Mental Health of Offenders on Probation

Aleksandra Kornalewska – Zaremba, BA, MSc.

A thesis submitted to the University of Nottingham for the degree of

Professional Doctorate in Forensic Psychology (D.Foren.Psy.)

October 2015

Abstract

This thesis forms part of the criteria for the qualification of the Doctorate in Forensic Psychology Practice (ForenPsyD). Its overall aim is to examine the prevalence of mental disorders and unmet needs among offenders managed by the Probation Service, because the understanding of this has very important implications for epidemiology, health service planning and future offending.

The first chapter of this thesis presents a general introduction to the topic.

Chapter two is a single case study, which describes work undertaken in relation to risk assessment and development of a care plan with a client managed by the Probation Service. A number of previously researched risk factors for offending have been identified in this case, these included: high numbers of previous convictions, presence of mental disorders, substance misuse, poor educational and vocational skills, poor cognitive and interpersonal skills, and limited social support. This study also demonstrated the practical utility of the Structured Assessment of Personality Abbreviated Scale (SAPAS; Moran et al., 2003), a brief screening measure for personality disorder case identification.

The Structured Assessment of Personality Abbreviated Scale (SAPAS; Moran et al., 2003) is discussed and evaluated in chapter three. Presented evidence suggests that this measure can rapidly identify individuals at high risk of personality disorder with a good level of psychometric properties. Based on the above and developing evidence supporting its validity and reliability with forensic populations the SAPAS has been chosen to screen for case identification in the empirical study.

Chapter four presents findings from the literature review on the prevalence of mental disorders in offenders on probation using a systematic approach. A total of 18 studies published between 1993 and 2013 were reviewed, suggesting significant lack of research in this area. The little research that exists demonstrates mixed findings as the prevalence of mental disorders reported varies making a comparison between the papers difficult. Despite the above, where possible weighted average prevalence rates were calculated. The estimated overall prevalence of PD was 19%, any current mental disorder 6%, alcohol misuse 62%, drug abuse 54, anxiety 13% and depression 10%.

The findings from previous chapters were considered and informed more in depth, empirical research on the prevalence of mental disorders amongst offenders on probation presented in chapter five. The present study estimated that 61% of the probationers suffer from a current mental disorder according to Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1998), and found that a significant proportion experience difficulties with regards to social needs such as financial and housing difficulties, which have been previously identified as significant risk factors for reoffending.

Finally, chapter six presents overall findings discusses its implications, explores limitations and provides direction for future research. Several wider implications can be drawn from this thesis, which shows that high numbers of probationers suffer from a variety of Axis I disorders, likely personality disorders, substance misuse and have a number of social needs. Based on these findings, it is possible to conclude that there is a need for the mental health substance misuse and social needs of offenders to be given a higher priority in terms of service delivery, education and research.

Statement of Authorship

This thesis is submitted to the University of Nottingham in part fulfilment of the Doctorate in Forensic Psychology. The idea for the thesis was the author's own and reflects her interest in mental health of offenders managed in the community setting.

Acknowledgments

Writing this dissertation was a life-changing experience and without the encouragement, help, and support of a number of people, it would have never been accomplished. Therefore it is with heartfelt gratitude that I acknowledge and thank the following people.

Firstly, I would like to offer my sincere thanks to all participants. Secondly, I would like to thank my supervisor Dr Simon Duff for his advice, support, patience and encouragement during the writing of the majority of this thesis. Thirdly, I thank Dr Andrew Forrester for his support and providing me with the knowledge and experience to make this thesis possible. I would also like to extend my appreciation to my previous supervisor Dr Karen Townend, who supported me in the initial stages of this journey. She has been patient, nurturing and has allowed and encouraged me to develop my skills and confidence as a psychologist and researcher.

Personally, I would like to thank my family and friends for believing in me, as without them I would never have had the strength and determination to complete this thesis. Finally, thank you to Mark and my parents, I could not have done this without you, not only practically but also psychologically. You have always been there, always interested in my work, and your support and love has been amazing. Thank you.

Contents

List of Tables

Chapter 5

List of Figures

Chapter 4 **p.**

List of Appendices

Chapter One

Introduction

Mental health presents one of the greatest challenges in health, economic and social terms. The understanding of the prevalence of mental health problems and unmet needs is therefore vital, as it has very important implications for epidemiology, health service planning and offending behaviour.

According to the Ministry of Justice (MoJ, 2012), over the last two decades, the number of people in contact with the criminal justice system has steadily increased. It is reported that at the end of 2012 around 86,000 people within England and Wales were remanded in custody up from 41,000 in 1992 (MoJ, 2012). There are many reasons behind this fast growth: e.g. more actions are being considered as criminal behaviour, an increase in the average sentence length, and incarcerating more individuals for a wider range of low level offences.

Many of those incarcerated present with a range of complex and frequently multiple needs such as poor mental and physical health, substance misuse, homelessness, unemployment, histories of family breakdown and trauma (e.g. Fazel, Hope, O'Donnell, and Jacoby, 2001; Hek, Condon, and Harris, 2005; Plugge, Douglas, and Fitzpatrick, 2006; Singleton, Meltzer, Gatward, Coid, and Deasy, 1998; Brooker, Repper, Beverly, Ferriter, and Brewer, 2002; Sirdifield, Gojkovic, Brooker, and Ferriter, 2009). Often these needs remain unidentified and unsupported resulting in a cycle of crisis and offending.

The overcrowded prisons and high psychomorbidity in this population can be interpreted as a failure of services in the community to identify and support vulnerable people in order to prevent and break this cycle. It is estimated that as

many as 90% of prisoners have a mental health problem, substance misuse problem or personality disorder, around 70% have two or more of these problems and approximately 1 in 10 of prisoners will be affected by severe mental illness (MoJ, 2012a). Based on the above the need to improve mental health care for offenders on probation has been justified not just on moral, economic and public health grounds, but also as a pathway out of offending (Brooker et al., 2009; HM Government and Department of Health (DoH), 2011).

Similarly the number of people being supervised by probation service has increased. According to data obtained by MoJ (2012a), the annual total probation caseloads increased by 39% between 2000 and 2008, and in 2011 over 230,000 offenders were under probation supervision. For many offenders serving a community sentences can be an appropriate form of punishment for their offending behaviour as this allows them to maintain already established relationships and access support in the community, which might be more appropriate in addressing their complex needs (Moj, 2012a).

