the detainee have remained in custody between 1-6 hours (n=36, 80%). A total of 28 (62.2%) remained at a low risk rating; four (8.9%) had their risk level increased and were now considered medium, with a four-fold increase for those now considered to be at high risk (n=4, 8.9%). The total time in custody for those who participated within the study ranged from 30 minutes to two days. A concluding DASA was completed for individuals who had remained in custody for over six hours. The total amount completed was 20, 44.4% of the original starting sample. Over two-thirds (n=16, 35.6%) remained at low

risk, 4.4% (n=2) remained at medium, and 4.4% (n=2) continued to rate as high risk.

Self-Harm

A further aim of this study included observing the prevalence of reported previous and / or current thoughts of self-harm and the functions of this self-harming behaviour. A total of eight detained individuals (17.8%) had a previous marker on their police record for engagement in self-harming behaviours. Of these detainees, 62.5% (n=5) had 'unknown' recorded against the method of self-harm; one individual (12.5%) had recorded that they had cut themselves, one was recorded as self-strangulation (12.5%), and another recorded as previously using a concealed item in custody to harm themselves (12.5%). Of those whose records showed a previous marker for engagement in self-harming behaviours, all eight (100%) had their initial observation level set at 'Visit every 30 minutes'.

Of the whole study sample, two participants (4.4%) engaged in an act of self-harm whilst detained in custody, with three individuals (6.7%) making related threats. Recorded within the NSPIS risk assessment, a total of 18 detainees (40%) scored positively as a potential risk for self-harm. From those who scored positively, two (11.1%) went on to complete acts of self-harm whilst detained,

with two (11.1%) making threats. The two individuals who self-harmed had their initial observation levels set at 'Visit every 30 minutes'. One individual who self-harmed whilst in custody completed the adapted ISAS measure and their scores were all within 1SD of the mean. In relation to the function of their self-harming behaviour, this participant scored the highest on the 'affect regulation' scale.

A total of 14 detainees (31.1%) completed the adapted ISAS assessment and reported engagement in the following behaviours at some point in their lifetime: cutting (n=13, 92.9%), pulling their hair (n=8, 57.1%), interfering with wound healing (n=7, 50%), swallowing dangerous substances (n=7, 50%), banging or hitting oneself (n=6, 42.9%), biting (n=5, 35.7%), other (n=5, 35.7%), carving (n=4, 28.6%), rubbing skin against a rough surface (n=4, 28.6%), burning (n=3, 21.4%), severe scratching (n=3, 21.4%), hurting oneself with needles (n=3, 21.4%), and pinching (n=2, 14.3%). A total of seven (50%) reported that they did not feel pain during self-harming behaviours; six (42.9%) reported that the sensation of pain occurred sometimes; and one stated that they did feel pain (7.1%). Over three quarters (n=11, 78.6%) reported that they were alone when they self-harmed, with two (14.3%) reporting that it was only some of the time that they were alone, with one (7.1%) responding they were not alone. There were a

total of 11 detainees (78.6%) who responded that less than one hour occurred from the time they had the urge to self-harm until they acted on the urge; two (14.3%) reported 1-3 hours, with 1 (7.1%) reporting that the elapsed time was longer than one day.

With regards to the various functions of self-harm, Table 13 reports the frequency of individuals scoring 1SD and 2SDs above the mean for the functions assessed on the adapted ISAS measure.

Table 13

Frequency of Individuals Clinically Scoring on the Adapted ISAS Measure

Function of Self Harm	Number of Individuals 1SD Above the Mean (n)	Number of Individuals 2SDs Above the Mean (n)
Affect Regulation	1	0
Anti-Dissociation	3	3
Anti-Suicide	2	3
Marking Distress	1	1
Self-Punishment	6	0
Autonomy	3	1
Interpersonal Boundaries	3	1
Interpersonal Influence	0	1

Peer Bonding	0	1
Revenge	1	0
Self-Care	1	1
Sensation-Seeking	0	1
Toughness	2	1

Impulsivity

All participants completed the BIS-11 psychometric to measure impulsivity. A total of 27 detainees' (60%) scores suggested that they possessed high trait impulsivity, with four detainees (8.8%) displaying either extreme inhibition or dishonesty. For those individuals who were considered to have high trait impulsivity, 19 (70.4%) had their initial observation levels set at 'Visit every 30 minutes'; seven (25.9%) were set at 'Visit every 60 minutes', and one (3.7%) was under 'Constant observation'. With regards to the specific aspects of impulsivity, 25 participants (55.5%) scored in the high range for non-planning impulsivity; 22 (48.8%) scored in the high range for motor impulsivity; and 15 (33.3%) scored in the high range for attentional impulsivity. For those whose overall impulsivity score fell into the high range (n=27), a total of 13 (48.1%) went on to display behaviours and / or acts related to aggression. From those scoring within the normal ranges of trait

impulsivity, four (27.7%) exhibited aggressive behaviours throughout their detention period.

Predictive Validity of the Current NSPIS Risk Assessment

Via the conduction of a bivariate correlation analysis the results show a significant, strong, positive correlation between the NSPIS risk assessment and the NSPIS risk assessment observation level, $r(43) = .56$, $p<.01$. This indicates that the information obtained within the NSPIS risk assessment appears to inform the initial level of risk, as suggested by the setting of the observation levels. A significantly positive, moderate correlation was observed between the NSPIS risk assessment observation level and the detention log total, $r(43) = .42$, $p<.01$. This would suggest that the higher the observation level set at the time of the initial risk assessment, the higher the score received from the information within the detention log. A further significantly positive, moderate correlation was observed between the NSPIS risk assessment and the first DASA assessment's overall score, $r(43) = .31$, $p<.05$. Such a result would indicate that there are similarities between the two assessments and their scoring of risk. There were no significant correlations observed between the NSPIS risk assessment and BIS-11 total, $r(43) = .23$; $p=.127$, and the adapted ISAS total, $r(12) = 0.02$; $p=.945$.

A simple linear regression was calculated to consider the predictive validity of the NSPIS risk assessment in relation to the behaviour exhibited by detainees. This included behaviours that are considered to present a risk either to the detainees themselves or others, as recorded within the detention log. A significant regression equation was found, F (1,43) = 41.21, p<.001), with an R^2 of .49. This indicates that the NSPIS risk assessment explains 49% of the variance within the detention log. A further regression using the previously defined categories within the NSPIS risk assessment was computed, using the stepwise method. This particular method removes the weakest correlated variables, resulting in the remaining variables as being able to explain the distribution more accurately (Field, 2005). The categories of aggression and overall welfare were excluded via the analysis, with the mental health, medical, capacity, and self-harm categories remaining. The results for the regression analysis with the detention log total as the criterion variable are shown in Table 14. The covariate (mental health risk) explained 32% (30% adjusted) of the variance in the detention log total (Model 1), demonstrating statistical significance, F (1,43) = 20.20, p<.001. The addition of medical risk (Model 2) explained 14% extra variance compared to Model 1 (R^2 = .46; adj. R^2 = .43) and was statistically significant, F (2,42) = 17.73, p<.001. Adding capacity risk (Model 3) explained a

Table 14

Regression Analysis Outcome for the Pre-Defined Categories of the NSPIS Risk Assessment Predicting Risky Behaviour in the Detention Log

	Model 1			Model 2			Model 3			Model 4		
	B	SE *B*	*β*	*B*	SE *B*	*β*	*B*	SE *B*	*β*	*B*	SE *B*	*B*
Model 1												
Mental Health	3.12	.69	.57***	2.50	.66	.45***	2.28	.61	.41**	1.99	.60	.36**
Model 2												
Medical				.95	.29	.39**	1.39	.31	.57***	1.17	.31	.48**
Model 3												
Capacity							-16.41	5.54	-.36**	-15.01	5.36	-.32**
Model 4												
Self-Harm										.75	.35	.24*
R^2	.32			.46			.55			.60		
ΔR^2				.14**			.10**			.05*		
adj. R^2	.30			.43			.52			.56		

*p<.05, **p<.01, ***p<.001.

B, unstandardized regression coefficient; SE *B*, standard error of unstandardized regression coefficient; *β*, standardized beta coefficient; R^2, explained variance; adj. R^2, *adjusted explained variance;* ΔR^2, change in explained variance.

further 10% variance in comparison to Model 2 (R^2 = .55; adj. R^2 = .52) and was statistically significant, F (3,41) = 16.94, p<.001. The final model (Model 4) included the addition of self-harm risk and explained a further 5% of the variance (R^2 = 0.60; adj. R^2 = .56) and was statistically significant, F (4,40) = 14.92, p<.001. Thus, the vast majority of explained variance in the detention log total was accounted for by mental health risk as recorded within the NSPIS risk assessment.

An additional simple linear regression was computed inclusive of the observation levels as determined by the NSPIS risk assessment. A significant regression equation was found, F (1,43) = 9.26, p<.01), with R^2 = .18. These results would suggest that the observation level set upon the detainees' arrival accounts for 18% of the variance within the detention log records.

Predictive Validity of Additional Measures

A bivariate correlation shows the detention log risk total to be significantly and strongly positively correlated with the initial DASA score, r(43) =.64, p<.01. Additionally, the detention log risk total also indicated a significant, strong positive correlation with the BIS-11 total, r(43) =.45, p<.01. These results would indicate that the initial DASA assessment observes risky behaviour in a manner that is similar to the detention log. Furthermore, whilst no causal

relationship can be assumed from the results of the correlation, it can be suggested that there is a strong relationship between impulsivity and problematic behaviour exhibited within police custody. There was no significant correlation observed between the detention log total and the adapted ISAS total ($r(12) = -.41$, $p = .143$).

To specifically consider the aspect of predictability, a simple linear regression was administered between the initial DASA overall score and the detention log risk total. This variable accounted for 41% of the variance ($R^2 = .41$) and was statistically significant, $F(1,43) = 30.38$, $p < .001$. Similarly, the simple linear regression including the BIS-11 total score resulted in a significant regression equation, $F(1,43) = 11.45$, $p < .01$, accounting for 21% of the variance ($R^2 = .21$). Taking into account the different types of impulsivity that are measured within the BIS-11 psychometric, the three subtraits were entered into a stepwise regression. The analysis only entered attentional impulsivity, which explained 27% of the variance ($R^2 = .27$) and was statistically significant $F(1,43) = 15.49$, $p < .001$.

The adapted ISAS measure includes information relating to the ways in which individuals have self-harmed. The thirteen options within the measure were included in a stepwise linear regression. The analysis entered 'interfering with wounds' only and excluded all

other behaviours measured. This analysis produced a significant regression equation, F (1,43) = 5.25, p<.05, that accounts for 11% of the variance within the detention log total score (R^2 = .11). Additionally, the functions of self-harm were entered into a stepwise linear regression. Only the 'self-harm as a punishment' variable was entered. This accounted for a total of 35% of the variance within the detention log total (R^2 = .35), with the regression demonstrating statistical significance, F (1,12) = 6.37, p<.05. When combining the results outlined above, a significant regression equation was produced, F (5,8) = 4.18, p<.05). Taking into consideration the results outlined above, all variables were entered into a linear regression. Although this analysis produced a significant regression equation, F (5,8) = 4.18, p<.05, the coefficients did not report any independent variables to be significant contributors. This raised a cause for concern regarding multicollinearity as further identified from the tolerance values and the variance inflation factors (Frost, 2013).

Reviewing the results of these analyses, a hierarchical multiple linear regression was calculated to consider if an increase in the variance could be achieved. In order to control the total scores from the NSPIS risk assessment, the BIS-11, and the DASA, these variables were entered into the model first (block one). This method of analysis also allows for exploration of the contribution of

the variance by more specific elements of the included assessments. Therefore, the self-harming behaviour of interfering with wounds, the function of self-harm as punishment, and attentional impulsivity variables were added into the regression (block two, stepwise). This analysis excluded the variables entered into block two. The excluded variables outcome showed that none of these variables would significantly enter the regression model at the next stage. From this, a standard linear regression was computed including the assessment variables as contained in block one. The covariates (BIS-11 total, initial DASA total, NSPIS risk assessment total) explained 72% (70% adjusted) of the variance in the detention log total, demonstrating statistical significance, $F(1,43) = 35.36$, $p<.001$). Table 15 outlines the coefficients of this regression analysis.

Via the analyses of various regressions, the results show that the NSPIS risk assessment accounts for 49% of the variance within the detention log data. However, with the addition of the BIS-11 psychometric and the initial DASA assessment, the level of variance increases to 70%.

Table 15

Regression Analysis Outcome for Final Model

	Model 1		
	B	SE *B*	*β*
Model 1			
BIS-11 Total	.12	.06	.19*
Initial DASA Total	5.28	1.17	.41***
NSPIS Risk Assessment Total	.70	.18	.53***
R^2	.72		
adj. R^2	.70		

*p<.05, **p<.01, ***p<.001.
B, unstandardized regression coefficient; SE *B*, standard error of unstandardized regression coefficient; *β*, standardized beta coefficient; R^2, explained variance; adj. R^2, *adjusted explained variance.*

Post-Hoc Analyses

Post-hoc power analyses indicated that the sample size (n=45) used in the correlation calculations was unlikely to be large enough to adequately detect any effects that may have been in existence (1-β err prob = 0.54 for two tailed test). With the power (1-β) calculated at 0.54, this suggests that there is a 54% chance of missing an association. Subsequently, this increases the probability of a Type II error occurring. A Type II error occurs when failing to detect an effect that is present, a false negative. This is where there is a failing in rejecting the null hypothesis when it is actually false (Calkins, 2005). A Type I error refers to a false positive, where the null hypothesis is incorrectly rejected favouring the alternative. (Shuttleworth, 2008). Taking into consideration the

various regression analyses, the study sample of 45 obtained statistical power with 1-β error prob = 0.83, marginally exceeding the recommended level of statistical power (Cohen, 1988).

DISCUSSION

The primary aims of this study were to include: an examination of the prevalence of risk, problematic, and violent behaviours in the police custody environment; an examination of the prevalence of self-harming behaviours and their functions; an examination of the prevalence of impulsivity and the specific types of impulsivity the detainees identify with; an exploration of the predictive validity of the current NSPIS risk assessment; and a final exploratory review of the predictive validity of additional psychological measures when considering risk in police custody. Firstly, an overall view of the results will be considered with each aim discussed in turn. The limitations of the study will then be presented, with recommendations for future research and practice to conclude.

The sample obtained within this study met the originally proposed aims outlined within the methodology section. This allows for a greater level of generalisability to the individuals who pass through this specific custody suite, but also to other police custody suites around the UK. The gender proportion as reported within this empirical study (82.2% male; 17.8% female) is not dissimilar to that discovered in the systematic review presented within this thesis (Chapter Two), with the included studies reporting 75.5% males, and 24.5% males. Similarly, the same occurred for the mean age

with 34 years being observed in the research and 36 years of age within the systematic review. The primary reasons for arrest and detention within this particular custody suite included common assault, burglary, actual bodily harm, and theft. This corresponds with the recorded crime records in England and Wales with assault, burglary, and theft the most frequently committed offences between 2015-16 (Office for National Statistics, 2016). The information regarding mental health concerns mirrors the findings obtained within the systematic review, with depression and anxiety most frequently recorded. There is a considerable wealth of empirical evidence in the literature to support a link between mental illness and offending behaviours (Hodgins et al., 1996; Marzuk, 1996; Mullen, 2001; Mulvey, 1994; Silver, Felson, & Vaneseltine, 2008). Whilst exploring this link was not an aim of this study, the descriptive information obtained provides additional confirmation that there is a vital requirement for healthcare professionals, including mental health practitioners, to be present in police custody. As McKinnon and Grubin (2014) recently explored, identifying such needs and responding to them can potentially reduce the risk exhibited within the police custody environment. These findings increase the external validity of the study and allow for a greater confidence in the implementation of any recommendations.

Prevalence of Risk, Problematic, and Violent Behaviours

It is not unrealistic to expect the occurrence of aggressive and problematic behaviours within police custody. Within this study the results show that the police considered all detainees who entered custody to have some level of risk, i.e. all risk assessments displayed a positive indication. The results would suggest that there is an over-representation of false positives in the NSPIS risk assessment, as there were a large proportion of identified risks that did not translate into actuality. Conversely, none of the NSPIS risk assessments positively identified risks for aggressive behaviour, although a total of 40% of detainees exhibited such acts during their detention. The custody environment is typically unpredictable for both the custody staff and the detainees. The primary aim of detaining an individual is to progress with criminal proceedings relating to their suspected offending behaviour. Interviews, property searches, reviews of CCTV, etc. can lead to new enquiries and change proceedings rapidly; the results of these processes can naturally impact upon the detainee, both in positive and negative ways. From observing detainees via clinical practice, an individual may remain calm during their initial period in custody but post-interview, exhibit extremely aggressive behaviours and on occasion need to be placed in restraints. The behaviour displayed is often extreme, which is why attempting to predict risk with a preventative perspective is of vital importance. Further

confounding variables that may contribute to the acts of aggression in custody include the detainees' perceptions of their previous experiences with the police, and current attitudes towards this authoritative body (Pollock, 2008; Rosenbaum, Schuck, Costello, Hawkins, & Ring, 2005).

The results suggest that medical risk is the most prevalent as recorded within the NSPIS risk assessment. This may be due to this particular category including a broad range of factors that would receive a positive indicator for the presence of risk, i.e. medication requirements, concerns regarding substance misuse withdrawal, and requests for healthcare professionals. Additionally, detainees may be more inclined to report medical concerns for the purpose of maintaining their levels of health throughout their detention. The custody environment does support this, as detainees have the same rights to medical care as any other patient and are able to have their medication bought to them, or administered on site by a nurse. Whilst this is a positive, the British Medical Association (BMA, 2009) reports that the procedure for administering medication to detainees in police stations often falls below the usual standards. Doctors are required to leave the medicine with custody staff for the detainee to take when appropriate. This increases the risk of medication being misplaced or wrongly dispensed, which in turn increases the overall risk, as would be represented within the

risk assessment (BMA, 2009). Additionally, the custody staff are aware that they are able to call on nurses, doctors, hospital staff, etc. to support them with a detainee's medical concerns and so may have greater confidence in recording and reporting associated evidence. However, the forensic physicians in police custody have dual obligations: one to the police, one to their medical profession. There may be times when the detainee does not wish to have medical information disclosed to the police and it is within their right for this to remain confidential (BMA, 2009). The forensic physician is required to make a judgement in relation to the disclosure of such information, and subsequently, this could have an impact upon future risk.

The second highest risk category as recorded on the NSPIS risk assessment is that of mental health. This particular custody suite has access to a team of mental health professionals, whereby the police are able to make referrals should they feel the detainee requires assessment. Due to the lack of mental health training that custody staff generally receive, there may be a propensity to overcompensate for this risk by reporting mental health issues. However, the lack of training may also have the opposite effect, with custody officers unable to recognise dominant psychopathology and symptomatology of mental health concerns, such as personality disorder traits. This could consequently lead to not identifying them

as a potential risk. Additionally, it has been suggested in previous research that there is a lack of acknowledgement that the custody environment can act as a trigger to exacerbating such problematic traits and illnesses (Hannan et al., 2010).

Whilst the initial NSPIS risk assessment asks two questions specifically concerning capacity, the mental health and medical categories somewhat overlap with regard to this factor. A detainee may lack the capacity to accurately understand the purpose of the risk assessment and this could diminish the accuracy of their answers and the completion of the assessment. The guidance from an appropriate adult may support with this.

Prevalence of Self-Harm and its Function

This study aimed to consider the prevalence of self-injury amongst detainees, with a focus on the function of this specific behaviour. It was hypothesised that 'affect regulation' and 'marking distress' would be the dominant functions due to previous literature results (Castle, Bassett, King, & Gleason, 2013; Klonsky, 2007; 2009; Nock, 2009; Suyemotoa, 1998). The results of the ISAS measure administered in this study suggested that this hypothesis should be rejected, with those individuals completing the assessment indicating 'self-punishment', 'anti-dissociation', and 'anti-suicide', as the most prevalent functions associated with their self-harming

behaviour. Klonsky (2007) reports that the self-punishment function of self-harm is an expression of anger or derogation towards oneself and may be a way of emanating a soothing element to an emotionally distressing experience. Being placed in police custody is an additional factor that could validate those individual's beliefs that there is a requirement for self-punishment. This self-validation amongst negative thoughts could dominate, particularly in an environment where rumination is common (Moore et al., 2013; Petty, Briñol, & Tormala, 2002). A self-harmer is not only at risk for the potential to exhibit or engage in such behaviours, but also for the reasons why. The two remaining identified functions could also be problematic considering the custody environment. Anti-dissociation, as Gunderson (1984) proposes, is where individuals may self-injure during prolonged dissociative episodes when loved ones are absent, in addition to achieving their desire of generating emotional and physical sensations; and anti-suicide is a means of expressing suicidal thoughts without risking death (Klonsky, 2007). Detention in custody is isolating with a considerable lack of contact, and the nature of the detention may impact upon an individual's desire to self-harm / commit suicide. Cummins (2008) identified that those who have been detained for particularly serious offences, such as rape or sexual offences against a child, are more likely to experience suicidal ideation. This provides evidence to support taking into consideration offence type

when assessing risk. Finally, 78.6% of the self-harmers in this sample indicated that they are alone when they participate in self-injurious behaviours and that this takes place less than one hour after they have the initial urge. Most emphasised that the act occurs almost instantly after the thought. Whilst the custody environment cannot be identified as a causal link to these specific functions of self-harm, there is certainly evidence to suggest that this specific environment could considerably impact upon an already vulnerable, individual's negative self-perceptions.

Two individuals engaged in acts of self-injury whilst detained in police custody. They were male, one 20 years of age and the other 47; both their initial observation levels were set to, 'Visit every 30 minutes'. The 20-year-old was arrested upon suspicion of burglary, had a marker for previous self-harm on his police record for using items concealed in custody, had a risk of self-harm rated as 'standard', and self-reported a diagnosis of depression. Prior to him being bailed, he had cut himself using a false nail that he had concealed upon his person. He completed the ISAS psychometric with his primary function identified as 'affect regulation'. The 47-year-old male was arrested upon suspicion of common assault and had a previous marker for self-harming behaviour using a ligature. His risk of self-harm was raised upon arrival and he self-reported a diagnosis of depression; he had consumed alcohol prior to his

detention but did not report self-harming behaviour on the initial NSPIS risk assessment, or to the researcher. This male attempted to self-strangulate by tying his jumper around his neck. He was later charged and detained for court. These two examples, whilst only accounting for 14.2% of the self-harming sample, are evidence that although the risk had been identified upon initial detention, the preventative measures (or lack of) were not effective at preventing this specific risk.

Prevalence of Impulsive Traits

Prior to the data collection, it was hypothesised that the BIS-11 would report the most prevalent scale of impulsiveness to be that of 'non-planning'. High non-planning impulsiveness would indicate a lack of careful thinking and planning, and enjoyment of challenging mental tasks (Patton et al., 1995). Haden and Shiva (2009) and Zhou et al. (2014) reported male psychiatric forensic patients and juvenile offenders scored significantly differently from their control groups and scored the highest on the non-planning scale. Furthermore, Gordon and Egan (2011) reported significant correlations between this specific impulsiveness scale and total convictions. The results from this research project follow suit, in that 55.5% of the sample scored in the clinically high range for non-planning impulsivity. The literature would suggest that this lack of careful thinking and planning contributed to the aggressive and

antisocial behaviour exhibited in the offences (Antonowicz & Ross, 2005; Farrington, 1996; Komarovskaya et al., 2007; Ward & Maruna, 2007). The statistics regarding the rate at which these individuals scored in the clinically high range, across all three impulsivity scales, shows that this is indeed a trait highly prevalent amongst those who are involved in the CJS. Almost one in two individuals (48.1%) who scored within these clinical ranges went on to behave in an aggressive manner whilst detained in custody.

Exploratory Review of Risk Assessment Predictability

The primary aim of this research project was to explore the predictive validity of the NSPIS risk assessment and consider if the implementation of psychological questioning and / or structured judgment could provide any significant improvement. It was hypothesised that psychological tools and psychologically structured risk assessment would be a more significant predictor of problematic behaviour (risk) in comparison to the current NSPIS risk assessment. The results demonstrated that this hypothesis should be rejected, as it is in fact a combination that provides a model with the greatest level of predictability in relation to risk. The results showed that the NSPIS risk assessment is a significant predictor of risk, accounting for 49% of the variance. Further analyses report that with the addition of the initial DASA assessment total score and the BIS-11 total score, this increases

the variance accounted for by 21%. The final model accounts for 70% of the variance, with all variables described contributing to the model significantly.

With the NSPIS risk assessment independently accounting for 49% of the variance, this demonstrates that it is inclusive of considering aspects of risk that are exhibited by detainees whilst in police custody. However, the six categories of risk as identified by the researchers within this risk assessment did not all significantly contribute to a proposed predictive model. The overall welfare and aggression risk categories were automatically excluded by the analysis. The exclusion of the overall welfare category may be due to aspects of a detainee's risk being captured within the other categories. One element of risk that this specific category considers is a detainee's requirement to make immediate contact with someone or if there is someone who is dependent upon him or her. The response is predominantly categorical, i.e. yes or no, and due to the immediacy of such risks, best practice would involve attempts to provide a resolution in a timely manner. Subsequently, this could provide reassurance and clarification to the detainee and ultimately diminish this level of risk.

With the aggression risk category, the descriptive data showed that there were no identified risks within this category for any detainee

at the time the NSPIS risk assessment was administered. This is somewhat surprising as the experience of arrest and initial detention has been reported as one of the most volatile and emotional times for a detainee (Hayes, 1996). Although with 95.6% of this sample having previously been detained in police custody, their familiarity with the environment and criminal justice proceedings could lead to a reduction in conflict and distress (Baum, Fisher, & Solomon, 1981). A total of 40% went on to exhibit some form of aggressive behaviour during their time in police custody. Although no causal explanation was explored within this research project, the 'pains of custody' literature (Jones, 2007; Sykes, 1958) supports such change in behaviour over the period of detention. With this particular risk initially unobserved, it provides supporting evidence in emphasising a dynamic and fluid risk assessment procedure (Cummins, 2008).

The regression analysis reported that four out of the six risk categories accounted for 56% of the variance within the detention log total. This increase in variance accounted for, in comparison to the NSPIS risks assessment alone, may be due to the increase in variables entered into the statistical analysis. Although, as outlined above, may accurately indicate that the majority of a detainee's risk is accounted for within these four risk categories: mental health, capacity, self-harm, and medical. The results state that mental

health risk explains 32% of the variance. This is not surprising as the literature suggests a high prevalence of mental illness amongst those who commit crime (Payne-James et al., 2010; Peay, 2011; Rekrut-Lapa & Lapa, 2014; Vinkers et al., 2011). This is further corroborated by the results of the systematic review presented in Chapter Two. With the literature highlighting the unsuitability of the police custody environment (Adebowale, 2013; Cummins, 2008; Jones, 2007; Skinns, 2011), in that it can exacerbate any pre-existing mental health concerns, this consequently increases the level of risk. As previously discussed, there is little consistency in the mental health awareness training delivered to the police (MIND & Victim Support, 2013) and so recognition of associated symptomatology may be inaccurate. This then compromises the ability to implement solutions that can manage this specific risk. The remaining three risk categories of medical, capacity, and self-harm explain an additional 29% variance. The response to these elements of risk, administered by both the police and specialist staff present within police custody, can be implemented on a practical level. For example, appropriate medication can be dispensed, an appropriate adult can be sourced, and the removal of potential ligature points and distribution of protective clothing can take place. These practical resolutions, observed by detainees, can aid in the reduction of such risks.

With the remaining 51% of the variance unaccounted for, this indicated that consideration for further exploration should be given. This was investigated via further regression analyses taking into account variables that had demonstrated a level of statistical significance. The final regression model included the BIS-11 psychometric. The literature supports a strong association between impulsivity and aggression (in addition to other negative externalised behaviours; Critchfield et al., 2004; Houston et al., 2003; Pechorro et al., 2015), as well as mental health issues (Vasconcelos et al., 2014; Zhou et al., 2014). The trait of impulsivity is also reported to be elevated amongst forensic populations (Haden & Shiva, 2008; Miller & Lynam, 2001). Therefore, it is somewhat expected that a measure of impulsivity would support the prediction of risk in the police custody environment. Empirical research claims impulsivity to be a vulnerability marker and affected by environmental influences (Verdejo-Garcia, Lawrence, & Clark, 2008; Wikström & Treiber, 2007). With the police custody environment being identified as distressing (Hannan et al., 2010), this may exacerbate an individual's impulsive tendencies and lead to engagement in negative behaviours, increasing the level of risk. The BIS-11 measures impulsivity as a prolonged trait and so with the addition of this information for each individual, it adds a further personal layer to the detainee's risk assessment.

The final regression model also includes the DASA assessment. This assessment has been shown to have moderate to strong predictive ability in relation to the exhibition of general aggressive behaviour, self-harm, and physical aggression towards members of staff (Barry-Walsh et al., 2009; Daffern & Howells, 2007). With these behaviours occurring regularly within police custody, it can be anticipated that the assessment would replicate its previous findings in this specific environment. Both the NSPIS and DASA risk assessments contain a similar number of aspects of risk; nevertheless, there should be minimal overlap in the information obtained due the nature and design of the separate assessments. The NSPIS risk assessment is administered as soon as is practicably possible, from the moment a detainee arrives into custody. PACE Code C defines police custody risk assessments as ongoing processes that must always be subject to review if circumstances change (Home Office, 2012). The DASA differs in that it is administered after a period of time and retrospectively reviews behaviour. A change in the NSPIS risk assessment may be as a response to problematic behaviour, whilst the DASA actively reviews past behaviour to predict future behaviour in a 24-hour period. Problematic behaviour exhibited by detainees may not necessarily indicate a change in the observation levels as included with the NSPIS risk assessment, or the severity level within the DASA. With more specific guidelines regarding aggression and risky

behaviours included in the DASA, in addition to an accrued total of such behaviours observed, this supports a dynamic and relevant risk assessment for each individual. Furthermore, combining these two assessments may counteract some of the biases that can present with the self-report information initially provided in the NSPIS risk assessment. The literature supports such a structured clinical judgment approach that combines evidence-based assessments with a level of sensitivity in order to address individual risk factors (Abderhalden et al., 2008; Burman, Armstrong, Batchelor, McNeill, & Nicholson, 2007; Daffern & Howells, 2007).

Although this final regression model may be a greater predictor of risk in comparison to the NSPIS risk assessment alone, it is not without its practical shortfalls. The implementation of such measures and assessments would increase the time of completion by up to fifteen minutes, with a further assessment required a minimum of one hour after the detainee has arrived into custody. With the proposed model, it may not be feasible to complete the entire risk assessment at the custody desk, as is the current standard procedure with the NSPIS risk assessment. With both models reliant upon self-report information from detainees, relocating the completion of the risk assessment may provide for a more accurate portrayal of their risk. Skinns (2011) reported that detainees often felt ashamed disclosing personal information over

the custody desk, including details regarding previous engagement in self-harming behaviour. This particular location may have numerous people present including staff and other detainees. Whilst there are specialised interview rooms available in the custody suites, these are predominantly used by the police to interview the detainee regarding criminal matters. This may reduce the level of reassurance felt by the detainee towards expecting impartiality from the risk assessor when conducting the assessment (BMA, 2009). The DASA assessment is to be completed retrospectively with relevant information obtained from the detention log, with no detainee contact required. An additional obstacle to overcome would be the interpretation of the BIS-11 psychometric; conjunctively, this raises the question of who would complete the risk assessment if such an addition were to be included. As stated in Chapter Three, there are no obtainable minimum requirements for the administration of the BIS-11, although experienced professional administration is desired. The interpretation in this circumstance would amount to the totalling of a score and associating this score to a pre-defined level of impulsivity. A training session would be required to ensure custody staff were not working outside their boundaries, providing clarity that the results could only be used for the purpose of the risk assessment, i.e. they would not be able to form diagnoses or recommend treatment based upon the outcome. Taking this information into account, it

could be argued that this responsibility could remain with the custody staff, as their competency to complete the initial assessment is still present and training will provide them with the skills to complete the additional assessments. However, if sufficient resources were available, it could be suggested that introducing a healthcare professional to support with the completion of the risk assessment would be beneficial. A multi-disciplinarily approach could reduce the risk of bias by increasing joint decision-making, which may also increase the detainee's level of reassurance as previously discussed.