To date the majority of the research on offender health has focused on prisoners, and comparatively little research has examined the prevalence of mental disorders amongst offenders managed by the Probation Service. A literature review by Brooker et al., (2002) found a high prevalence of mental disorders in prison populations, with as many as 12-15% of all prisoners having 4 or 5 co–existing mental disorders and 30% of all prisoners have been found to have a history of self-harm. Overall, the studies reviewed reported a wide range of prevalence rates for major mental disorders, which was attributed to the fact that different studies

used different diagnostic criteria including use of screening tools and self-reports, which may not be a reliable prevalence measure.

Furthermore, the available research also suggests that prisoners are at greater risk of developing mental health problems compared with people of a similar age and gender in the general population, where according to the 2007 Adult Psychiatric Morbidity Survey (AMPS) of England, the prevalence rates of mental disorders are one in four, 23% (APMS, 2007). Prisoners are also less likely to receive psychiatric help they need and are at increased risk of suicide (Brooker et al., 2002). This might be explained by the limited access to appropriate services that in first instance would identify the problem and then offer support or if necessary refer to appropriate services.

A large scale, point prevalence survey of 3,142 prisoners conducted by the Office for National Statistics (ONS) found that over 90% of prisoners in England and Wales had one or more of five psychiatric disorders; psychosis, neurosis, personality disorder, hazardous alcohol misuse and drug dependence (Singleton, et al., 1998). Furthermore, the remand prisoners had high rates of mental disorder than sentenced prisoners, with rates of 'probable psychosis' in sentenced population of 4% and 9% in the remand population. In addition women had higher rates of mental disorder than men. In women prisoner samples these rates also varied between 10% in the sentenced population and 21% in the remand population. In addition, 59% of male remand and 40% of male sentenced prisoners had a neurotic disorder, and even higher rates found in women ranging from 76% in females on remand and 63% in sentenced prisoners (Singleton et al.,

1998). The above presented statistics are concerning, as if these identified needs are not met during the incarceration, they will have a significant impact on offenders, their future and the community mental health services.

Despite the limited availability of research in probation, the existing data suggest that the health needs of this population are similar to those found in prison populations. Recent research by Brooker, Sirdifield, Blizard, Denney, and Pluck (2012) in Lincolnshire Probation Trust found that 39% of probationers had a current mental illness. The overall prevalence of current psychotic disorders was 11% and the most prevalent current mental health disorder reported was probable personality disorder, found in 47% of the sample. Furthermore, 27% of the sample had a current anxiety disorder, 55% scored positive for alcohol abuse and 12% scored positive for drug abuse. The overall estimates of prevalence of substance abuse as being either alcohol or drug abuse was 60%. The study also reported high levels of comorbidity. Overall, 89% of those with a current mental illness also had a probable personality disorder, as compared to 37% of those who did not have a current mental illness (Brooker et al., 2012).

Even more alarming are the previous findings by Brooker et al., (2011), reporting that 60% of those with a current mental illness (e.g. mood or anxiety disorder) were not receiving treatment, and only half of those with a current psychosis were receiving any support from mental health services. This suggests that there is significant lack in identifying mental health problems by probation staff. As only 33% of those identified as having a psychotic disorder by the study's researchers were subsequently recorded in probation files.

The little research that does exist on the health of offenders managed in the community demonstrates mixed findings mainly due to variation in methodology, the way of defining mental health problems and in the range of mental disorders under investigation. Despite this, all the studies showed that mental and physical health needs of this population are greater than those of the general population, and that this vulnerable group has a difficulty in accessing the appropriate care.

Accurate figures for the number of people with mental health problems within Criminal Justice System (CJS) in the UK are difficult to obtain. Despite the criminal justice policy that emphasizes 'health', including mental health, as a pathway out of offending (Social Exclusion Unit, 2002; Brooker et al., 2012). This is partly because the criminal justice staff across agencies such as the police, the Crown Prosecution Service, the courts, prison and probation are not trained to identify and assess these problems and also due to the problem of defining mental health problems. Even though the relationship between mental disorders and offending has been studied extensively it's not fully understood. In order to better comprehend this complex relationship more robust research is needed to identify individuals with mental disorders in the CJS.

Policy makers some time ago have established that offenders in general experience poor health, low educational attainment, unemployment, poor housing and chronic substance misuse (Department of Health (DoH), 2007). In this context the Ministry of Justice (MoJ) Strategic Plan for Reducing Reoffending 2008–11 (MoJ, 2008) identified the need to address the health and social inequalities experienced by this population throughout the CJS. The challenge of

responding to this need resulted in development of a range of services designed to identify Mentally Disordered Offenders (MDO's) and when appropriate, diverting them away from the CJS and into the treatment.

A key principle behind diversion services is that when criminal behaviour suggests the presence of mental illness, offenders should receive treatment rather than punishment. Furthermore, in line with the principle of equivalence it is emphasised that standards of care for offenders with mental disorders should be equivalent to standards of care provided in the community to patients with a mental disorder who do not come into contact with the criminal justice system (MoJ, 2008). To date, the results with regards to the efficacy of these services are rather limited, although there is some evidence to suggest that these services can help to reduce recidivism and improve mental health outcomes for offender population (Scott, McGilloway, Dempster, Browne, and Donnelly 2013).

The overall aim of this thesis is to establish the prevalence of mental disorders and unmet needs of offenders managed in the community. The following definition of mental disorder introduced by American Psychiatric Association in DSM-5 (APA, 2013) will be adopt for the purpose of this thesis *"A mental disorder is a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behaviour that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning"* (APA, 2013, p.20). This thesis will also draw on a biopsychosocial model as a main theoretical explanation of various aspects of

offending behaviour and the relationship between criminal activity and poor mental health.

The biopsychosocial model is a method of understanding health and illness through biological, psychological, and social factors. The principle of this approach states that all issues relating to health results from a complex interplay of these three factors (Engel, 1977). This model was first introduced by Grinker in 1954, and was popularized by Engel in 1977 as an alternative to medical model of understanding illness and treatment of patients. This model emerged in order to explain why individuals exposed to the same stimuli behave differently (Adler, 2009). Since then the model has been applied to the study of behaviour in a number of areas including criminal offending.