Exploring the introduction of a psychometric assessment and a structured clinical assessor of situational aggression to the current NSPIS risk assessment was with the aim of increasing predictability levels, specifically in regard to the potential exhibition of problematic behaviours by a police custody detainee. The intention would be to reduce the opportunities for such behaviour to occur, with the view of improving levels of safety for both the detainee and custody staff. It would be pivotal to fully inform the detainee of the purpose of the risk assessment prior to completion, primarily so that they can provide informed consent. Additionally, they should be made aware that the data from the psychometric assessments would be accessible as outlined by PACE Code C, Section 3.8A guidelines (Home Office, 2012). This states that:

> The content of any risk assessment and any analysis of the level of risk relating to the person's detention is not required to be shown or provided to the detainee or any person acting on behalf of the detainee. But information should not be withheld from any person acting on the detainee's behalf, for example, an appropriate adult, solicitor or interpreter, if to do so might put that person at risk. (p.9)

Limitations

One of the considerable limitations of this study is the sample size. The post-hoc analyses reported that this limited the reliability of the results, with the probability heightened for the occurrence of statistical errors. This must be taken into consideration when reviewing the results, particularly when contemplating any action towards practical implementations. Additionally, the sampling method may have introduced an element of bias into the study. It included individuals who disclosed a willingness to take part and whose behaviour was considered non-aggressive by the custody sergeant on duty. As previously outlined in the methods section, the implementation of the exclusion criteria may have largely prevented the inclusion of riskier and more aggressive individuals within the study. Therefore, the aspects of risk that were reported as prevalent within this study may not be wholly generalisable to the police custody population.

Directions for Future Research and Practice

Future research should include a pilot project that implements the risk assessment model suggested within this study to consider its efficacy in predicting risky behaviour in police custody. This would provide empirical evidence to either reject or support its use amongst this population, within this context and environment. Additionally, revising the inclusion and exclusion criteria would be beneficial with the aims of including a greater level of diversity within the sample. Research that creates profiles of the riskier behaviours would be of considerable value. These profiles could be obtained from the information and data recorded in this current research project. Creating such profiles would allow for the police to easily and immediately identify an individual that possesses qualities that have previously been related to the exhibition of aggressive and risky behaviours. These profile characteristics could include gender, age, offence type, substance misuse, mental health concerns, impulsivity levels, etc. The results of this combined with the implementation of a structured clinical judgment assessment could allow for a more substantial predictor. Mental health and medical issues awareness training would be of value to administer to custody officers, with the view of instilling a greater confidence in the completion of the risk assessments.

CONCLUSION

The study reported that there is a considerable presence of highly impulsive individuals within police custody that lack the careful planning and forethought required to reduce their problematic behaviours. In addition, these individuals also display a variety of aggressive behaviours whilst detained in police custody that can range from kicking furniture to verbal aggression. Those individuals that disclosed engagement in self-harming behaviours prior to their detention showed that the dominant function of their self-harm was that of self-punishment. The scholarly literature suggests that the custodial environment can exacerbate these factors and a greater acknowledgement of this is required. The current NSPIS risk assessment possesses an element of predictive validity in relation to risk exhibited throughout an individual's detention accounting for 49% of the variance. However, with the addition of one DASA assessment (completed a minimum after one hour into the detention period) and the BIS-11 psychometric total score, the level of predictability increases by 21%. The proposed model also introduces a more dynamic approach to the assessment and allows for the appraisal to be informed by literature and empirical evidence. This suggests that there is room for improvement in the police custody risk assessment to predict the exhibition of risky

behaviours; however, this introduces a number of practical obstacles to overcome.

Rationale for Chapter Five

Chapter Four identified a high prevalence of trait impulsivity amongst police custody detainees. In addition, it reported on individuals who engaged in self-harming behaviour both prior to their detention in custody and during. The prevalence of the healthcare needs observed (including mental health), combined with the personality facets of impulsivity and potentiality to engage in self-harming behaviour, can equate to an individual at risk. When criminal proceedings lead to an individual being released from police custody, their vulnerabilities still remain and support for this is required. This is of particular relevance when considering those individuals who are released straight back into the community. Chapter Five presents a single case study involving the assessment and treatment of a female who exhibited impulsive and self-harming behaviours whilst in detained in police custody.

CHAPTER FIVE

DBT-INFORMED SKILLS TRAINING IN THE COMMUNITY WITH AN INDIVIDUAL ENTERING NHS SERVICES VIA DETENTION IN POLICE CUSTODY: A SINGLE CASE STUDY

Ethical Considerations

The following case study is based upon a factual account of the assessment and treatment of an individual who was detained in police custody after being arrested upon suspicion of burglary. This individual was subsequently case-managed by the CJLD service due to identified psychological needs. The assessment and intervention undertaken was bespoke to the individual with the view of providing a short-term psychological intervention whilst reviewing an onward referral for long-term treatment.

In order to maintain anonymity, the identity of the client has been concealed and their name altered, and will be referred to as "Ms Taylor" throughout. Informed consent was obtained from the client prior to translating their details in this manner (see Appendix 12).

ABSTRACT

This case study considers the effectiveness of a bespoke community-based, DBT-informed intervention that took place with an individual who had come into contact with the CJLD service via detention in police custody. The initial assessment determined that the individual was suffering from mental health issues, inclusive of self-harm behaviour, meeting the criteria for borderline personality disorder, and expressions of unresolved trauma. It was considered that these concerns may be improved via engagement in a package of psychological therapies designed to manage levels of emotional regulation. The psychometric assessments and psychological formulation determined that short-term DBT-informed treatment, focusing on skills training surrounding emotional management, would benefit the individual. This was to be delivered whilst waiting for a long-term referral to mainstream services focusing on the unresolved trauma and maladaptive personality traits. The client was prematurely discharged from treatment due to considerably high non-attendance rates. This was theorised to be due to a lack of motivation and / or overwhelming feelings of guilt (or shame) to address her difficulties. Deteriorations were observed in the individual's impulse controls via psychometric assessment and in the manifestation of reoffending, and changes in functions of self-harm are hypothesised to be due to alterations in relationships,

linked to the offending behaviour. All evidence obtained suggests a further need for treatment when the individual is motivated to engage. Recommendations are made with regard to possible future directions for CJLD teams, including either the implementation of DBT-informed or general skills training interventions, in addition to more informed assessments.

INTRODUCTION

A review commissioned by the Secretary of State for Justice in England and Wales investigated the treatment of individuals within the CJS who have mental health problems and learning disabilities. The evidence obtained from a range of sources resulted in the publication of The Bradley Report (DoH, 2009), which proposed a total of 82 recommendations for improvement. These recommendations endorsed the implementation of better levels of support and treatment for the targeted population, throughout all stages of the CJS (Durcan et al., 2014). The report concluded that intervening as early as possible would provide the best opportunity for the management and treatment of those individuals with mental health issues (DoH, 2009). The Women's Justice Taskforce reported that women with mental health problems are more likely to commit crime, and agree that early intervention is crucial to aid in the diversion away from the CJS (Prison Reform Trust, 2011). Scott et al.'s (2009) empirical research supported these conclusions, with their results showing that 91% of women who enter police custody showed positive symptomatology of mental illness, with 54% having historically harmed others, or themselves. Early intervention would allow for an opportunity to identify a variety of vulnerabilities (including mental health issues, self-harm, and

victimisation), with the view of providing support to avoid a re-entry to the CJS.

The initial recommendation for early intervention led to selected police custody suites gaining access to liaison and diversion services. These services included: ameliorated screening and identification of individuals with mental health problems; staff informing the police and prosecutors of any relevant information to facilitate diversions of such offenders from the CJS; and the signposting of individuals to local health and social care services as appropriate. The majority of such services available cater for both males and females. However, the prevalence of services that are accommodating to one specific gender can vary depending upon their location. For example, there may be fewer options for women to gain support from a refuge centre than to seek an alternative avenue of support, such as a counselling service, in a particular geographical location. The DoH actively recommends a gender-specific approach to support the needs of women offenders, particularly those with mental health care needs (Earle, Nadin, & Jacobson, 2014).

The early identification, assessment, and improved information-sharing regarding individuals could better inform the charging, prosecution, and sentencing decisions made for individuals with mental health problems. The long-term impact may be that more

offenders can be treated in the community, ensuring that those who are required to be in prison custody can receive targeted and effective care whilst they are incarcerated (DoH, 2009). This may be particularly favourable for women who enter the CJS, as there is evidence to suggest that community sentences enable women to continue providing care for their children, take control of their lives, and adequately address the cause(s) of their offending behaviour (Hedderman & Hough, 1994; Prison Reform Trust, 2011). Player's (2014) explorative review argues that there should be a requirement for differential treatment between male and female offenders. This is to support the theoretical differences between the two genders and their behaviours, and the ideological constructs of equality, rehabilitation, and justice. There appears to be relatively little support for women to be managed within custodial settings, with this avenue for treatment primarily seen to cause disruption to their already chaotic lives (Ginn, 2012). Independent reviews on this matter, such as the Corston Report (Corston, 2007), further corroborate that prison is rarely an appropriate or proportionate response to women who enter the CJS (Ginn, 2013). However, the practical application reinforcing these perspectives is yet to be instrumented and achieved (Ginn, 2013).

In February 2010, Nottinghamshire Healthcare NHS Trust established the Bradley Implementation Project with the CJS and

other partners. Its aim was to develop and implement the recommendations of The Bradley Report, via a CJLD pilot service. The team, which consisted of forensic community psychiatric nurses (FCPN) and forensic psychologists, attended a local police station on a daily basis to screen, identify, and assess individuals who had been recognised to have a mental disorder. Upon identification, the team is to advise police of any immediate needs; advise police and the CPS on potential diversion options; and to support the detainee (Hanka & Collins, 2011). The team is required to refer onwards to health and social care services when appropriate and to liaise with any existing care agencies. Should the case proceed through the CJS, they are to offer the court available information relating to any identified mental disorders to assist with decision-making; to support bailed mentally disordered offenders in accessing mainstream services in the community; to advise and liaise with Probation services in relation to pre-sentence reports and the management of mentally disordered offenders subject to community orders; and to provide information to prisons should a remand to custody occur, all within a timely manner (NHS England, 2014).

The CJLD service aims to reduce health inequalities, improve physical and mental health issues, tackle offending behaviour, reduce and manage substance misuse, reduce reoffending, include

clear treatment goals, and strike a balance between individual rights and public safety (NHS England, 2014). Whilst the CJLD service has no input regarding an individual's legal and criminal proceedings, the service holds the capacity to provide the support desired by the independent reviewers on female offenders' care within the earliest stage of the CJS. Despite this consideration, the Brighter Futures Report (Earle et al., 2014) comments that the service provision remains intermittent in its support for women in particular, and that adequate developments have not yet taken place to create a sufficient impact upon female offenders' treatment. However, a specific review of the effectiveness of CJLD service resources revealed that participation in services offered to offenders with mental illnesses had a positive impact upon their criminal justice and mental health outcomes (Scott, McGilloway, Dempster, Browne, & Donnelly, 2013).

The client in this case study was identified as having mental health issues via a CJLD service assessment that was administered during her detention in police custody. It was further established that she was currently self-harming, misusing substances, and had untreated historical trauma relating to sexual and emotional abuse. The police notified the CJLD service assessor that this client would be bailed pending further enquiries for the current offence of burglary. With the CJLD service aiming to support bailed mentally

disordered offenders, the remainder of this introduction will focus on the proposed short-term treatment for this client, prior to accessing mainstream services in the community.

At the time this individual was detained in police custody and volunteered to engage in the support the CJLD service could offer, there was no alternative that would have provided treatment as immediately as the proposed intervention. If there was an immediate threat to either the client themselves or others, only then would additional services have been able to rapidly connect, i.e. the crisis resolution and home treatment teams (MIND, 2015). A short-term DBT-informed intervention was identified as appropriate for this client via assessment and psychological formulation. The implementation of this treatment was to collaboratively provide the client with skills to adaptively respond to emotional distress and to provide continuity of care in the community.

Dialectical Behaviour Therapy (DBT)

DBT is a structured, cognitive behavioural treatment originally created by Marsha Linehan (1993) for use with borderline personality disorder (BPD) clients with chronic parasuicidal problems (Swales, Heard, & Williams, 2000). This approach to behaviour therapy utilises three theories: dialectical philosophy,

behaviour theory, and biosocial theory. These theoretical perspectives aim to increase motivation to change, enhance capabilities, generalise gains to clients' environment, and aspire to structure their environment to reinforce their gains (Rizvi, Steffel, & Carson-Wong, 2013). DBT is a widely known, highly empirically supported treatment (Chapman, 2006). With its integration of a variety of theoretical domains, this generates an increase in its suitability for individuals from a multiplicity of backgrounds. Rizvi's (2011) findings suggest that DBT is effective for those factors that it intends to target but in contrast, shows that many individuals continue to engage in problematic behaviours following one year of treatment. Research shows that the personality psychopathology of the clientele appropriate for DBT (i.e. BPD) is a significant contributor to the high dropout rates commonly transpiring within three months of intervention (Kelly et al., 1992). BPD is affiliated with an assortment of other behaviours that interfere with the successful delivery of treatment, such as: prematurely ending sessions or overrunning sessions, displaying extreme emotion dysregulation during sessions, dissociation, not attending appointments or showing up extremely late, and not completing out-of-session work (Linehan, 1993; Stone, 2000 as cited in Rizvi, 2011). Considering such factors, treatment failure is not an uncommon occurrence.

A distinctive and fundamental element of DBT is its use of dialectical thinking (Palmer & Wright, 2007): a process of polarisation, tension, and synthesis in its understanding of client behavioural patterns (Robins & Rosenthal, 2011). Such a philosophy includes holding opposing viewpoints whilst simultaneously looking for the truth. This way of thinking is advantageous when conceptualising problems for clients who have difficulty tolerating contrasting beliefs (Rizvi et al., 2013). The behavioural theory domains consider the feelings, thoughts, and observable behaviour of the individual with the therapeutic intervention focusing on decreasing maladaptive behaviours via skills training (Lynch, Chapman, Rosenthal, Kuo & Linehan, 2006).

Finally, Linehan (1993) postulates that the biosocial theory explains the maladaptive personality pathology of those whom DBT was designed to treat. The biosocial theory speculates that the combination of a biological dysfunction (greater emotional reactivity and sensitivity, and slower return to baseline), and an invalidating environment are the catalysts for pervasive emotion dysregulation (Crowell, Beauchaine, & Linehan, 2009). In addition, research suggests that the development of neural structures related to emotion regulation can be altered by early negative childhood experiences such as neglect, or trauma (McLaughlin, Sheridan, & Lambert, 2014).

Feigenbaum (2010) discusses that as emotional arousal diminishes the effectiveness of cognitive processing systems, impulsive acts are more likely to occur. These impulsive acts decrease the level of emotional intensity in that moment but can be destructive in the long term. One of the most prevalent acts of impulsivity amongst the BPD population is that of deliberate self-injury (i.e. self-harm without suicidal intent; Bresin, Carter, & Gordon, 2013; In-Albon, Bürli, Ruf, & Schmid, 2013; Klonsky, 2007). Whilst the act of self-harm may hold a variety of functions for an individual, DBT recognises that it should be one of the first treatment targets. There is a considerable evidence base and theoretical rationale supporting DBT as a treatment for self-injurious behaviours (APA, 2006), particularly with its inclusion of an emotion regulation module. The development of this module was based upon the supposition that a decrease in emotion dysregulation will reduce the need for engagement in maladaptive behaviours that serve to regulate emotions (Gratz, 2007). Gratz and Roemer (2004) theorise emotion regulation to be a multifaceted construct involving: the awareness, understanding, and acceptance of emotions; the ability to engage in goal-directed behaviours, and inhibit impulsive behaviours when experiencing negative emotions; the flexible use of situationally appropriate strategies to modulate the intensity and / or duration of emotional responses, rather than to eliminate emotions entirely; and the willingness to experience

negative emotions as part of pursuing meaningful activities in life (as cited in Gratz, 2007). To achieve these aspirations with an individual whose regulation is dysfunctional, the treatment seeks to attain a level of emotional awareness and understanding, with the hope of up-skilling the individual to label and identify emotions (Gratz, 2007). DBT is not commonly conducted within the community, but Blackford and Love (2011) hypothesise that the skills-training elements of the overall therapy can adequately prosper if implemented within community mental health services. Pilot studies adopting this approach have achieved promising results in reducing self-injurious behaviours (Evans et al., 1999 as cited in Blennerhassett & O'Raghallaigh, 2005; Stiglmayr et al., 2014). There are a variety of studies that show that DBT is more effective at decreasing dysfunctional symptomatology in comparison to treatment as usual, with additional evidence showing engagement in treatment increasing social operation (Brazier et al., 2006; Linehan et al., 1999). Administering skills training to an individual with an identified mental health need in the community and involved with the CJS, who will be waiting for appropriate long-term treatment, can provide that person with the opportunity to receive support where ordinarily they would not.

The client in this case study was currently on bail for burglary against one of the residents of the care home where she was an

employee. The client was subsequently dismissed due to the offence, with her co-accused being her current intimate partner. Research completed by Blevins, Kuhns, and Lee (2012) showed that the motivation for such an offence is largely to fund an existing drug habit, in addition to experiencing a level of thrill-seeking. They further reported that female burglars are generally more impulsive than males and prefer to steal from homes and residences with a significant other. When the treatment of such offenders is considered, their risk of reoffending is an important aspect. The MoJ (2011) shows that individuals whose index offence is that of burglary have the highest proven reoffending rate at 48.1%. DBT's target is not to reduce recidivism, so intervention in this case would not be expected to explicitly deter an individual from reoffending. However, by providing a support network and an opportunity to acquire new skills, the individual may be greater informed about how to manage their emotions and thoughts, subsequently leading to an avoidance in offending behaviour (McCann, Ivanoff, Schmidt, & Beach, 2007).

The aim of this case study is to specifically examine the therapeutic efficacy of providing short-term DBT-informed work (focusing on emotion regulation) as a pre-cursor to long-term psychological treatment. The intervention was provided to an individual who has come through police custody and currently self-harming.

Effectiveness will be measured through the comparison of psychometric assessments in relation to impulsivity, functions of self-injurious behaviours, self-esteem, and overall engagement in the therapeutic process.

ASSESSMENT

To effectively assess an individual who has been detained in police custody, the assessing clinician is required to target domains ranging from childhood experiences, school life, and relationships, through to their current circumstances and reason for being detained in custody. This is with the view of obtaining evidenced-based written information, such as a thorough history, to make an accurate judgement on an individual's required need(s) (Clark, 2011). The assessor's purpose is to ascertain mental wellbeing, to consider support requirements for the duration of detention, and implement support with an appropriate service upon release (if applicable).

Initial CJLD Mental Health Assessment and Referral

Standard procedures (see Appendix 13) for assessing individuals in police custody were followed in relation to Ms Taylor's initial CJLD service mental health assessment. Documentation from the police indicated previous markers for engagement in self-harming behaviour, a self-reported diagnosis of depression, and described her presentation upon arrival in custody as "distressed and tearful". Based upon this information, a CJLD service FCPN determined that Ms Taylor required a CJLD service-specific mental health assessment to ensure her wellbeing whilst detained, and to consider

if support of services were required upon release. The CJLD mental health assessment consists of a semi-structured interview and, if deemed appropriate by the assessor, a Personality Disorder Questionnaire (PDQ-4+; Hyler, 1994). These assessments allow for: further exploration of the severity of the self-reported mental health issues, using clinical judgement to determine if they are situational or chronic; the exploration for a cause of the suspected offending, reviewing contributing static and dynamic risk factors (Andrews & Bonta, 1994); an opportunity to build up a rapport with the detainee should further assessment be required in the community (Tahan & Sminkey, 2012); and a review to reduce self-report / social desirability bias that may present within the initial NSPIS risk assessment (Crandall, 1976).

The CJLD service assessment continued with Ms Taylor over three additional sessions in the community. The results were utilised to identify Ms Taylor's problem areas and review avenues of support and treatment. It was concluded by the CJLD service assessor that Ms Taylor "may benefit from engaging in a package of psychological therapies, aimed at aiding her in getting her a better understanding of her psychological needs and regulating her emotions". The PDQ-4+ completed by Ms Taylor was valid with appropriate responding. It showed a significant personality psychopathology across the domains of borderline, paranoid, and avoidant personality disorders

with anti-social, negativistic, narcissistic, depressive, and dependent traits. Subsequent to these results, an internal referral was made within the CJLD service to the author of this report, with the provision of providing a psychological assessment and formulating an appropriate treatment pathway.

CLIENT DETAILS

The following information has been obtained from the individual's police documents, initial assessment paperwork, multi-disciplinary notes and liaisons with the CJLD service assessor.

Social Circumstances

Historical

Ms Taylor is a 28-year old mixed-race female. She has two children to care for aged eight and ten years of age. Ms Taylor has one younger brother and visits said brother and her parents every few weeks. Ms Taylor reports her childhood to have been both a happy and unhappy time for her, commenting that she cannot remember large parts of it. Ms Taylor did not provide an explanation for the lack of memories during her childhood years. Ms Taylor left school aged 14 with no qualifications.

At the age of 14, Ms Taylor's then boyfriend forced her to live in a flat with him and she was unable to leave without his consent. Ms Taylor stated that he permitted her to be raped by his brother and that this was a constantly abusive relationship for 10 years. Ms Taylor became pregnant with twins at the age of 15, although miscarried. This trauma, including the abuse within the relationship, remains unresolved and untreated. Ms Taylor

commented that she has thoughts of harming her ex-partner for the perpetrated abuse throughout their relationship. Her ex-partner is the father of her two children and they stay with him on alternate weekends.

Offending Behaviour

Ms Taylor had no previous arrests or convictions prior to this arrest for burglary, theft of a dwelling, and concerns in the supply of cocaine. Ms Taylor was one of a small group of employees with access to the residential care home concerned within the suspected offences. She was bailed regarding the burglary and refused charge regarding the concerns of supplying cocaine and charged with the following alternative offences: concerned in the supply of a controlled drug of class B (cannabis) and possession of a controlled drug of class B (cannabis / cannabis resin).

Current

Four years ago, Ms Taylor moved residences to escape her ex-partner; it was at this time that she met her current partner. They currently live together with Ms Taylor's children and she reports that he is continually supportive. Ms Taylor started her first job when she was aged 26 as a carer with an independent company that provides health and social care. As a consequence of the

offence, Ms Taylor lost this job and is now struggling to find employment that will suit due to the restrictive bail conditions. In addition, Ms Taylor is under some financial pressures due to various debts.

Mental Health

The CJLD service assessment reports that Ms Taylor displayed symptoms that are consistent with those of BPD (APA, 2013; see Appendix 14): presenting as emotionally unstable, distressed, tearful, and in low mood. The assessment indicated that Ms Taylor's responses were extreme and negative towards herself, life in general, and the world around her, with a tendency to focus on others being responsible for her difficulties. In addition, Ms Taylor was very self-critical and self-deprecating, feeling that she has been unable to provide her children with their materialistic needs, expressing that "they would be better off if I were dead". There is no formal diagnosis in place for Ms Taylor; however, she is currently prescribed anti-depressant medication by her GP.

Substance Misuse

Ms Taylor smokes cannabis daily and takes illicit drugs (cocaine and amphetamine) at weekends. Ms Taylor states that there is an element of enjoyment in taking these drugs as they make her feel

"normal" and block out difficult emotional issues. She comments that she does not care about the effects these substances have on her physical health, as she is "only waiting to die anyway". Within the month prior to the initial assessment, Ms Taylor had frequently been taking amphetamine that she did not pay for, indicating the debt had been settled in "other ways" - an "easy" way for her to obtain drugs. Ms Taylor consumes alcohol on a social and regular basis, and whilst knowing her limits, admits that she will still continue to drink to a point where she is not in control. Due to Ms Taylor's contact with the CJS, she is now engaging with Substance Misuse Services (SMS) on a mandatory basis, with fortnightly appointments.

Self-Harm

Ms Taylor reported that she first self-harmed aged 10, sitting in the bath and scrubbing the dirt off her nails until they were "very red, very sore, and bleeding". Ms Taylor was unable to provide a reason as to why she completed such behaviour. Over the years, Ms Taylor has tried a wide variety of self-harming behaviours, although never with the view of committing suicide. Ms Taylor's preferred method of self-harm is cutting; however, she reports that this might not happen for a period of six months, although "when it happens, it happens a lot". Ms Taylor reported thoughts of harming herself

whilst detained in police custody and the assessment stated that she is likely to "exhibit impulsive suicidal behaviours if detained for prolonged periods of time, or under significant distress". Ms Taylor reported that she often "wishes [she] were dead", "is only waiting to die", feeling "it would be better if I were dead, I would feel better and the kids would be better off with my parents", and "I don't want to wake up". Whilst verbally expressing a wish to die, Ms Taylor did not report feeling suicidal, but further discussed regular engagement in self-harming behaviours. She continued by commenting that she enjoys feeling the pain that these behaviours induce, stating, "there's more to self-harm than wanting to kill yourself". When asked, Ms Taylor reported that she wants to stop self-harming for her children, as on occasions they have seen the marks and asked questions. She acknowledges difficulties in regulating her emotions, and that this can result in both verbal and physical outbursts that can include harming herself.

Pre-Intervention Psychometrics

The following pre-intervention psychometrics were administered to Ms Taylor by the author as additional sources of information to the CJLD assessments and the PDQ-4+. In combination with measuring treatment effectiveness, the psychometrics provide reliable evidence to inform treatment. The administration of psychometric

assessments allows for the comparison to a relative population and provides a standardised guide for the clinician to use. Whilst many psychometric assessments include statements to decrease random responding, caution must be given as individuals may want to respond in a socially desirable manner. Consequently, this may distort the effect of the individual's psychological defences and produce a psychological formulation that lacks a resemblance to their true difficulties (Ward & Stewart, 2003).

Impulsivity

Ms Taylor's level of impulsivity was measured via the BIS-11 (Patton et al., 1995) - a 30-item self-report questionnaire designed to assess the personality / behavioural construct of impulsiveness. Stanford et al. (2009) reported reasonable test-retest reliability over one month (=.83) and stated the internal consistency to be 'good' (α=.83). Ms Taylor's motor impulsivity was found to be within a 'normal' range (±1SD) for the population closest to her current profile (substance abusers; Swann et al., 2004, as cited in Stanford et al., 2009), with her attentional impulsivity within ±2SDs. The results show that Ms Taylor's non-planning and overall impulsivity are greater than 2SDs above the norm, suggesting that her thoughts and actions relating to impulsivity are at a clinically significant level, creating a cause for concern.

Functions of Self-Injury

Ms Taylor was assessed using the ISAS (Klonsky & Glenn, 2009), a two-part self-report measure that initially assesses lifetime frequency of 12 non-suicidal self-injurious (NSSI) behaviours, i.e. those performed intentionally and without suicidal intent. This also includes five additional questions assessing descriptive and contextual factors of lifetime engagement in NSSI behaviours and finally the function of the individual's NSSI behaviours. Glenn and Klonsky's (2011) findings suggest the ISAS has good test-retest reliability for the behaviour scales (=.68), with both the interpersonal functions and intrapersonal functions having excellent reliability at =.87 and =.80 respectively (Klonsky & Glenn, 2009).

Ms Taylor indicated that she had engaged in: cutting, biting, carving, pulling hair, interfering with wound healing (e.g. picking scabs), rubbing skin against rough surface, and swallowing dangerous substances. Ms Taylor was unable to estimate the number of times she had performed each NSSI behaviour, stating that they occur frequently and that engagement started approximately 17 years ago. Ms Taylor disclosed she had most recently harmed herself eight days prior to this assessment, that she 'sometimes' feels pain during self-harm, 'sometimes' self-harms when she is alone, and that 'less than one hour' of time elapses

between the urge to self-harm and the act. She responded positively when asked if she wanted to stop self-harming. Ms Taylor's responses to the second section of the ISAS psychometric indicate that her primary function for engaging in NSSI behaviours is for autonomy (2SDs above the mean). In addition, Ms Taylor's scores indicate that her secondary functions include toughness, anti-suicide, anti-dissociation / feeling generation, and interpersonal boundaries.

Self-Esteem

Ms Taylor's level of self-esteem was measured using the Rosenberg Self-Esteem Scale (SES; Rosenberg, 1965). The 10-item self-report scale determines global self-worth by measuring both positive and negative feelings about the self. Ms Taylor scored 20 out of a possible 40. The normative data for the UK population shows an average total score of 30.55, and further proposes that a respondent who scores less than 21 overall has a 'very low' level of self-esteem.

Locus of Control

Ms Taylor was assessed using the Rotter's (1966) Locus of Control Scale; a 29-item self-report questionnaire that measures an individual's internal, versus external, perception of personal control.

Both internal consistency and test-retest reliability are 'good' at =.70 (Peterson, 2003). The highest score obtainable on this scale is 23 and Ms Taylor scored a total of 19. This 'very high' score indicates that Ms Taylor has an external locus of control: believing that events, good or bad, are caused by uncontrollable factors such as the environment or other people.

Summary of Pre-Intervention Psychometrics

Ms Taylor's external locus of control instils the belief that any event that happens to her, whether good or bad, is caused by uncontrollable factors such as the environment or other people. Ms Taylor's primary function of her engagement in NSSI behaviours is to feel a sense of autonomy, giving her an element of control over her life as her core beliefs epitomise a lack of control. An additional function of Ms Taylor's engagement in NSSI behaviours includes that of anti-dissociation (feeling generation), which may be linked to her previous prolonged sexual abuse. Research (Low, Jones, MaCleod, Power, & Duggan, 2000; Marzano, Hawton, Rivlin, & Fazel, 2011) suggests that these two factors (past trauma (specifically sexual abuse) and dissociation) are closely linked to low self-esteem and impulsivity. The psychometrics indicate that Ms Taylor has a significantly low level of self-esteem and is impulsive in regards to a lack of careful thinking, and a lack of concern for the

future. Ms Taylor's frequent engagement in a variety of NSSI behaviours would indicate impulsive decision-making, i.e. not choosing a consistent method she knows is safe, and acting upon the urge to self-harm within 'less than one hour'.

Client Formulation

Individual case conceptualisation contributes towards the organisation of complex information about an individual: proposing various hypotheses about problem triggers for the individual and linking problems with common underlying causes via psychological mechanisms. In addition, case level formulations support staff and the client by providing guidelines for appropriate interventions with the aim of achieving optimal outcomes (Jones, 2010; Stenhouse & Van Kessel, 2002; Vess, Ward, & Collie, 2008). With Ms Taylor's psychosocial information and the results of the psychometrics, an integrative case formulation was completed.

The information obtained from assessments allows for the identification of a number of potential factors that have contributed to Ms. Taylor's current difficulties. Whilst there is minimal information regarding Ms Taylor's youngest years, her engagement in self-harm at the age of ten would suggest there may have been some concerns regarding her cognitive processes. Her engagement

in self-harming behaviour was completed in secret, with this continuing in a similar manner to the present day. This implies the want to maintain an aspect of control over her preferred coping strategy, for it not to be taken away from her, and to feel that she can 'cope' on her own. The psychometric results regarding NSSI behaviours support such hypotheses.

The trauma experienced within Ms Taylor's teenage years appears to have significantly contributed to the development of negative beliefs and further maladaptive coping strategies. The act of leaving school at age 14 with no qualifications, to reside with her partner at the time indicates a tendency to act impulsively without thought for consequences. Ms Taylor's pregnancy and miscarriage of twins at the age of 15 was a traumatic event, which currently remains unresolved. Such an ordeal may have exacerbated already existent negative beliefs of the self, i.e. 'I'm not good enough', 'I'm ashamed', and 'I'm a failure'. Such views have remained with Ms Taylor as she expresses guilt and shame in relation to her parenting of her two children, the eldest of which was born three years after the miscarriage. For the next nine years Ms Taylor remained under the complete control of her partner, subject to sexual assaults and emotional abuse. It can be postulated that this ten-year relationship would pose as a working model for future relationships. The abuse became such commonplace in Ms Taylor's life that she

appears to experience dissociative symptoms when engaging in sexual behaviour. She reports a sense of detachment from her feelings during such occurrences, i.e. not feeling anything and holds no desire to prevent such occurrences from taking place. This is evidenced in her adult life by Ms Taylor thinking very little of engaging in risky sexual behaviour, stating she finds it "easy" to pay off her drug debts in this manner.

Ms Taylor describes her participation in the misuse of illicit substances (amphetamine, cannabis, and cocaine) as a positive experience, allowing her to feel "normal". As two of her preferred drugs are mind-altering, it is likely that Ms Taylor consumes such substances to 'escape' from her undesired thoughts and feelings. She regularly takes drugs with her current partner, with whom she formed a relationship a matter of months after moving away from her abusive partner.