A number of biological factors (e.g. genetic factors, factors that impact neurological functioning) (Listwan et al., 2010; Ragatz et al., 2012; Schaefer and Hennessy, 2001), psychological factors (e.g. cognitive ability, personality traits, and psychopathology) (Salekin, Debus, and Barber, 2010; Salekin, Leistico, Trobst, Schrum, and Lochman, 2005; Schaefer and Hennessy, 2001) and sociological factors (e.g. demographics and social influences that impact personality development like for example; environment, family structure, education) (Listwan et al., 2010; Ragatz et al., 2012; Schaefer and Hennessy, 2001) have been linked to offending behaviour. According to Pallone and Hennessy (1996), offending behaviour is influenced by the interaction between these three factors. The application and more in depth evaluation of the model

will be presented in a single case study that will explore the aspects of offending behaviour and poor mental health.

With regards to classification of mental disorders, currently there are two well established systems: The International Classification of Diseases (ICD-10) published by the World Health Organisation (WHO, 1992) and the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) published by the American Psychiatric Association (APA, 2013). Both systems categorise disorders to permit the systematic recording, analysis, interpretation and comparison of mortality and morbidity of data collected.

Justification, Aims & Overview of Thesis

Based on the available literature it appears that the mental health among offenders on probation is an area that is under researched. High prevalence rates of the mental disorders, social needs have been identified within this population, as well as their impact on probationers themselves and a wider society. Therefore, identifying and addressing these needs (e.g. poor mental health, substance misuse, housing, educational and vocational needs) should have a significant impact upon offenders' health but also as way of breaking the cycle of crime and reducing the rates of reoffending. Consequently, screening persons on probation is vital in order to identify those with complex needs and where appropriate refer them to the appropriate services. The consequences of not taking action will continue to have a negative impact on offenders' wellbeing and a wider society. This thesis will therefore provide an important basis for understanding a range and the characteristics of mental disorders in probationers. To achieve this aim, four pieces of work have been undertaken investigating various aspects of the topic.

These chapters consists of a singles case study presented in chapter two, a psychometric critique in chapter three, a systematic review in chapter four and an empirical study in chapter five. Each of these chapters can be considered as independent studies as they all have unique objectives that contribute to the overall understanding of the topic. The following objectives have been highlighted within four main chapters of this thesis.

Chapter two is a single case study of work undertaken in relation to risk assessment and development of a care plan with a client managed by the Probation Service. This exploratory case study aims to aid an understanding of mental health needs and psychological functioning of a prolific offender, and explores psychological explanations for criminal behaviour and an association between the presence of previously researched risk factors for offending. Finally, this case study intends to demonstrate the practical utility of the Structured Assessment of Personality Abbreviated Scale (SAPAS: Moran, Leese, Lee, Walters, Thornicroft and Mann, 2003) a brief screening measure for personality disorder, which will be discussed and evaluated in chapter three.

The purpose of the third chapter is to critically evaluate the psychometric properties of the SAPAS (Moran et al., 2003) and investigate the practical utility of this psychometric measure as a routine personality disorder screening tool for case identification in probation population. Available research suggests high prevalence (47%) of probable personality disorder among offenders on probation (Brooker et al., 2012). To date one important obstacle to the conduct of epidemiological research into personality disorders has been the fact that

diagnostic interviews are time consuming, require substantial training and as a consequence result in financial strains. An alternative strategy is to use brief screening tools that are designed to be administered by non-specialists, but nevertheless are accurate at identifying probable and non-probable cases of personality disorder. Therefore this piece of work aims to establish whether using the SAPAS can improve case identification and thus have implications on treatment provision.

The fourth chapter of this thesis presents findings form a systematic review on the mental disorders of offenders on probation. It highlights the lack of literature suggesting greater need for more robust research in this population and as a result aid development of the research questions for an empirical study presented in chapter five.

In order to establish the levels of mental disorders and unmet needs amongst offenders under probation supervision an empirical study was conducted in a sample of probationers managed by the London Probation Service in Lambeth. The findings of this study are presented and discussed in chapter five. Overall this study provides valuable insights into health and social needs of this population.

Finally, chapter six is an overall discussion of the general findings of the thesis. The implications of these findings are considered in terms of existing methodological limitations, impact upon clinical practice future service development and direction for future research.

Chapter Two

Risk and Needs Assessment of a Prolific Offender

A Single Case Study

Abstract

This single case study describes work undertaken in relation to risk assessment and development of a care plan with an offender managed by the Probation Service and explores mental health needs, psychological functioning and criminogenic factors previously found to be associated with offending.

A number of risk factors have been identified in this case, these included: high numbers of previous convictions, presence of mental disorders, substance misuse, poor educational and vocational skills, poor cognitive and interpersonal skills, and limited social support. These were considered and informed care/risk management plan.

Furthermore this study demonstrated the practical utility of the Structured Assessment of Personality Abbreviated Scale (SAPAS; Moran et al., 2003) screening measure as a first step in two stage assessment for personality disorder case identification.

Rationale for Chapter 3

Currently, the assessment of personality disorder (PD) remains one of clinical judgement supported by the application of standardised assessments tools. These measures tend to be lengthy and require training to administer. Therefore, it is not a revelation that they are not commonly use across the Criminal Justice System (CJS), as evident in the single case study despite the strong evidence from research on the relationship between PD and recidivism. This highlights the need for a brief structured screening measure to be use in routine clinical assessment of people coming into contact with CJS. The following chapter aims to critically evaluate the utility of the SAPAS as a screening measure for case identification of PD.

Chapter Three

Critique of a Psychometric Measure

The Structured Assessment of Personality Abbreviated Scale

Abstract

This chapter critically evaluates the psychometric properties of the Standardised Assessment of Personality Abbreviated Scale (SAPAS: Moran et al., 2003), a screening measure for personality disorders. It explores the relative strengths and limitation of this tool for cases identification in Criminal Justice Settings (CJS). Evidence suggests that this measure can rapidly identify individuals at high risk of personality disorder with a good level of psychometric properties. A cut off score of 3 on the SAPAS has a good balance of sensitivity (0.94) and specificity (0.85) for case identification. Despite the limitations inherent in any screening tool, the SAPAS can be successfully used in clinical and research settings as it is short, simple to use, does not require training, and therefore fulfils many of the criteria for a desirable screening measure.

Introduction

The literature and the findings from the single case study presented previously suggest that offender characteristics are very important not only in the prediction of risk for future offending but also their engagement and response to treatment (McMurran and Ward, 2010). Research into Personality Disorders (PDs) established that there is a strong relationship between personality disorder (PD) and offending (Coid et al., 2006; Hernandez-Avila et al., 2000; Listwan, Piquero and Van-Voorhis, 2010), where presence of PD among offenders increases their risk of future offending and recidivism (Fridell et al., 2008; Hiscoke et al., 2003).

The prevalence of PDs within the UK prison and probation population is estimated between 60-70% (Ministry of Justice, 2011) and is associated with: the chronic presence of psychological problems (Mulder, 2002), suicidal behaviour (Harris and Barraclough, 1997), substance misuse (Grant, Stinson, Dawson, Chou, Ruan and Pickering, 2004), antisocial behaviour (Schmeelk, Sylvers and Lilienfeld, 2008) increase in health care related expenditures (Rendu, Moran, Patel, Knapp and Mann, 2002) and is also likely to have negative impact on engagement with probation service (Pluck, Sirdifield, Brooker and Moran, 2012). This has very serious implications on the victims, the perpetrator, the criminal justice, mental health service and wider society.

Measurement of PD is infrequently carried out across criminal justice and mental health services, despite established relationship between presence of PD and offending behaviour. These assessments are vital in order to inform formulation and development of effective treatment plan to managed identified risks, and

should be apply at the earliest opportunity. However, majority of personality assessment tools are fairly complex, require training and substantial amount of time to administer. Therefore, there is a need for a brief valid and reliable screening measure for PD that will assist with early case identification. This chapter critically evaluates the psychometric properties of the Standardised Assessment of Personality Abbreviated Scale (SAPAS) by Moran, Leese, Lee, Walters, Thornicroft and Mann, 2003, a screening measure for PD.

The Standardised Assessment of Personality Abbreviated Scale

The SAPAS is a brief eight-item screening measure for personality disorder. Its purpose is to produce a dimensional score that represents the likelihood that a person has a personality disorder in general, rather than to screen for particular types of personality disorders or patterns. It has been developed by Moran et al., (2003) and based on the opening section of an informant–based semi-structured interview, the Standardised Assessment of Personality (SAP) (Mann, Jenkins, Cutting, 1981), an informant based interview that allows for a diagnosis of PD according to ICD-10 (WHO, 1992) or DSM-IV-TR (APA, 2000) criteria with the aim to screen for case identification as a part of routine assessment.

The SAPAS consists of eight questions (please Table 2) corresponding to a descriptive statement about the person's personality. Each of the questions can be scored 0 (absent) or 1 (present), and the scores on the eight items are added together to produce a total score, ranging from 0 to 8.

Table 1
SAPAS Scale Questions

	Question
1	In general do you have difficulty making and keeping friends?
2	Would you normally describe yourself as a loner?
3	In general do you trust other people?
4	Do you normally use your temper easily?
5	Are you normally an impulsive sort of person?
6	Are you normally a worrier?
7	In general do you depend on others a lot?
8	In general are you a perfectionist?

The SAPAS is very quick to complete as it takes on average 2-5 minutes to complete and does not require a training to administer or score. As this screen measure is so short and straight forward there is no manual. A score of 3 or more on the SAPAS correctly identifies the Presence of DSM-IV personality disorder in 90% of participants (Moran et al., 2003).

The SAPAS has been originally validated using a sample of 60 adult psychiatric patients, recruited from outpatient, day patient and inpatient units across London. A score of 3 or more was established to be both sensitive and specific as a measure of the presence of a personality disorder according to the Structured Clinical Interview for the DSM-IV, Axis II (Moran et al., 2003). Subsequently the measure has been also validated for use in a number of European psychiatric samples (Bukh, Bock, Vinberg, Gether and Kessing, 2010; Moran et al., 2003) among those with substance dependence (Hesse, Rasmussen and Pedersen, 2008) and most recently those on probation (Pluck et al., 2012). However, before embarking on examining the psychometric properties of the SAPAS it is

important to first define personality and provide an overview of the theories and methods used to measure this construct.

Personality & Personality Disorder

Personality represents those characteristics of the person that account for consistent patterns of feelings, thinking and behaving. This construct has a long history dating back to Plato, Aristotle, Descartes and Machiavelli. Since a numerous definitions of this construct has been proposed.

Allport (1937), first defined personality as "*the dynamic organisation within the individual of those psychosocial systems that determine his unique adjustment to the environment*" (p.48) and then as "*the dynamic organisation within the individual of those psychophysical systems that determine his characteristic behaviour and thought"* (Allport, 1961, p.28).

A modern definition by Larsen and Diener (2002), describes personality a set of psychological traits and mechanisms within individuals that are organised and relatively enduring. These traits and mechanisms influence individual interactions with, and adaptations to the intrapsychic, physical, and social environments.

A number of approaches exist to the study of personality (i.e. psychoanalytic, genetic, and behavioural) and consequently there are differences between them in understanding and conceptualising this construct. One of the most influential method is known as trait approach, which is based on the assumption that differences among individuals can be explained by a number of distinct behavioural styles also known as traits.

The first personality inventory by Cattell (1966) was based on sixteen primary personality dimensions and consisted of 171 traits. This approach has been criticised as traits were overlapping and it was lengthy. Subsequently, the 'Big Five' model has been introduced, which simplified the previous personality inventory, into five dimensions: extraversion, neuroticism, agreeableness, conscientiousness and openness to experience (Costa and McCrea, 1992; Goldberg, 1990, 1993).

Another influential work was introduced by Eysenck, who described two-dimensional classification of personality: extraversion and neuroticism, in his early work *Dimensions of Personality* (Eysenck, 1947). The third dimension, psychoticism, was added to the model in the late 1970s to capture the behaviours that are not explained by neuroticism and extraversion (Eysenck and Eysenck, 1976). Due to the differences in understanding and defining construct of personality, there are also some differences when it comes to defining personality abnormalities.

Personality disorders (PDs) form a class of mental disorders that manifests as a problem in cognition, affect, and behaviour, this occurs when the structure of personality prevents the person from achieving adaptive solutions to universal life tasks (Livesly, 1998). More practical understanding of PD, commonly applied within clinical setting describes its symptoms as a three Ps; problematic, persistent and pervasive. Due to the inflexibility and pervasiveness of these long standing rigid patterns, they have significant impact on individual and others.