Ms Taylor's most recent suspected offending was committed in the company of her current partner: the burglary offence appeared to have been an opportunistic, impulsive act that subsequently led to Ms Taylor being dismissed from her employment. As this was Ms Taylor's first serious offence, in combination with her previous experience of relationships and choice of partners, it could be

hypothesised that she was a victim of manipulation from her partner, with him taking advantage of a vulnerable individual. Ms Taylor's view of herself, her very low self-esteem and previous understandings, lead her to believe that she must do what she can to avoid abandonment or rejection within relationships, further leading her to involvement in offending behaviour.

Ms Taylor describes her current intimate relationship as "good and supportive" and until her involvement in the offence, she was employed in a respectable position, able to provide for her two children, and reports a suitable social life, i.e. going to the pub with friends. Despite the fact that these aspects of Ms Taylor's life are positive, she still engages in self-destructive behaviours. She smokes cannabis on a daily basis, takes cocaine and / or amphetamine at weekends, drinks to excess, and self-harms. Although Ms Taylor's social circumstances have changed, evidence suggests that her emotional difficulties and negative thoughts are still present and overwhelming, causing her to continue to participate in maladaptive coping strategies. The purpose of Ms Taylor's misuse of substances is to escape her emotional difficulties and to alter her self-perception in an attempt to improve her low self-esteem.

Ms Taylor's self-harming behaviours allow for an element of control. Others appear to have controlled her throughout the entirety of her life, and most recently, she has been under the control of the police due to strict bail conditions and curfews. Self-harming also allows her to 'feel' something, having persistently separated herself from feeling anything as a protective technique. Ms Taylor's negative thoughts sanction her vulnerability to becoming involved in situations and / or relationships where any behaviour is acceptable, to avoid abandonment or rejection. Ms Taylor may have an awareness of this factor, conscious that she places intimate relationships as a priority above her parenting. Such a decision then contributes to the developing feelings of guilt and shame. This formulation remained open to revisions along with the option to re-formulate at any stage (Eells & Lombart, 2011).

Treatment Targets

At present, self-harm and participation in substance misuse are the biggest risk factors to Ms Taylor. As Ms Taylor is already in contact with SMS, one of the primary short-term therapeutic targets will focus on the exploration and understanding of emotions. This is with the view of providing Ms Taylor with skills to recognise and regulate emotional arousal, to decrease engagement in self-harming behaviour, and to find adaptive ways of responding to

emotional distress. Long-term treatment targets include the resolution of her traumatic experiences, in addition to engagement in Compassion Focused Therapy to explore, contain, and manage Ms Taylor's feelings of guilt and shame.

INTERVENTION

The case formulation dictated that the primary treatment target for Ms Taylor would be to explore emotions with the view of providing skills to recognise and regulate emotional arousal, to decrease her self-harming behaviour, and to find adaptive ways of responding to emotional distress. In an attempt to address these identified needs, the delivery of DBT-informed sessions that focused on the 'Emotion Regulation' module took place. Overall, the intervention would take place over a total of ten sessions: one session completing psychometrics, eight DBT-informed sessions, and one therapy ending / report disclosure session. The author of this report, a DBT therapist, would deliver the planned sessions.

Sessions

All sessions would be structured and defined by a treatment manual, take place on an individual one-to-one basis, last for the duration of 60 minutes, take place up to twice per week, and take place at the police station at a time to suit Ms Taylor. As this work was completed in the community, with no formal court order attached, attendance at sessions was voluntary. Ms Taylor was

provided with a briefing[1] of the session requirements and content prior to her agreement to attend and meaningfully engage.

The first session consisted of:

- A review of the proposed intervention
- Disclosure of initial case formulation
- Goals of skills training
- Introduction of mindfulness exercises
- Emotion regulation introduction (rationale and overview)
- Goals of emotion regulation training
- Emotional experiences
- Roles of emotions
- Out-of-session work

The sharing of a case formulation allows for the client to understand the rationale of psychometric assessments, shows evidence for proposed treatment plans and targets, and also provides the opportunity for revisions of the formulation. In addition to the main formulation, a simplified version outlining the

[1] The briefing took place with the initial CJLD assessor, prior to the initial treatment session. The purpose of this briefing was to allow for the introduction of Ms Taylor and the author of this report (DBT therapist), and for the recommended treatment to be comprehensively explained. Ms Taylor engaged in a verbal therapeutic contract where therapeutic goals were collaboratively defined and the following discussed: required attendance levels, what is meant by meaningfully engaging in sessions, policies relating to termination of treatment, and the likelihood of onwards referrals relating to long-term psychological interventions. Ms Taylor was made aware that close contact would be made with her GP throughout the intervention and an end of treatment report would be produced.

psychometric assessments, linked with Ms Taylor's personal background information was provided. It was felt that this version would be more meaningful to Ms Taylor to allow enhancements in her understanding of her current difficulties, with the view of greater advances and participation in the intervention. Ms Taylor agreed that the events during her teenage years were considerably traumatic, having a significant impact upon the way she views herself and the world today. Ms Taylor understood that targeting her unresolved trauma would be a logical place to start in the long term, but feels that she is not ready to address this at this time.

Ms Taylor appeared reluctant to engage in unfamiliar exercises, i.e. mindfulness tasks. An attempt at a breathing exercise was prematurely terminated at Ms Taylor's request as it made her feel "uncomfortable". A handout with mindfulness exercises was provided to Ms Taylor for her to practice in her own time, when she felt safe. Upon orientation of emotion regulation skills, Ms Taylor identified a desire to better understand her emotions, decrease the negative feelings, and find alternative ways to deal with negative emotions as opposed to engaging in self-harming behaviour. Ms Taylor stated that her emotions are generally destructive to herself and those around her, and does not see that emotions are useful in any way. The emotion that is the most problematic for her is that of anger or feeling "pissed off", and these are the emotions /

feelings that Ms Taylor would like to work on. She commented that if she thinks of something positive, she questions this, and tells herself to "stop dreaming". The concept of primary and secondary emotions was discussed and Ms Taylor found this a little difficult to understand. The example, 'feeling guilty about being upset' was provided and she responded by saying she does not feel guilt or shame, she does not cry, nor cry in front of anyone, and that this is because she would feel embarrassed. Ms Taylor sees crying as a sign of weakness, sometimes feeling "stupid" and "pathetic" when she cries. These feelings were relayed back, as an example of a secondary emotion overshadowing a primary emotion. It was discussed how this can sometimes confuse being able to identify what is really going on, making it difficult to effectively problem-solve. For out-of-session work, Ms Taylor was asked to write about an emotion that she finds destructive along with a description, and identify an emotion that she feels she does not experience often and would like to increase.

Ms Taylor did not complete the out-of-session work, nor practice any mindfulness exercises in between the planned sessions. When this was challenged, Ms Taylor stated that she had forgotten. Ms Taylor did not wish to practice any mindfulness exercises and the homework was completed within the session. She engaged meaningfully and discussed her destructive emotion, 'angry / pissed

off' (see Figure 3) and an emotion she wished to experience more, 'excitement / enjoyment' (see Figure 4).



Figure 3. Destructive emotion exercise



Figure 4. Emotion I'd like to experience more exercise

The 'devil's advocate' technique was used to discuss and explore the 15 myths of emotions. This was with the view of normalising

the idea that everyone has some worries about experiencing emotions and it is important to challenge some of the misconceptions. The 15 myths were explored one by one with Ms Taylor and she agreed with the following:

- Letting others know that I am feeling bad is a weakness
- Negative feelings are bad and destructive
- Being emotional means being out of control
- Some emotions are really stupid
- Painful emotions are not really important and should be ignored
- It is a sign of weakness if I show that I care
- It is wrong to express emotion
- Some people don't have emotions
- Other people don't hurt like I do
- If I'm hurting it's OK to take it out on others

Upon Ms Taylor's initial agreement / disagreement with the myths, the rationale regarding her answer was explored. Subsequently, we would propose an opposing answer, or statement, for us to discuss further.

Therapist: Do you agree, or disagree, with the following myth about emotions: It is a sign of weakness if I show that I care.

Ms Taylor: Agree.

Therapist: Why do you agree with the statement?

Ms Taylor: Well, with my kids, I have to bring them up tough, show them tough love and make sure they act tough so that they don't get bullied.

Therapist: Are you able to see any negative sides to 'tough love'?

Ms Taylor: I shouldn't do this really as I don't want them to end up like me, I don't want them to end up in trouble with the police.

Therapist: This is good, your answer shows evidence that you are able to consider a different perspective, which is a valuable skill to have, but also you acknowledge that your emotions and how you feel towards emotions can impact on others around you.

Ms Taylor engaged well throughout this exercise, proposing logical and reasonable answers, and contributing to discussions appropriately. The differences between intellectual agreement, emotional agreement, and 'wise mind' agreement, using a handout as an aid, were collaboratively discussed (see Figure 5).

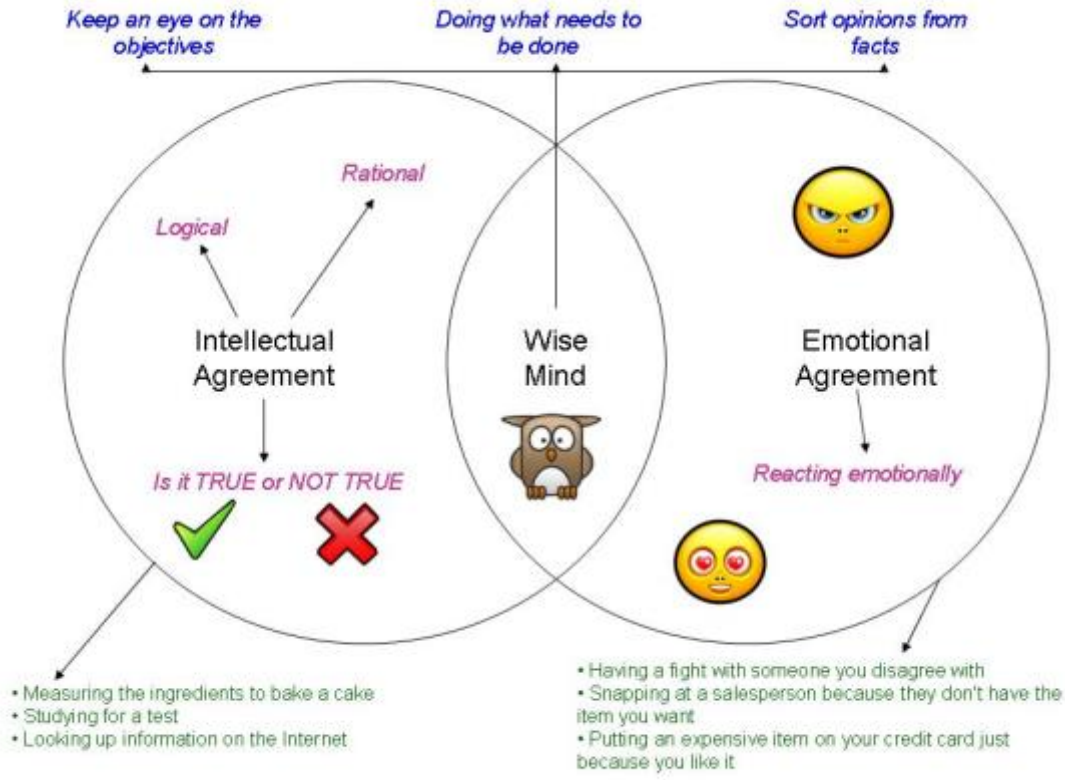


Figure 5. Wise Mind Handout

Ms Taylor requested to take this handout away with her. Out-of-session work set included observing emotions and behaviours, and writing down any other myths that she may operate by.

No additional sessions were completed with Ms Taylor due to her high non-attendance rate for sessions arranged. This will be discussed further in the section below.

Responsivity Issues

The proposed intervention (including assessment sessions) had been planned to take place over a total of 10 sessions. A total of 13 sessions were arranged in an attempt to complete the DBT-informed work; however, Ms Taylor's attendance rate equalled 23%. CJLD policy indicates that if two consecutive appointments are missed without valid reason, and / or the attendance rate is less than 66%, the individual will be discharged from the service; this is what occurred with Ms Taylor.[2] Due to Ms Taylor's personality traits and history of negative relationships, additional considerations were observed in relation to the termination of the intervention to avoid developing further perceptions of abandonment or rejection. Ms Taylor was aware that she could rearrange appointments if necessary, reminded of the termination policy, and provided with opportunities throughout to discuss whether she would want to voluntarily discontinue treatment without consequence.

[2] As standard procedure, Ms Taylor was written to in order to explain why she had been discharged from the service. This occurred after numerous correspondences (via telephone and letter) to state that should she miss sessions without reason, she would be discharged. Ms Taylor had the opportunity to telephone at any point to discuss this. An additional letter was sent to Ms Taylor containing a copy of the end of treatment report that provided information regarding recommended treatment, in addition to informing Ms Taylor that her GP would be provided with a copy of the report. The final letter stated that she could contact the service to discuss the treatment recommendations at any point.

From the assessments and formulation, there are a number of issues that could have potentially impacted upon Ms Taylor's attendance and engagement through this intervention. In particular, Ms Taylor's identified maladaptive personality traits, high impulsivity levels, and current engagement in substance misuse may have affected her response to treatment. Evidence suggests that these factors, in addition to commitment to change, are significant predictors of premature treatment dropout (Barnicot, Katsakou, Marougka, & Priebe, 2011; Wnuk et al*.,* 2013). Due to the short duration of the intervention, the therapeutic relationship is an aspect that is problematic to gauge. With Ms Taylor's experience of persistent negative relationships, combined with her maladaptive personality functioning (Dingfelder, 2004), these factors may have impacted upon her ability to begin to form a positive therapeutic alliance, with evidence indicating that a poor relationship between the client and the therapist is a significant predictor of discharge from treatment (Wnuk et al., 2013). Ms Taylor was assessed as having high impulsivity levels and with impulsive temperament linked to engagement of substance misuse (Dawe et al., 2007), it can be hypothesised that the 'reward drive' dimension of impulsivity may have motivated Ms Taylor's continuation of substance abuse throughout the duration of the intervention, i.e. the substances provided a greater reward than the therapy. Ms Taylor's impulsivity levels may have also led her to make a decision to engage in

therapy without having fully comprehended its intensity and required commitment. This aspect of impulsivity can be linked with motivation to change, which could be suggested has been the biggest factor contributing to Ms Taylor's premature disengagement.

Ms Taylor had to made few practical sacrifices to attend the appointments, i.e. no financial sacrifices, and all appointments were arranged to coincide with the times when she had to sign on as per her bail conditions at the police station. Her engagement during attended sessions and comments made throughout would suggest that she is aware of her difficulties but has no real commitment to act to change: the 'contemplation' stage in the Cycle of Change (Prochaska & DiClemente, 1983). In addition, Ms Taylor's feelings of guilt and shame, and high level of experiential avoidance may be linked to low motivation (Tierney & McCabe, 2001), which is also associated with engagement in therapy (Frost, 2004). Having not previously engaged in any therapeutic intervention, Ms Taylor's envision of therapy may have perhaps involved the eradication of her coping mechanisms (particularly self-harm), forming an impression that she may be left in a vulnerable position due to her already existent, low-level tolerance of emotional distress. According to Swift and Greenberg (2012), the circumstances surrounding the materialisation of the intervention and the

therapeutic setting may impact upon therapy participation. Ms Taylor's journey to treatment occurred via an association with the police; sessions took place within the police station (in interview rooms above the custody suite), and occurred at a time when Ms Taylor would be signing on as per her bail conditions. The combination of these circumstances may have triggered an overwhelming sense of being controlled. As Ms Taylor's primary function of her self-harming behaviour is to develop a greater sense of autonomy, these feelings may have influenced her lack of attendance. Upon the exploration of both internal and external responsivity issues for treatment, it can be seen that a number of factors could have affected the way in which Ms Taylor responded to treatment.

RESULTS

Although the treatment was terminated due to Ms Taylor's high non-attendance, the following section will highlight any effects that occurred due to her dropping out of treatment. An ad-hoc session[3] took place with Ms Taylor three weeks after she had been discharged from CJLD service; this was with the view of repeating the psychometric assessments, to obtain feedback from the sessions attended, and to review the treatment recommendations following the discharge from services, as no correspondence had been received following the report.