Diagnostic process

Currently, the assessment of PD remains one of clinical judgement based on the criteria listed in two main classification systems, the Diagnostic and Statistical Manual of Mental Disorders (DSM), 5th edition, (American Psychiatric Association, 2013) or International Classification of Diseases (ICD), 10th version, (World Health Organisation, 1992).

According to DSM-5 (APA, 2013) the essential features of a PD are impairments in personality functioning and the presence of pathological personality traits, that are inflexible, maladaptive and enduring. In order to diagnose a PD the following criteria must be fulfilled:

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 sociocultural 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., drug or medication) or a general medical condition (e.g., severe head trauma).

The onset of personality disorder is usually in childhood or adolescence and thus is stable and of long duration. Within the DSM-5 (APA; 2013) criteria there are ten different types of personality disorders that are grouped into three clusters A, B or C, these and their short characteristics are presented in Table 2, p.76. Each disorder consists of a unique combination of attitudes, emotions and behaviours. Cluster A includes disorders that are odd or eccentric, cluster B contains disorders in which dramatic and erratic emotional responses are common, and cluster C consists of anxious and fearful disorders.

As previously stated the assessment of PD remains one of clinical judgement, however this can be strengthen by the application of standardised assessment measures. These can be grouped into two categories semi structured interviews and self-report questionnaires. The most frequently utilised in clinical practice semi structured interviews are; the International Personality Disorder Examination (IPDE; Lenzenweger, Loranger, Korfine and Neff, 1997), the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, and Benjamin, 1997), the Standardized Assessment of Personality (SAP; Mann Jenkins, Cutting, 1981), the Diagnostic Interview for Personality Disorders (Zanarini, Frankenburg, Chaunecy, and Guberson, 1987), and the Personality Disorder Interview (PDI-IV; Widiger, Mangine, Crobitt, Ellis and Thomas, 1995). These should be administered by trained professionals in order to limit observational and interpretational variance. The assessments of personality involving implementation of semi-structure interview are lengthy in time and require training. Unfortunately, there is growing number of constraints in clinical practice, with limited time for extensive assessments. A simple solution to this

problem could be to divide the diagnostic process into two stages. Stage one, screening, stage two, semi structure interview for positive cases identified during screening.

A number of self-report questionnaires are currently available for screening PDs: the International Personality Disorder Examination Screen (IPDE-S; Lenzenweger et al., 1997), the Personality Diagnostic Questionnaire – Revised (Hyler et al., 1992) and the Structured Clinical Interview II Screen for DSM-IV (SCID-II Screen; Ekselsius et al., 1994). Although these measures are of some value to researchers aiming to identify 'high risk' populations, when compared to a structured interview, their specificity is rather poor, and take a long time to complete (Moran et al., 2003). Therefore, a brief valid and reliable screening measure for PDs would potentially overcome some of these problems and assist with early identification of those that may require further assessment.

Table 2. Personality Disorders Cluster & Characteristics

Cluster	Personality Disorder	Characteristics
A Odd and eccentric behaviours.	**Paranoid**	Characterised by high levels of mistrust and suspiciousness. Individuals meeting diagnostic criteria for Paranoid PD are found to be easily provoked into feeling unfairly treated or attacked, without sufficient basis leading to development of harbouring resentments. Common features include: suspicions that others are deceiving, exploiting or harming the individual; preoccupations with unjustified doubts as to the loyalty and trustworthiness of others; a reluctance to confide in others, fearing information will be used maliciously; a persistent bearing of grudges; unjustified, recurring suspicions about the fidelity of spouse/partner.
	Schizoid	Characterised by a lack of interest in forming relationships with others and a flattened emotional state. Common features include: a preference for solitary activities; little interest in activities including sexual activity with another person; limited network of close friends or confidants; the person may appear as emotionally cold, detached or bland.
	Schizotypal	Characterised by difficulties in establishing and maintaining close relationships with others. The individual affected experiences extreme discomfort with close relationships and has less capacity to form them. Furthermore, the presentation is complicated by cognitive or perceptual distortions and eccentricities of behaviour. Common features include: ideas of reference; odd beliefs or magical thinking; suspiciousness or paranoid ideation; inappropriate or constricted affect; the behaviour or appearance seems odd, eccentric or even peculiar; excessive social anxiety.
B Dramatic, emotional or erratic disorders.	**Antisocial**	Characterised by impulsivity, irresponsibility, remorselessness and frequent rule breaking in adulthood. Common features include: failure to conform to social norms with respect to lawful behaviours; deceitfulness as indicated by repeated lying, use of aliases or conning others for personal profit or pleasure; lack of remorse; impulsivity and failure to plan ahead; irritability or aggressiveness as indicated by repeated physical fights or assaults; reckless disregard for the safety of self or others; consistent irresponsibility, as indicated by repeated failure to sustain consistent work behaviour or honour financial obligations; lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another. There is also evidence of a Conduct Disorder prior the age of fifteen.
	Borderline	Characterised by an unstable sense of self, relationships and moods. This type of personality disorder is often called emotionally unstable due to the presence of frequent emotional crises often resulting in self-harming and impulsive risky behaviours. Common features include: frantic efforts to avoid real or imagined abandonment; a pattern of unstable, intense personal relationships; identity disturbance; chronic feelings of emptiness, worthlessness; recurrent suicidal behaviour; transient, stress-related paranoid ideation.
	Histrionic	Characterised by extreme emotionality and attention seeking behaviour, which is based on a strong desire to be the centre of attention. Common features include: uneasiness when not the centre of attention; inappropriate sexually seductive or provocative behaviour; rapidly shifting and shallow emotions; use of physical appearance to draw attention to self; style of speech that is excessively impressionistic and lacking in detail; exaggerated expression of emotion; highly suggestible; considers relationships to be more intimate than they are.
	Narcissistic	Characterised by an overvaluation of self-worth, directing affection to self rather than others and holding an expectation that others will recognise and cater to their desires and needs. Common features include: inflated self-esteem; interpersonal exploitativeness; expansive imagination; supercilious imperturbability and deficient social conscience.

Cluster	Personality Disorder	Characteristics
C Anxious or fearful disorders.	**Dependent**	Characterised by a pervasive and excessive need to be taken care of that leads to submissive and clinging behavior and fears of separation, beginning by early adulthood and present in a variety of contexts. Common features include: difficulty making everyday decisions without an excessive amount of advice and reassurance from others; needs others to assume responsibility for most major areas of the person life; difficulty expressing disagreement with others because of fear of loss of support or approval; difficulty initiating projects or doing things on his or her own due to a lack of self-confidence.
	Obsessive – Compulsive	Characterised by pervasive pattern of preoccupation with orderliness, perfectionism, and mental and interpersonal control, at the expense of flexibility, openness, and efficiency, beginning by early adulthood and present in a variety of contexts. Common features include: highly self-critical; expect others to meet their high standards; critical of those with different ideals; rigid/ruminative thinking style; highly levels of perfectionism/procrastination.
	Avoidant	Characterised by high levels of social anxiety, which stems from an underlying sense of defectiveness and inadequacy. Common features include: being socially withdrawn; apprehensive, shy and awkward; inner sense of inferiority; vigilant for signs of rejection and failure; may desire close relationships but are hypersensitive to rejection; avoidance.

DSM Personality Disorders Clusters and Characteristics

Over the years research resulted in the refinement of the criteria sets for personality disorder diagnoses present in DSM-III-R (1987), DSM-IV (1994), DSM-IV-TR (2000), and DSM-5 (APA, 2013). The ICD-10 criteria are quiet similar to that of DSM with exception that the Schizotypical PD and the Narcissistic PD are not classified in ICD-10. In addition there is a distinction made in ICD-10 between two types of the Emotional Unstable PD: the Impulsive type and the Borderline type. Antisocial and dissocial personality disorder are also conceptualised differently. The ICD-10 focuses on interpersonal deficits, for example, incapacity to experience guilt, and less on antisocial behaviour. In addition, symptoms of conduct disorder in childhood are not a prerequisite.

DSM-5

As a result of ongoing research there have been changes in DSM criteria, and although the DSM-5 kept the DSM-IV categorical approach it also introduce a diagnosis of Personality Disorder- Trait Specified (PD-TS). This allows clinicians to note the presence of a personality disorder without requiring a specific name for it. This offers more flexibility and descriptive information than the current categorical approach. It has the advantage of eliminating the need for vague diagnoses such as Other Specified and Unspecified Personality Disorder (APA, 2013).

The DSM-5 (APA, 2013) includes two types of diagnostic models for personality disorders. The first type is called a categorical model. This is the "official" diagnostic method listed in the section called, Diagnostic Criteria and Codes (Chapter II). However, an alternative combination of dimensional and categorical

model is also presented in DSM-5 (Chapter III), as there was growing evidence in support of a dimensional rather than a categorical system of diagnosis prior its publication.

The current and “official" diagnostic method derives from a categorical model of disease, disorders, and conditions. This approach defines a presence or absence of disorder; it’s similar to the light switch. It is either on, or it is off. For some conditions a categorical model is very appropriate, as it offers a quick system of categorising, which can be extremely useful in clinical settings. However, when it comes to personality disorders this approach presents some limitation, like for example the information regarding the severity of a condition. Using the light switch analogy the dimensional model is more like a dimmer. It has a range from being completely off, to somewhat on/off, to completely on, and therefore is more suited for conditions such as PD where there is a continuum ranging from normal to abnormal.

While we may gain greater accuracy and precision when we view personality disorders as dimensional or continuous in nature, we lose a large degree of diagnostic simplicity as with a dimensional approach, everything becomes more complicated. The DSM-5 (APA, 2013) embraces a combination of dimensional and categorical model, (Chapter III) where PDs are linked to particular personality traits and degree of impairment allowing personality characteristics to be explore and describe on individual basis rather than by categories of a disorder. This appears to be an important move in a direction of addressing some of the issues highlighted in previous editions of DSM with regards to categorical approach to diagnosis of PD.

In the DSM-5 alternative model, only six specific personality disorders are included, versus the ten included in the official section presented in Chapter II. The six that are included are: Antisocial, Avoidant, Borderline, Narcissistic, Obsessive-compulsive, and Schizotypal. Each of the six specified personality disorders require a moderate, severe, or extreme impairment rating of personality functioning, and a specified number of pathological personality traits. The number required, and the list of pathological traits, is unique to each personality disorder. Although this model is not the officially recognised diagnostic system of DSM-5, clinicians may use this method for greater specificity to inform their clinical practice. Furthermore it also encourages further research in this area.

Psychometric Measures, Assessments & Properties

Psychometric measures aim to assess a particular aspect or aspects of a person's functioning (i.e. cognitive, personality, interpersonal variables) that might be relevant to evaluation and conceptualization of the presenting problem. Their use has become a vital part of a clinical service that emphasizes evidence based practice.

The assessment process aids practitioners with identification of the problem, helps with development of an appropriate treatment plan and provides a baseline for measuring the outcome of the treatment. As important as selection of appropriate treatments that are supported by research, it is equally important to use assessment measures with proven reliability and validity to address assessment questions.

Due to a growing number of constraints in clinical practice (i.e. financial consideration, time limitations) there is a growing trend moving away from using

lengthy psychometric tools, towards brief structured screening measures that are feasible for use in routine clinical assessment as they are brief and practical. Nevertheless, these screening measures still need to be statistically accurate at identifying probable and non-probable cases of disorders for the population and setting in which they are being used (Pluck, Sirdifield, Brooker and Moran, 2012).

According to Antony and Barlow (2011), a 'psychometrically strong measure' needs to have consistent empirical evidence of reliability, validity, and ideally clinical utility. Although, psychometric evidence is always conditional, as it is based on sample characteristics and assessment purpose, the supporting empirical evidence must be relevant to the specific purpose the measure is going to be used.

In evaluating the psychometric properties of psychological measure, the aim is to establish a degree to which an assessment provides an accurate and precise measure of the targeted problem. Although, reliability and validity are related concepts, they also differ in many ways.

Reliability refers to the consistency to which a psychometric assessment measures a construct accurately, consistently and with minimal errors (Wasserman and Bracken, 2003). Validity on the other hand assesses the accuracy of interpretation and judgments based on test scores (Garb, Lilienfeld and Fowler, 2008). "*A test can be reliable but not valid however, a test cannot be valid but unreliable. Test score reliability sets an upper limit on validity, such that test validity is constrained by reliability*" (Wasserman and Bracken, 2003; Anton and Barlow, 2011, p. 24).

The validity of a screening tool is defined as the measure of frequency with which the result of that test is confirmed by a diagnostic procedure. Reliability involves both the variation in methods used and variation of observers. The result from screening is related to the prevalence of the condition in populations. Screening measures can be administered quickly therefore, have financial benefits and provide many more advantages for use in clinical practice.