Ms Taylor's impulsivity profile pre-intervention indicated that she scored above the normal data levels (within the relative population) for all factors aside from motor impulsivity, with her non-planning and overall impulsivity a cause for concern. Table 16 illustrates that each factor of impulsivity numerically increased for Ms Taylor after the unplanned discharge from treatment. The reliable change criterions (RCCs; Evans, 1998) were calculated for all scales on the measure, with a reliable deterioration occurring in Ms Taylor's overall and motor impulsivity levels between assessment periods.

[3] Ms Taylor was attending an appointment with her allocated drugs worker and it was requested if at the end of that appointment, she would volunteer to complete the psychometric assessments again and provide feedback on the sessions that she attended. Ms Taylor agreed to this.

Table 16

Pre- and Post-Impulsivity Psychometric Assessment Results

Barratt's Impulsivity Scale	Pre-Intervention Score	Post-Intervention Score	Norms for Substance Abusers (SD)	RCC and Reliable Change?
Overall	89	103	61.25 (7.5)	±8.57 Reliable Deterioration
Attentional	24	26	17.4 (5.0)	±5.71 No
Motor	26	33	25.8 (4.9)	±5.6 Reliable Deterioration
Non-Planning	39	44	24.7 (5.4)	±6.17 No

Ms Taylor's self-harming behaviour holds a variety of functions for her; however, it is a maladaptive coping strategy to combat negative cognitive processes and suppress overwhelming emotions. The post-discharge assessment would suggest that Ms Taylor's primary function remains as 'autonomy' but to a lesser extent having decreased in clinical severity. There has been a numerical increase in revenge, self-care, and sensation-seeking as secondary functions. Whilst decreases in numerical scores were observed in the secondary functions of affect regulation, marking distress, self-punishment, and toughness, these all remained within the 'norm' levels. The RCCs were calculated for all functions on this measure,

with Table 17 showing a reliable deterioration in Ms Taylor's self-harm. Although, the results suggest that there has been an increase in Ms Taylor self-harming for the purposes of self-care and sensation seeking.

Table 17

Pre- and Post-Function of Self-Harm Psychometric Assessment Results

Function Scale	Function of Self-Harm	Pre-Intervention Score	Post-Intervention Score	Norms (SD)	RCC and Reliable Change?
Interpersonal	Autonomy	4	3	0.6 (1.3)	±1.30 No
	Interpersonal Boundaries	3	3	0.8 (1.4)	±1.40 No
	Interpersonal Influence	0	1	0.8 (1.4)	±1.40 No
	Peer Bonding	0	0	0.5 (1.3)	±1.30 No
	Revenge	2	3	0.6 (1.4)	±1.40 No
	Self-Care	1	3	0.8 (1.4)	±1.400 Reliable Deterioration
	Sensation Seeking	0	2	0.7 (1.3)	±1.30 Reliable Deterioration
	Toughness	3	2	1.0 (1.4)	±1.40 No

Intrapersonal	Affect Regulation	5	3	3.0 (2.1)	±2.60 No
	Anti-Dissociation	3	4	1.0 (1.6)	±1.98 No
	Anti-Suicide	3	3	0.8 (1.5)	±1.86 No
	Marking Distress	3	2	1.5 (1.8)	±2.23 No
	Self-Punishment	4	3	2.0 (2.1)	±2.60 No

Ms Taylor did not wish to complete the two remaining psychometric measures of self-esteem and locus of control, requesting to terminate the session. After briefly reviewing the questions for these assessments, Ms Taylor commented, "the answers would be the same".

Approximately three weeks after the final assessment session (approximately six weeks after the last DBT-informed session), information received from an SMS member of staff stated that Ms Taylor had been arrested for fraud, with her bank account being linked to selling items online that did not exist. As with the initial offence, her partner was also her co-accused.

Therapeutic Process and Treatment Success

Due to the termination of the intervention, as dictated by Ms Taylor's high non-attendance rate, no real progress in relation to the treatment targets can be observed. The psychometric assessments coupled with two completed DBT-informed sessions show that Ms Taylor has strengths in her levels of insight into her current issues, is competent in perspective taking, and can consider how her emotional reactions can impact upon others. It is also positive that Ms Taylor was able to recognise that therapy would be beneficial to her in the future, when she is ready to address her issues and make changes. The psychometric assessments show deteriorations in her level of impulse controls and changes in her functions of self-harm. At Ms Taylor's request, there was no secondary assessment to measure her self-esteem levels. Taking her word, her self-esteem levels remain the same, which infers that the sessions had no impact. It is not thought that the two completed sessions caused the change in impulsivity and functions in self-harm but additional, external factors impacted upon this.

Ms Taylor provided feedback on the sessions that she had attended, stating that she did not feel that she had changed and felt that the sessions were "too slow", but that she understood the logic and rationale of providing such treatment.

Areas of Further Work

It was recommended that Ms Taylor continue to engage with SMS, as this will allow for progression in addressing issues with illegal substances and hope to stabilise her behaviour. Ms Taylor was encouraged to request that her GP make a referral to the Personality Disorder Network when she feels that she will be able to attend, meaningfully engage, and interact with a group when discussing aspects relating to her personality difficulties. Finally, it was recommended that Ms Taylor request that her GP make a referral to Let's Talk Wellbeing to engage in a service that allows for her to resolve her historical traumas when she feels able to open up about these.

DISCUSSION

The aims of all CJLD services include diverting individuals who have been detained in police custody to appropriate services in relation to their mental health concerns. One aim includes completing the assessments and referrals in a timely manner, with the in-house policy requesting that referrals are made within four weeks of initial assessment, if not sooner. Such efficiency will ensure that progress can be made in the treatment of an individual's identified mental health needs. MIND's (2010) survey discovered that one in five individuals had been waiting over a year to receive psychological treatment in the UK, with one in ten waiting over two years. The report from this survey continued by commenting that waiting times can have extremely damaging consequences for some individuals. Their mental distress may intensify, relationships could break down, they may become unemployed, and if left untreated or supported this could lead to isolation from family, friends, and society (MIND, 2010). Whilst the CJLD service is unable to reduce the waiting times of external services, the aim of this case study was to determine the effectiveness of a short-term intervention. The implementation of this intervention occurred whilst waiting for a referral for long-term treatment to be accepted. This was with the aim of reducing the established difficulties that can occur during waiting times.

Structured mental health assessments, psychometric testing, and a psychological formulation discussed at a multi-disciplinary level determined that the most immediate risk factor for Ms Taylor's overall wellbeing was that of her engagement in self-harming behaviour. DBT's core structure of providing skills training allowed for a short-term DBT-informed intervention to be created, primarily focusing on delivering the emotion regulation module. The main aims of this intervention were to decrease emotional dysregulation, increase understanding of associated emotions, and reduce risk in Ms Taylor's self-harming behaviour. Secondary aims, although just as valuable, included providing Ms Taylor with skills that would prepare her for long-term treatment, i.e. attending sessions, beginning to feel comfortable about engaging in discussions, completing out-of-session work, and developing an alliance with a therapist and understanding such a relationship (Hoffman, 1993). It can be hypothesised that Ms Taylor's personality psychopathology contributed to her premature discharge from treatment. There is considerable literature to support this, with Rizvi et al. (2013) reporting dropout and missed sessions as being common amongst the BPD population, as well as an association with high rates of treatment failure (Koerner & Dimeff, 2007). Whilst Ms Taylor's responsivity issues have previously been discussed in detail, it may also be considered that her identified feelings of guilt and shame played a greater part. Ms Taylor may not have wanted to 'quit', but

felt that engaging in therapy was 'too much' for her as it involved a commitment to exploring her difficulties. Her strategy of removing herself from the therapy and returning to her 'comfort zone' would be to not attend, as opposed to 'shaming' herself by admitting that it was not something she could cope with at the present time. The factor of the therapeutic relationship must also be revisited: there is reason to question what length of time is considered adequate to form a positive therapeutic relationship. The answer is somewhat unobtainable as there are numerous factors that could contribute to the hindrance of the development of a successful therapeutic relationship. Linehan (1993) discusses that the therapist-client relationship plays a considerable part in the success of DBT. The therapeutic relationship can act as a motivational factor within an individual's therapeutic journey; however, Linehan (1993) continues by stating that the attribution of failure should not always be placed with the client (as cited in Rizvi, 2011). BPD diagnostic criteria includes difficulties with and within relationships (intense, unstable, and conflicted), and there are ethical questions to be asked in relation to beginning informed treatment that places such a heavy reliance on the interaction between the client and the therapist, with little time for this relationship to develop. Evidence shows that progress with BPD clients is slow (Koerner & Dimeff, 2007), so the concept that short-term (approximately ten sessions) interventions

for offending BPD clients in the community may not be appropriate must be considered.

Furthermore, there is a plethora of research to suggest that premature exits from therapeutic interventions are detrimental to the client, and potentially to the therapist (Dembling 2011; Hamilton, Moore, Crane, & Payne, 2011; Hansen, Lambert, & Forman, 2002). The nature of the majority of treatment interventions includes a structured, time-bound approach, with theoretical and empirical evidence to support these factors. Dropping out from treatment can result in the client not receiving an 'adequate dose' of treatment; a loss of potential patient improvement, with the likelihood of them over-utilising resources; poorer outcomes in the reduction of their negative symptomatology; and potentially being left unsupported (Hamilton et al., 2011; Hansen et al., 2002). Additionally, Sperry (2016) suggests that a therapist can experience narcissistic injury, burnout, and clinical apathy when their client drops out of treatment. In addition to impacting upon their client and the therapy they receive, these factors can have consequences for the principal agencies and services, i.e. a financial burden if clients continue to dropout due to stressed, unmotivated clinicians.

Whilst the effectiveness of the DBT-informed intervention in this case is problematic to gauge, differences in impulsivity and functions of self-harm were measured via psychometric assessment. The increase in impulsivity may be explained via a combination of factors: Ms Taylor disclosed during a session that she was experiencing considerable levels of "boredom" as she had been dismissed from her employment due to her offending behaviour. This left her unable to find employment due to curfew restrictions subsequently leaving her with "nothing to do". Whilst meaningful engagement in treatment may have decreased this frustration, the purpose of this therapy was not to relieve already existing feelings of disinterest. Had the preservation of her initial enthusiasm and motivation to engage been achieved, this may have naturally alleviated these feelings of frustration. In addition, engaging in meaningful activities, purposeful discussions, and working towards acquiring a new skill set to help improve her quality of life would have occupied Ms Taylor's time and mind. The impulsivity increase manifested itself in offending behaviour, with Ms Taylor further arrested for a fraudulent offence, again with her partner as the co-accused. The deterioration of impulse controls over a short period of time, hypothesised pressure from her partner, and feelings of boredom may have contributed to Ms Taylor reoffending. Evidence shows that these factors, including unemployment, have a

considerable impact upon the risk of reoffending (Social Exclusions Unit, 2002).

According to police information, Ms Taylor would have been taking part in the recent offending behaviour at the time of the second psychometric assessments. Ms Taylor's considerable change in behaviour may provide a plausible explanation for her increase in impulsivity; however, it must not be assumed that this correlation implies causation. Ms Taylor was able to financially gain from the offence, supplementing the financial loss acquired by her sudden unemployment. Her index offence is associated with the motivation of thrill-seeking and desired acquirement of illegal substances; Ms Taylor chose to carry out an additional offence that could easily produce the same outcome. A lack of finances would subsequently lead to a deprivation in illegal substances. Furthermore, a lack of substances would require Ms Taylor to change her behaviour to achieve the desired emotional outcomes: the psychometric assessments indicate that Ms Taylor's change in behaviour was expressed via the increase of self-harming for the purpose of 'sensation-seeking'. It can be hypothesised that her partner had some influence over the recent offending behaviour, as with the previous offence. It can also be suggested that Ms Taylor would benefit from a perceived improvement in their relationship. For

example, if she continued to submit to her partner's requests, she may gain a sense of belonging, and become less fearful of abandonment and rejection. This may rationalise the interpreted decrease in self-harm for the purpose of autonomy, as she feels that she does not have to self-sacrifice to feel independent and in control; her partner may manipulate her into feeling that she is achieving by offending, giving her perceived dominance over the fraudulent activity. Finally, the extension in engaging in self-harm for revengeful and self-care purposes may be associated, as the revenge aspect could potentially be an act against authoritative figures such as the police, i.e. 'look at what you're making me do because you arrested me and now I'm on bail, unemployed', or even towards the CJLD service, i.e. 'you can't change me, I'll never change', with the self-care linked to 'I don't need anyone's help, I can care for myself'.

Future Directions

Whilst this case would be considered as a failure in treatment, it should not deter further attempts at engaging this population in skills training interventions. The opportunities should be taken to develop a greater awareness of the barriers to treatment and how these can be dealt with, and to provide effective treatment to individuals wishing to enter into such treatment. As the individual's

motivation to engage in therapy is so heavily relied upon, in the further assessment sessions completed by the initial assessor (prior to a psychological formulation) the administration of a motivation measure, such as The Motivation and Engagement Scale (Liem & Martin, 2011) should be included. Even if the individual is unsuitable for the skills training on offer, information relating to engagement and motivation levels would be valuable to the service offering long-term treatment. The more information that can be obtained at the earlier stages of contact with the CJS, the higher the likelihood of providing therapy for the individual at the right time.

CJLD services may want to continue to pilot a model as presented within this case study, obtaining data to review the efficacy of delivering DBT-informed skills training to this population. Such an evaluation would be extremely valuable for the future of both DBT and CJLD services. Consideration should also be given to the creation and implementation of a more basic skills training package that includes advice and training on how to make appointments, change appointments, engage meaningfully in a therapy session, and how to ask for help during a session. Such training could attempt to provide the individual with a greater level of competency in these tasks that are often overlooked, but could make the difference between treatment failure and treatment success.

Future research may focus on obtaining more detailed information regarding non-attendance at skills training in the community, and / or consider a study focusing on levels of motivation for this specific population. This could include a review of any associations with a variety of factors that may impact on engagement levels, i.e. current misuse of substances, previous contact with mental health services, and offending behaviour.

SUMMARY OF FINDINGS

The literature suggests that DBT-informed skills work may have recently been successfully implemented within the community. However, evidence from this case study demonstrated that an individual with significant risk factors that created their current profile and contributed to offending behaviour, would considerably increase the chances that treatment would be unsuccessful. In this circumstance, the risk factors included a dysfunctional personality psychopathology and residency within the community. With individuals volunteering into therapy whilst they are in community settings, there is a high reliance on them wanting to change and learn, with this being the largest factor of treatment success. Whilst there can be varying levels of acceptance with regards to a client's self-reported motivation, positive expressions of engagement cannot be taken as a guarantee and will not truly manifest until the start of therapy itself.

CHAPTER SIX

DISCUSSION

Aims and Purpose of Thesis

The aims of this thesis were to consider the various needs of individuals detained in police custody, and how various practices could be amended and practically implemented to ensure their welfare. These were addressed via a systematic review, the critique of a psychometric measure, an empirical research project that reviewed the predictive validity of the current NSPIS risk assessment, and a case study that attempted to implement psychological intervention with an individual whose needs were identified whilst detained in police custody.

Limitations

Limitations within the systematic review included the results being largely geographically contained. This method of data collection may present a natural bias, with research being selective, reducing the factor of generalisability. The results from each singular piece of research are essentially only reflective of that police custody suite. It has only been via the systematic approach that the accumulation of this data has provided an overall picture of the healthcare needs of police custody detainees.

One of the considerable limitations within the empirical research study was the sample size. The post-hoc analyses reported that this limited the reliability of the results, with a heightened probability of statistical errors occurring. This must be taken into consideration when reviewing the results, particularly when contemplating any action towards practical implementations. Additionally, the sampling method may have introduced an element of bias to the study. It included individuals who disclosed a willingness to take part, and whose behaviour was considered non-aggressive by the custody sergeant on duty. This may have largely prevented the inclusion of riskier, more aggressive individuals within the study. Therefore, the aspects of risk that were reported as prevalent within this study may not be wholly generalisable to the police custody population.