Psychometric Properties of the SAPAS

A good psychological measure requires the following properties: reliability, validity, ability to discriminate, and appropriate norms (Kline, 1986). The following section will examine the SAPAS according to these psychometric properties.

Reliability

Reliability refers to the extent, to which a psychometric tool measures a construct accurately, consistently and with minimal error. Despite the fact that the use of psychometric measures aims to increase the scientific basis of psychology and reduce the level of error, it must be acknowledged that within every psychometric measure there is some level of error (Groth-Marnat, 2005). The reliability acts as an indicator of the amount of error in measurement. A number of factors can influence the reliability of a set of scores, for example characteristics of the measure itself, administrative characteristics, and the characteristics of the test takers (Goodwin and Goodwin, 1999).

Internal Consistency

A psychometric measure is considered reliable if it is self-consistent. Internal consistency refers to the degree of uniformity and coherence among the items within a test and is usually measured by Cronbach's alpha coefficient, which ranges from 0 to 1, with greater value indicating better internal consistency (Wasserman and Bracken, 2003).

Literature highlights a number of interpretive guidelines for determining how high alpha should be for a given scale. The most frequently cited of these recommendations are by Nunnally (1978), who reported alpha coefficient of a minimum of 0.7 as satisfactory, 0.8 to 0.89 as good and 0.9 to 1.00 as excellent.

A cursory review of the literature by Gary-Little, Williams and Hancock (1997), suggests that alpha coefficient between 0.72 and 0.88 is usually offered as evidence of acceptable to high reliability, with an alpha of at least 0.8 acting as average benchmark for widely used measures (Lance, Butts and Michels, 2006). Field (2000) however, suggested that alphas over 0.6 also reflect a measure that is internally consistent. Based on the above it seems that although useful in assessing internal consistency of a total measure score, alpha coefficient is not without its limitations. It also has to be noted that interpretation of alpha cannot be complete without a consideration of whether assessment is uni-dimensional and the length of scale, as both of these factors can affect the reliability of alpha coefficient (John and Benet-Martinez, 2000; Ayearst and Bagby, 2011).

The preliminary validation of the SAPAS by Moran et al., (2003) investigated the internal consistency by means of the Cronbach's alpha coefficient. Findings are presented below in Table 3. A moderate degree of internal consistency with the alpha coefficient for the total score 0.68 was stated.

Table 3

SAPAS Internal Consistency (Moran et al., 2003)

SAPAS Item	Alpha Coefficient
1. Difficulty making and keeping friends	0.59
2. Usually a loner	0.63
3. Trusting others	0.57
4. Normally loses temper easily	0.66
5. Normally impulsive	0.72
6. Normally a worrier	0.62
7. Depends on others a lot	0.68
8. Generally a perfectionist	0.70

A study of a validity and reliability of the SAPAS in a sample (n=58) of substance abusers by Hesse, Rasmussen and Pedersen (2008) reported modest levels of internal consistency (see Table 4) with the alpha coefficient for the total score of 0.62, somewhat lower to the original value of 0.68 obtained by Moran et al, (2003). Furthermore, the study found that the impulsivity item reduced reliability slightly, and concluded that the SAPAS is a relatively reliable brief screening measure of personality disorder in clients with extensive substance abuse.

Table 4

SAPAS Internal Consistency (Hesse et al., 2008)

SAPAS Item	Alpha Coefficient
1. Difficulty making and keeping friends	0.57
2. Usually a loner	0.60
3. Trusting others	0.55
4. Normally loses temper easily	0.61
5. Normally impulsive	0.63
6. Normally a worrier	0.60
7. Depends on others a lot	0.59
8. Generally a perfectionist	0.61

Based on the evidence presented above it can be stated that the SAPAS has acceptable levels of internal consistency for a screening measure.

Test-retest Reliability

Test-retest reliability refers to the reliability of the test to achieve similar results over two separate occasions with no intervention provided. The rationale behind this method is rather simple. As the same test is administered twice, the difference between scores on the first and second administration of the test should be only due to errors in measurement. Therefore, if the measure truly reflects its intended construct then it should be able to assess the construct on different occasions equally well (Netemeyer, Bearden and Sharma, 2003). The correlation coefficient between two sets of responses is often used as a quantitative measure of test-retest reliability.

Personality disorders are by definition, composed of long-standing, maladaptive personality traits or behaviours. Therefore, measures designed to assess

personality disorder pathology should show high test-retest reliability and yield scores that are relatively stable over a short period of time.

One way of assessing test – retest reliability is by calculating Cohen's Kappa. Kappa values account for the level of agreement expected by chance alone and vary from 1.00 (per fact agreement) to -1.00 (less agreement than can be expected on the basis of chance alone), with 0 equal to agreement reached only by chance (Kaplan and Saccuzzo, 2001; Von Eye and Mun, 2005). Reliability is assessed as poor if values for kappa are below 0.40. Values in the range of 0.40 to 0.59 have been described as fair, and values assessed as good fall in the range of 0.60 to 0.74. Values above 0.75 are considered excellent (Ayearst and Bagby, 2011; cited in Anthony and Barlow, 2011).

Moran et al., (2003), reported the three weeks test – retest reliability on the SAPAS in a sample of 60 psychiatric patients. The results were obtained by calculating the kappa coefficient for each individual item, and are presented in Table 5. The overall reliability of the total score was estimated using Lin's concordance correlation coefficient (CCC) and was found to be 0.89. The CCC ranges from -1 to 1, with a value of 1 representing a perfect agreement, a value -1 representing a perfect disagreement, and a value of 0 representing no beyond chance agreement (Lin, 1989).

Table 5

SAPAS Kappa Coefficient (Moran et al., 2003)

SAPAS Item	Kappa Coefficient
1. Difficulty making and keeping friends	0.81
2. Usually a loner	0.83
3. Trusting others	0.79
4. Normally loses temper easily	0.83
5. Normally impulsive	0.61
6. Normally a worrier	0.62
7. Depends on others a lot	0.82
8. Generally a perfectionist	0.73

The results suggest that majority of items on SAPAS had adequate test re – test reliability, although the values for 'normally impulsive' and 'normally a worrier' are lower, 'normally impulsive' seems to be the least satisfactory item, after taking into consideration both internal consistency and test-retest reliability.