Implementing a risk assessment as proposed in the final model would increase the initial time of completion by up to 15 minutes, with an additional assessment requiring a minimum of one hour after the detainee has arrived into custody. This may impact upon the feasibility of this assessment being completed at the custody desk, as is the current standard procedure with the NSPIS risk assessment. Although, with both models relying upon self-report information from the detainee, moving the risk assessment to an

alternative location where the detainee feels more comfortable in disclosing personal information may provide for a more accurate portrayal of their risk. Feedback received within the HMIC (2015) analysis reported that detainees held a preference for their risk assessments to be completed in private. Whilst there are interview rooms available in the custody suites these are predominantly used by the police to interview the detainee regarding criminal matters. This may reduce the level of reassurance the detainee feels towards expecting impartiality from the risk assessor (BMA, 2009). An additional obstacle to overcome would be the interpretation of the BIS-11 psychometric and conjunctively, consideration of the qualities of the assessor should be given if such an addition were to be included. As stated in Chapter Three of the thesis, there are no obtainable minimum requirements for the administration of the BIS-11, although experienced professional administration is desired. However, if resources allowed, it could be beneficial to introduce a healthcare professional to support the completion of the risk assessment. A multi-disciplinary approach could reduce the risk of bias by increasing the opportunities for joint decision-making and may also increase the detainee's reassurance levels, as previously highlighted.

Future Research

Future research should include a pilot project to implement the risk assessment model as suggested within the empirical study. This would review its efficacy in practically predicting risky behaviour in police custody. The results would provide empirical evidence to either reject or support its use amongst this population, within this context and this environment. Additionally, revising the inclusion and exclusion criteria would be beneficial, with the aim of including a greater level of diversity within the sample.

Research that creates profiles of the higher-risk behaviours would be of considerable value. These profiles could be created from the information and data obtained in this current research project. Developing such profiles would allow for the police to easily and readily identify an individual who possesses qualities that have previously related to the exhibition of aggressive and risk-related behaviours. These profile characteristics could include, gender, age, offence type, substance misuse, mental health concerns, and impulsivity levels, etc. Such results, combined with the implementation of a structured clinical judgment assessment, could allow for a more substantial predictor. Additionally, the administration and delivery of mental health and medical issues awareness training would be of value, if this were to be made

available to custody officers on a larger scale than at present. This could instill a greater level of confidence in the completion of police risk assessments, consequently increasing the accuracy of any risk recorded.

With regard to implementing short-term psychological intervention to detainees, opportunities should be taken to develop a greater awareness of barriers to treatment and how these can be dealt with, to provide effective treatment to individuals wishing to enter into such treatment whilst they are residing in the community. CJLD services may want to continue to pilot a model as presented within the case study, obtaining data to review the efficacy of delivering DBT-informed skills training to this population. Such an evaluation would be extremely valuable for the future of both DBT and CJLD services. Consideration should also be given to the creation and implementation of a more basic skills training package. This would be delivered to detainees and its contents including advice on how to make appointments, change appointments, engage meaningfully in a therapy session, and how to ask for help during a session. Such training and guidance could provide the individual with a greater level of competency in these tasks, which are often overlooked, but could make the difference between treatment failure and success.

CONCLUDING REMARKS

This thesis explored the police custody environment at various stages and has addressed the original hypotheses. It has considered the overarching grouping of healthcare concerns and highlighted those that would require additional resources and those that present the greatest level of risk. Where applicable, the current findings demonstrate a level of consistency with previous research and provide adequate supporting evidence. In addition, it increases the evidence base that considers the police custody environment. However, with self-harm specifically, this risk factor did not corroborate previous findings and the original hypothesis within this area was rejected. It is felt that due to the significant risk this behaviour poses, particularly when considering deaths in custody, it should be considered independently with comparators in differing environments used as guidance only. The thesis has reviewed the NSPIS risk assessment and its effectiveness in predicting risk. With the results being positive, this suggests that it is moderately effective and to an extent, supports current practice. Although, supplementing this assessment with psychological measures and structured clinical judgement tools increases the level of predictability by 21%. This is a considerable increase, and McKinnon and Grubin (2014) evidenced within their pilot project

that the implementation of a structured screening assessment could improve the pickup rate of detainees with health problems, subsequently aiding the overall detection of higher risk detainees. The current research supports and augments these findings in that improvements can be made in the screening and assessment procedures carried out in police custody. The case study results suggest that there is the demand and opportunity to implement short-term psychological intervention to support those who pass through police custody, via the CJLD teams. Whilst this was not completed as planned due to client disengagement, efforts to implement this should not be halted. In conclusion, there still remains a plethora of aspects to review, research, evaluate, and critique regarding the police custody environment and its detainees. It is hoped that the proposed future research can contribute to the improvement of practice from all those involved in police custody suites and that this thesis has contributed to the vastly expanding evidence base in this area.

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APPENDICES

Appendix 1 – Scoping Exercise Search Outcome

The Campbell Collaboration
Searched 12th September 2016

	Police custod* or custody suite or custod*	9
OR	Detaine* or detained person*	20
AND	Health* AND assess* or health* AND determin* or health*	0
OR	Substance misuse* or drug misuse* or alcohol misuse*	27
OR	Self ADJ3 harm or self ADJ3 injur* or parasuicid* or suicid*	19
OR	Mental health* or mental* handicap* or mental* disabled person* or mental* disabled	53
Total Returned:		**128**

The Cochrane Library
Searched 12th September 2016

#1	Police custod* or custody suite or custod*	230
#2	Detaine* or detained person*	67
#3	Health* AND assess* or health* AND determin* or health*	252824
#4	Substance misuse* or drug misuse* or alcohol misuse*	1214

#5	Self ADJ3 harm or self ADJ3 injur* or parasuicid* or suicid*	3979
#6	Mental health* or mental* handicap* or mental* disabled person* or mental* disabled	21240
#7	#1 or #2	291
#8	#3 or #4 or #5 or #6	255023
#9	#7 and #8	**195**

Appendix 2 – Search Syntaxes and Outcomes

Embase via OvidSP– 1980 to 2016 Week 38
Searched 12th September 2016

#1	("Police custod*" or "custody suite" or "custod*").ti,ab,kw.	4212
#2	("Detaine*" or "detained person*").ti,ab,kw.	2214
#3	("Health* AND assess*" or "health* AND determin*" or "health*").ti,ab,kw.	2609528
#4	("Substance misuse*" or "drug misuse*" or "alcohol miuse*").ti,ab,kw.	4273
#5	("Self ADJ3 harm" or "self ADJ3 injur*" or "parasuicid*" or "suicid*").ti,ab,kw.	76183
#6	("Mental health" or "mental* handicap*" or "mental* disabled person*" or "mental* disabled").ti,ab,kw.	128687
#7	#1 or #2	6265
#8	#3 or #4 or #5 or #6	2674396
#9	#7 and #8	2360
#10	Remove duplicates from #9	**2301**

Ovid MEDLINE® via OvidSP– 1946 to September Week 1, 2016
Searched 12th September 2016

#1	("Police custod*" or "custody suite" or "custod*").ti,ab,kw.	2961
#2	("Detaine*" or "detained person*").ti,ab,kw.	1574
#3	("Health* AND assess*" or "health* AND determin*" or "health*").ti,ab,kw.	1820252

#4	("Substance misuse*" or "drug misuse*" or "alcohol miuse*").ti,ab,kw.	2611
#5	("Self ADJ3 harm" or "self ADJ3 injur*" or "parasuicid*" or "suicid*").ti,ab,kw.	56229
#6	("Mental health" or "mental* handicap*" or "mental* disabled person*" or "mental* disabled").ti,ab,kw.	89182
#7	#1 or #2	4429
#8	#3 or #4 or #5 or #6	1870026
#9	#7 and #8	1600
#10	Remove duplicates from #9	**1571**

PsychINFO – 1806 to July Week 4, 2016
Searched 12th September 2016

#1	("Police custod*" or "custody suite" or "custod*").ti,ab,kw.	6972
#2	("Detaine*" or "detained person*").ti,ab,kw.	1972
#3	("Health* AND assess*" or "health* AND determin*" or "health*").ti,ab,kw.	537320
#4	("Substance misuse*" or "drug misuse*" or "alcohol miuse*").ti,ab,kw.	3214
#5	("Self ADJ3 harm" or "self ADJ3 injur*" or "parasuicid*" or "suicid*").ti,ab,kw.	51032
#6	("Mental health" or "mental* handicap*" or "mental* disabled person*" or "mental* disabled").ti,ab,kw.	139339
#7	#1 or #2	8832
#8	#3 or #4 or #5 or #6	580342
#9	#7 and #8	2415

#10	Remove duplicates from #9	**1698**

PsycARTICLES Full Text
Searched 12th September 2016

#1	("Police custod*" or "custody suite" or "custod*").ti,ab,kw.	246
#2	("Detaine*" or "detained person*").ti,ab,kw.	74
#3	("Health* AND assess*" or "health* AND determin*" or "health*").ti,ab,kw.	14901
#4	("Substance misuse*" or "drug misuse*" or "alcohol miuse*").ti,ab,kw.	35
#5	("Self ADJ3 harm" or "self ADJ3 injur*" or "parasuicid*" or "suicid*").ti,ab,kw.	1968
#6	("Mental health" or "mental* handicap*" or "mental* disabled person*" or "mental* disabled").ti,ab,kw.	6100
#7	#1 or #2	319
#8	#3 or #4 or #5 or #6	16504
#9	#7 and #8	73
#10	Remove duplicates from #9	**60**

National Criminal Justice Reference Service (NCJRS) – 1980-Present
Searched 12th September 2016

	"police custody"	**484**

Ministry of Justice Website
Research and Analysis Publications
Searched 12th September 2016

	"police custody"	**32**

Home Office Website
Searched 12th September 2016

	"police custody"	**76**

DART: Europe E-Thesis Portal
Searched 12th September 2016

	"police custody"	**3**

Nottingham E-Thesis
Searched 12th September 2016

	"police custody"	**18**

Appendix 3 - Inclusion Criteria Pro-Forma

Author:

Date:

Country:

INCLUSION CRITERIA	CRITERION MET?	COMMENT
Population: Does the population consist of persons detained in police custody (male, female, adolescents, adults and older adults)?	Yes Unclear Discuss No	
Outcomes: Have healthcare issues and needs been measured via either questionnaires and / or interviews and / or mental health assessments and / or data collected from appropriate records?	Yes Unclear Discuss No	

If all questions answered with yes, include and quality assess.

Appendix 4 - Quality Assessment Checklist

Legend:

Y= Criteria met
P= Criteria possibly met
N= Criteria not met
U= Unclear / Undecided / Discuss

Score:

Y = 2
P = 1
N = 0
U = U

	Y	P	N	U	Comments	
Screening or threshold questions						
1. Are the aims of the research clear?						**Score** ☐
2. Has the author assured that the study has taken place in police custody?						**Score** ☐
3. Does the study consider healthcare needs of those detained in police custody?						**Score** ☐
Sampling and selection bias						
1. Was the method of sampling used appropriate considering the environment? (i.e. were participants recruited in an unbiased and appropriate way?)					Sampling Method:	**Score** ☐
2. Does the sample include both genders and all ages?						**Score** ☐
3. Are there any exclusions within the sample? **Reverse score this item*						**Score** ☐

4. Have those who are intoxicated and disinhibited by substance misuse been included in the study?						**Score** ☐
Risk of selection bias? *Low* *Medium* *High*						
Measurement bias for outcome **Double score this section*						
1. Have healthcare needs been explored using a standardized measure?						**Score** ☐
2. Have healthcare needs been assessed using more than one method? (e.g. self-report questionnaire and interview)						**Score** ☐
3. Have detainees' records also been searched?						**Score** ☐
4. Are healthcare needs assessments limited? (i.e. only physical, only mental health issues) **Reverse score this item*						**Score** ☐
Risk of measurement bias for outcome? *Low* *Medium* *High*						
Other issues						
1. Was the analysis appropriate?						**Score** ☐

2. Were the results displayed clearly and appropriately, avoiding reporting bias?						**Score** ☐
3. Were control or comparison groups included?						**Score** ☐
4. Do the statistics used adjust for any confounding variables?						**Score** ☐
5. Has missing data been dealt with appropriately?						**Score** ☐
Risk of other issues? Low Medium High						
Risk of bias in different domain **Overall quality:** **Total Score / 40** ☐ *Medium (20-29) High (30+)*						

Appendix 5 - Data Extraction Form

General Information

Date of data extraction:

Author:

Article title:

Source (e.g. journal, conference) year / volume / pages / country of origin:

Identification of the reviewer:

Notes

Specific information

Study characteristics

Re-verification of study eligibility (tick if correct)

Population	Outcome	Context
( )	( )	( )

Population characteristics

1. Target population (describe)

2. Recruitment procedures (participation rates if available)

3. Characteristics of participants before measure

   Age:

Ethnicity:

Family SES:

Gender:

Geographical region:

Other information:

Outcomes and outcome measures

1. Who carried out the measurement?

2. What was the measurement tool?

3. Was/were the tool(s) validated?
   If so, how?

4. How was the validity of self-reported behaviour maximised?

5. Notes

Analysis

1. Statistical Methods Used

2. Significant Findings with Statistical Output

3. Non-Significant Findings with Statistical Output

4. Notes

Appendix 6 - Demographic Pro-Forma

Participant Code: ☐☐☐–☐☐☐

1. Marker for Previous Self-Harm: □ Yes □ No

2. If *yes*, method for self-harm:

□ Breaking Bones	□ Burning	□ Cutting
□ Head-Banging	□ Hitting / Bruising Self	□ Ligature / Self-Strangulation
□ Overdose on Illegal Substances	□ Overdose on Non-Prescription Medication	□ Overdose on Prescription Medication
□ Other*	□ Scratching	□ Skin Picking
□ Suffocation	□ Using an Instrument	□ Using Concealed Items in Custody
□ Unknown	□ Not Applicable	

**Description*_____
_____
_____

2. Gender: □ Male □ Female

3. Age: ☐☐ years old

4. Reason for Arrest[1]:

□ Affray	□ Aggravated Theft of a Motor Vehicle	□ Arson
□ Assault – Common Assault	□ Assault – ABH	□ Assault – GBH
□ Assault – Police	□ Breach of ASBO	□ Beach of Bail
□ Breach of The Peace	□ Burglary	□ Criminal Damage
□ Deception	□ Disqualified Driving	□ Driving whilst Unfit through Drink/Drugs
□ Drugs Cultivation	□ Drunk Disorderly	□ Firearms Offence
□ Fraud	□ Going Equipped	□ Handling Stolen Goods
□ Harassment	□ Immigration Matters	□ Making off without Payment
□ Murder	□ Offensive Weapon	□ Other*
□ Pervert the Course of Justice	□ Positive Breath Test	□ Possession of Controlled Drug
□ Possession with Intent to Supply	□ Prevent Breach of the Peace	□ Production of Cannabis
□ Rape	□ Recall to Prison	□ Robbery
□ S. 136 Mental Health Act	□ S. 4 Public Order Act 1986	□ S. 5 Public Order Act 1986
□ Sexual Touching	□ Theft	□ Threats to Kill

[1] Taken from: Worksop Custody Closure, Performance Review, 2012. Retrieved from: http://www.nottspa.org/documents/meetings/Police-Authority/11th-April-2012_Item-07-Worksop-Custody-Suite-Closure-Report-AppA.pdf

□ Unknown □ Unlawful Taking of Motor Vehicle □ Warrant

□ Witness Intimidation

**Description*_____
_____
_____

4. Restraining equipment used upon arrest and / or arrival:

□ Yes □ No

5. Demeanour upon arrival:

_____
_____
_____
_____
_____

Appendix 7 – Research Study Information Sheet

Division of Psychiatry and Applied Psychology

YANG Fujia Building
Jubilee Campus, Wollaton Road
Nottingham, NG8 1BB
Tel: 0115 846 7523
Fax: 0115 846 6625

An Investigation into the Prevention of Risk and Problematic Behaviours in Police Custody

We would like to invite you to take part in our research study. Before you decide, it is important for you to understand the purpose of the research and what it will involve. **Please take time to read the following information carefully and discuss further with the researcher,** if you wish. Please ask if there is anything that is not clear, or if you would like more information.

What is the purpose of the study?
We are interested in understanding policies and procedures that the Police follow whilst in Police custody relating to a detainee's behaviour, with a view of considering if any improvements can be made using psychological assessments. You are not obligated to take part in this study and participation is entirely voluntary.

Why have I been invited?
You have been recruited into the study as you meet the entry criteria: being detained in Police custody, being aged 18 years or over and determined to be fit to interview. We aim to involve around 45 participants into the study who will all take part in the same procedure.

How long is the study?
The study will take you approximately 20-30 minutes to complete.

Do I have to take part?
Your participation in this study is entirely voluntary. If you agree to take part, we will ask you to sign a consent form. You are free to withdraw from the study at any time without giving a reason.

What will I be asked to do if I take part?
You will be invited to take part in this research by completing assessments in either your individual cell, or in an interview room within the Police custody suite. You will be asked to complete up to two assessments; one measuring impulsivity and the other self-harming behaviour. These assessments involve the researcher reciting to you between 39 – 69 statements (depending upon the assessments you complete) and asking you to answer how much you agree or disagree with each statement. You will also be asked to give the researcher permission to view your NSPIS risk assessment (the questions that you were asked upon arrival) and to view your electronic detention log.

What are the possible disadvantages and risks of taking part?
Due to the sensitive nature of some of the statements and questions asked within the assessments, it is possible that you may experience some personal and emotional distress. The likelihood of this occurring is very small. However, there are a variety of support pathways available of which contact details will be provided, if such a situation arises.

How will I benefit from participating in this study?
You will be contributing to our understanding of Police custody policies and procedures relating to the behaviour, safety and wellbeing of those detained in Police custody.

If I need to speak to someone about the research, whom should I contact?
If you have any questions, queries or concerns regarding the study, please contact the researchers using the contact details below. If you do experience any personal or emotional distress please refer to the debrief sheet which will be given to you after completion of the questionnaire. The debrief sheet contains several support pathway contacts.

Confidentiality
All the information that you provide will be treated in confidence, stored in a secure and locked office, and on a password protected database. Only members of the research team will have access to this data. All research data will be kept securely for 7 years. After this time your data will be disposed of securely. If you disclose information that states you will harm yourself or have previously harmed yourself; will harm or threaten another individual; or information that relates to a previously undisclosed offence, this will be verbally relayed to the custody staff. In relation to the research, your identification will only be in the form of a number. In the event that the results of the study are published, your identity will remain confidential. The head supervisor of the study may look at the information that you have provided to check that the study is being carried out correctly.

What will happen if I don't want to carry on with the study?
Your participation in this study is entirely voluntary and you are free to withdraw from the study at any time without giving a reason. Any data that has been collected up to the point of withdrawal will be destroyed immediately.

How will we use the results of this research?
The results of the study will contribute towards a Doctorate qualification (i.e. DForenPsyc).

Am I able to know the results of the study?
Yes, if you would like a summary of the results, please contact the researcher (details below).

Who has reviewed the study?
This study has been reviewed and given a favourable opinion by the Faculty of Medicine and Health Sciences' Research Ethics Committee, The Chief Constable of Nottinghamshire Police, and the Head of Custody for Mansfield Police Station.

Contact details:
Researcher: Grace Thorley lwxgmt@nottingham.ac.uk
Supervisor: Dr Simon Duff simon.duff@nottingham.ac.uk

Appendix 8 - The University of Nottingham Consent Form



Division of Psychiatry and Applied Psychology

PARTICIPANT CONSENT FORM

Title of Study: An Investigation into the Prevention of Risk and Problematic Behaviours in Police Custody

Name of Researcher: Grace Thorley

Name of Participant: **Please initial boxes**

1. I confirm that I have read and understood the information sheet for the above study and have had the opportunity to ask questions ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason. ☐
3. I understand that my personal details will be kept confidential. ☐
4. I give the researcher permission to view my NSPIS risk assessment (the questions that I was asked upon arrival) and to view my electronic detention log for the purposes of this study. ☐
5. I understand that if I disclose information that I will harm myself, or have previously harmed myself; will harm or threaten another individual, or information that relates to a previously undisclosed offence, this will verbally be relayed to the custody staff. ☐
6. I understand that I will be asked to complete up to two assessment questionnaires and that the data from these may be used in future study reports. ☐
7. I understand that my data from this study will be anonymised and that only the researcher and supervisor will have access to the data. ☐
8. I agree to take part in the above study. ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person taking consent	Date	Signature

Appendix 9 – Local Police Force Consent Form

Consent Form

Consent Form : Sharing your personal information

Please read this form carefully
If you have any concerns please discuss them before you sign

Statement
It has been explained what information the Police would like to share about me, who they want to share the information with and why they want to share it. I understand that if I agree to my information being shared I have the right to limit how much is shared or withdraw my agreement at any time.

Details

Full Name: _____
DOB: _____

Police Officer responsible for obtaining consent

Full Name: _____
Collar number: _____

Nottinghamshire Police have explained to me:

- What personal information they want to share
- Why they want to share my information
- Who they want to share with
- That my information is kept secure and only shared by securely
- That I have the right to withdraw and restrict my consent at any time

Declaration

I ***consent / *do not consent** to Nottinghamshire Police sharing my information on a need to know basis with **3rd Parties** for the purpose of their support / research;

Print Name:_____ DOB: _____
Sign: _____ Date: _____

Children and young people may also want their parent or person with parental responsibility to sign. In the event that the child us unable to sign this form, the parent or carer must complete below.

I confirm that the above person had indicated their consent for Nottinghamshire Police to share their personal information with a 3rd party

Witness Name:_____
Relationship to the child: _____
Sign:_____

A copy of this form must be scanned onto the Police system file and a copy must be given to the named person.

Appendix 10 – Research Study Debrief Form

Debriefing Sheet

An Investigation into the Prevention of Risk and Problematic Behaviours in Police Custody

Supervisor: *Dr. Simon Duff and* ***Researcher:*** *Grace Thorley*

Thank you for taking part in this study. The aim of the research is to consider the current policies and procedures relating to the Police's current risk assessment that is administered routinely to each detainee. Research that has recently been published suggested that there are small, but significant improvements that can be made to better identify those detainees that are more vulnerable than others when in this environment. Previous research shows that there is a link between those individuals who are impulsive in personality, engaged in self-harming behaviour and display problematic behaviours. These three measures have been chosen within this study based upon previous research with a view of informing the Police risk assessment, again, to consider those individuals who are at greater risk to themselves and other people.

The overall aim of this research is to consider if any improvements can be made to the Police risk assessment to aid with custody staff's procedures, that in turn provides the right care for those individual's in custody.

All the information you have provided will be kept confidential. All data will remain anonymous with only a number as identification.

If you have any questions about the study please do not hesitate to contact the researcher. Alternatively you can contact the supervisor using the contact details below.

Researcher
Grace Thorley
lwxgmt@nottingham.ac.uk

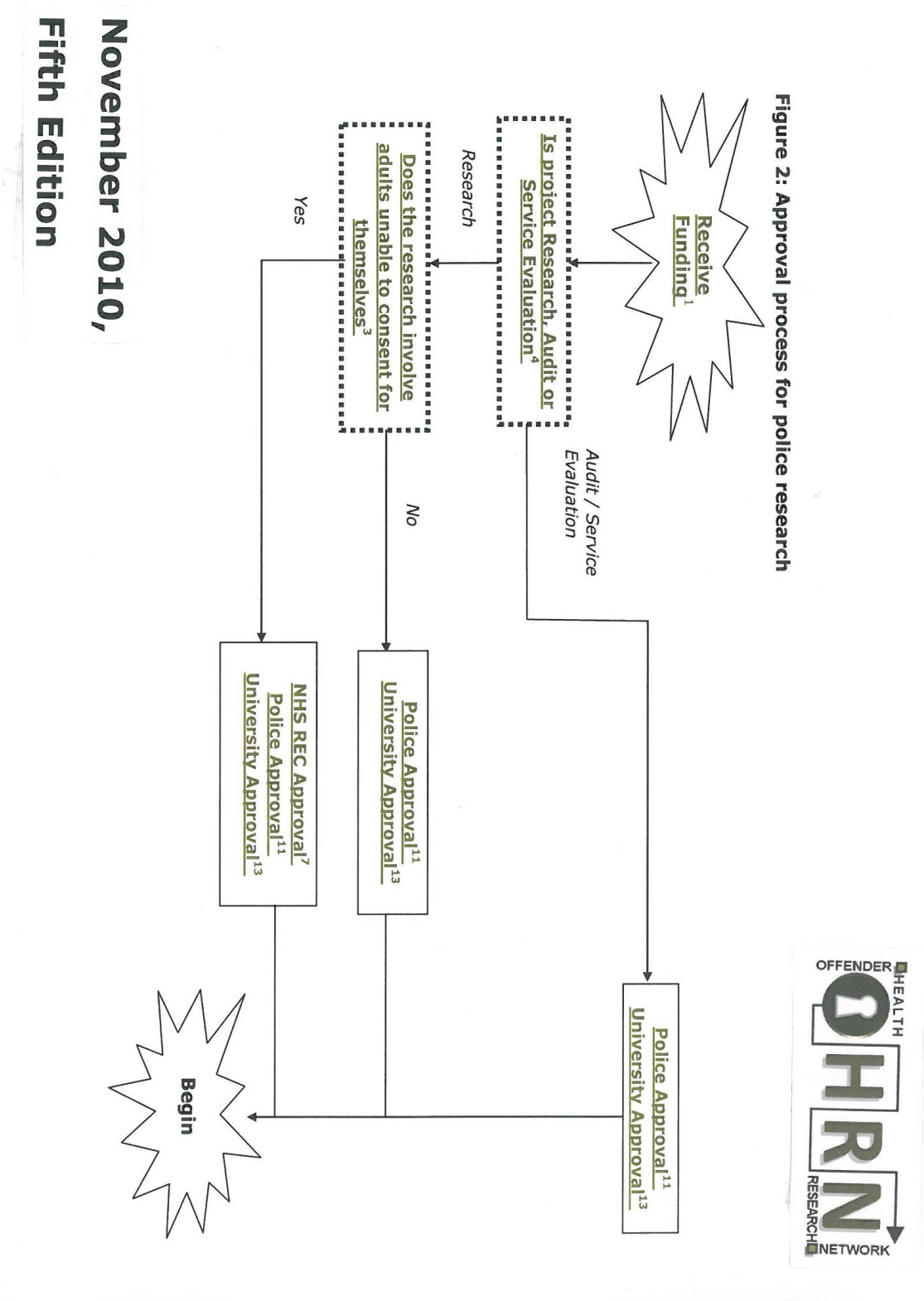
Supervisor
Dr. Simon Duff
simon.duff@nottingham.ac.uk

If you have felt any personal or emotional distress from participating within this study you can contact your local GP and / or the following:

The Samaritans	Tel: 08457 90 90 90
MIND Charity	Tel: 0300 123 3393

Nottingham Counselling Service
Tel: +44 (0)115 950 1743 || www.nottinghamcounsellingservice.org

Appendix 11 - OHRN Ethics Approval Process [Scanned]



Appendix 12 – Case Study Client Consent Form

THE UNIVERSITY OF NOTTINGHAM

DOCTORATE IN FORENSIC PSYCHOLOGY (D.FOREN.PSYCH)

CLIENT CONSENT TO COURSE WORK ASSIGNMENTS

I understand that GRACE THORLEY, hereafter referred to as 'the trainee' would like my permission to use information about me to complete a course work assignment (oral case presentation and/or written case report).

I understand that the work will not contain any information that would reveal my personal identity i.e. my name or address; rather I will be referred to via a pseudonym or case number.

The work may be discussed in the trainee's supervision and personal development group or looked at by other trainees to help their learning.

I understand that the work will be checked by the trainee's supervisor and The University of Nottingham to see that my anonymity and confidentiality have been safeguarded.

I understand that course work assignments (and material relating to these) are kept in securely locked premises and are not available for public access.

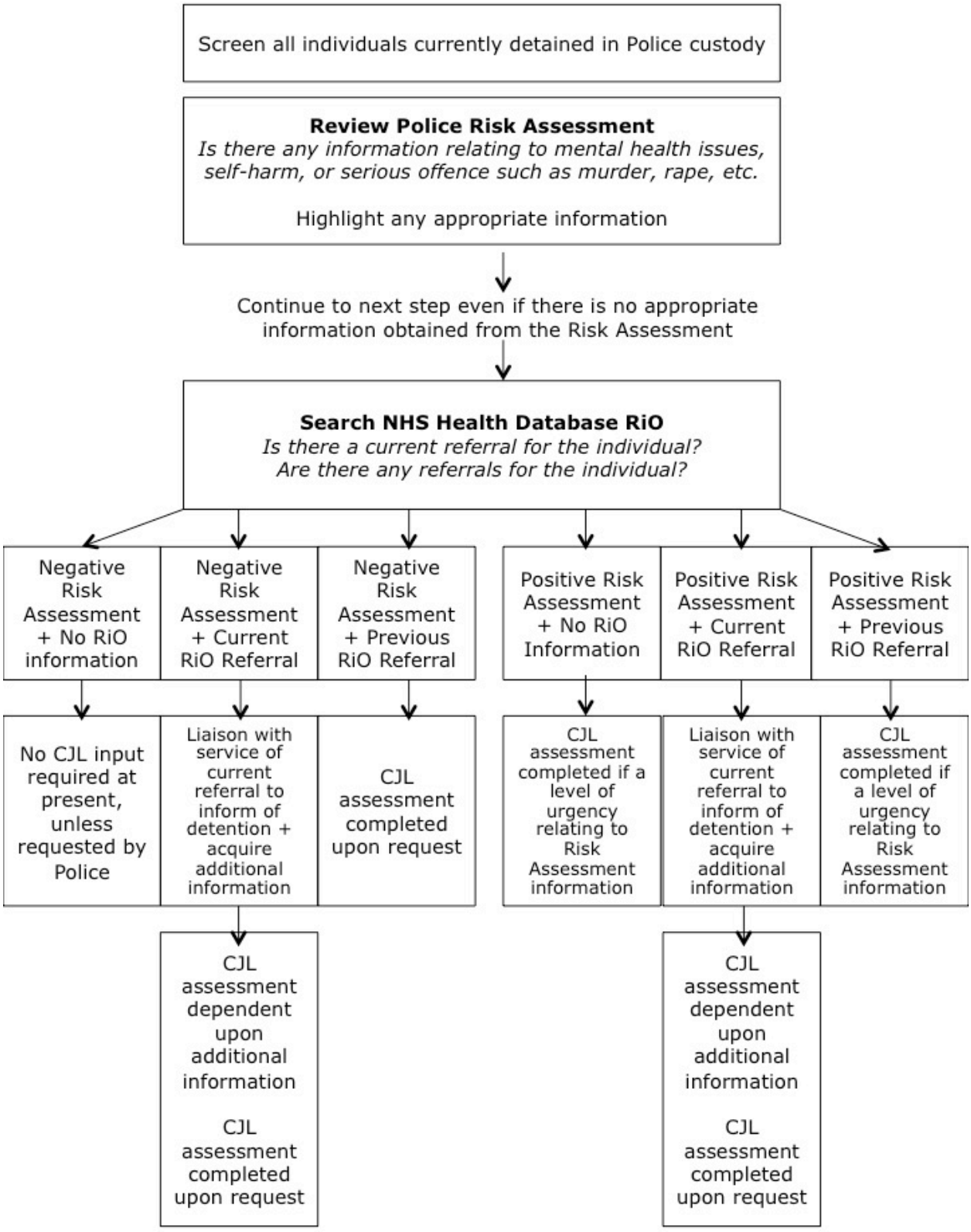
I understand that I do not have to allow information about me to be used in this way. I can change my mind and refuse my consent at any stage and this will have no effect on the treatment offered to me.

Name of Client: [redacted]

Client's signature: [redacted]

Date: 23.07.14

Appendix 13 - CJLD Service Standard Screening Procedure



Appendix 14 – Borderline Personality Disorder DSM-5 Criteria

General Criteria for a Personality Disorder
DSM-5 Criteria - Revised June 2011
The essential features of a personality disorder are impairments in personality (self and interpersonal) functioning and the presence of pathological personality traits. To diagnose a personality disorder, the following criteria must be met: A. Significant impairments in self (identity or self-direction) and interpersonal (empathy or intimacy) functioning. B. One or more pathological personality trait domains or trait facets. C. The impairments in personality functioning and the individual's personality trait expression are relatively stable across time and consistent across situations. D. The impairments in personality functioning and the individual's personality trait expression are not better understood as normative for the individual's developmental stage or socio-cultural environment. E. The impairments in personality functioning and the individual's personality trait expression are not solely due to the direct physiological effects of a substance (e.g., a drug of abuse, medication) or a general medical condition (e.g., severe head trauma).