Hesse et al., (2008), reported internal consistency of the SAPAS in sample of substance abusers to range from 0.26 to 0.58, which is lower in comparison to that found in psychiatric sample ($\alpha = 0.62$) by Moran et al., (2003). The four months reliability analyses of the SAPAS in substance abusers are presented below in Table 6.

Table 6

SAPAS Kappa Coefficient (Hesse et al., 2008)

SAPAS Item	Kappa Coefficient
1. Difficulty making and keeping friends	0.53
2. Usually a loner	0.58
3. Trusting others	0.58
4. Normally loses temper easily	0.32
5. Normally impulsive	0.50
6. Normally a worrier	0.26
7. Depends on others a lot	0.32
8. Generally a perfectionist	0.50

The kappa coefficient across the items in the substance abuser population are lower in comparison to those found in the psychiatric sample. The values on items: 4 (‘normally loses temper easily’), 6 (‘normally a worrier’) and 7 (‘depends on others a lot’) are poor, the rest of the items however have fair test-retest reliability. Although the same scores would not be expected at the test-retest, these results reported by Hesse et al., (2008) are dubious. However, this could be explained by the ‘practice effect’ where participants learn to respond to the same questions during the first test, which affects their response in the second test.

Interrater Reliability

Interrater reliability refers to consistency of judgments or ratings across multiple judges or raters, and as such is not a major issue since the SAPAS questions are largely self-explanatory and no interpretation is placed on responses provided by a participant, therefore it will not be discussed in more detail.

Validity

Psychometric validity is concerned with the extent to which test scores exclusively measure their intended psychological construct(s) and guide consequential decision making (Wasserman and Bracken, 2003). In order to evaluate the validity of a screening measure, it is necessary to establish various statistical features of the screen such as: the sensitivity (the rate of positive test results among patients with particular disorder) specificity (the rate of negative test results among patients without disorder), and positive predictive power (the proportion that is correctly identified as either a case or non-case). These are calculated in relation to how well the potential screening measure performs in relation to the 'gold standard' measure in diagnosis of the particular disorder (Pluck et al., 2012). The following section will examine the concurrent, predictive, construct, content and convergent validity of the SAPAS.

Concurrent & Predictive Validity

Concurrent validity assesses the extent to which the measure correlates with previously validated measures of the similar constructs and predictive validity is a measurement of how well a test predicts future performance. In order for a test to have predictive validity, there must be a statistically significant correlation between test scores and the criterion being used to measure validity.

To establish concurrent and predictive validity of the SAPAS Moran et al., (2003) used as the criterion the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II, First et al., 1997). At the time it was emphasised that, the validity of the assessment measure for personality disorder has yet to be

firmly established and none has been proved superior to any other. Therefore, the SCID-II was chosen as the gold standard because it has been widely used and its psychometric properties are well established (Zimmerman, 1994; Moran et al., 2003).

Moran et al., (2003), employed a logistic regression with the SAPAS total score as a predictor and SCID-II diagnosis as dependent variable to investigate the use of alternative cut-off scores on the SAPAS. This analysis produced an AUC of 0.94 (95% CI 0.88 – 0.99). Furthermore, to assess the sensitivity and specificity of the SAPAS for various cut off scores, a sensitivity-specificity plot was obtained, which indicated that the probability cut-off of 0.65 for a positive SCID-II diagnosis (equivalent to a total SAPAS score between 3 and 4) has approximately equal sensitivity and specificity, with both around 0.8 (Moran et al., 2003). The performance of the SAPAS at the range of cut - off scores is presented in Table 7 below.

Table 7

Performance of the SAPAS at different cut-off scores (Moran et al., 2003).

Cut-off score	Sensitivity	Specificity	(+) predictive value	(-) predictive value	Correctly classified (%)
2 or more	0.97	0.44	0.68	0.92	73
3 or more	0.94	0.85	0.89	0.92	90
4 or more	0.82	0.89	0.90	0.80	85
5 or more	0.58	1.0	1.0	0.66	77

The cut-off score of 3 or 4 correctly classified over 80% of the positive cases. Although both thresholds performed similarly, arguably the cut-off score of 3 offers the best balance of sensitivity (0.94) and specificity (0.85).

Pluck et al., (2012) determined the optimal cut-off score of the SAPAS for detecting a DSM-IV diagnosis of PD among those on probation. The study was undertaken as part of a larger cross-sectional survey of psychiatric morbidity in the UK probation population. A stratified random sample of 173 participants was selected, and assessed for the presence of depression, psychosis and other mental illness. In addition, one of the researchers assessed a consecutive series of 40 of these cases for PD. To establish the sensitivity, specificity, overall accuracy and positive predictive values of the SAPAS a range of cut-off scores were calculated. These are presented in Table 8. In addition a receiver operator characteristic (ROC) curve analysis was performed to assess its ability to predict the presence of DSM-IV PDs on the SCID-II (Pluck et al., 2012).

Overall, 75 % of the sample met DSM-IV criteria for at least one PD on the SCID-II and among those positive cases the most common diagnosis was antisocial PD, with 50% of the cases scoring positively, and multiple diagnoses common (Pluck et al., 2012). Using the general psychiatric cut-off score of 3, the prevalence of probable PD was 58%. The kappa coefficient for the level of agreement between dichotomized SAPAS scores and SCID–II was 0.51, indicating ‘good’ agreement between the two assessment measures (Pluck et al., 2012).

Table 8

Performance of the SAPAS at different cut-off scores (Pluck et al., 2012)

Cut-off score	Sensitivity	Specificity	(+) predictive value	Correctly classified (%)
1	1.0	0.40	0.86	85
2	0.90	0.60	0.87	83
3	0.73	0.90	0.96	78
4	0.47	0.90	0.93	58
5	0.20	1.0	1.0	15

Overall, the validity of the SAPAS among probationers by Pluck et al., (2012) has confirmed that the previously established by Moran et al., (2003) cut-off score of 3 for identification of cases of PD in general psychiatric context is also appropriate for use with the probation population. A score of 3 or more has an accuracy of 78% and good sensitivity (0.73) and specificity (0.9). The observed predictive value indicates that when an individual scores 3 or more on the SAPAS, one can be 96% confident that the correct identification of PD has been made, suggesting that the SAPAS could be of a great practical value to those working in the criminal justice system.

Furthermore, although a cut-off of score of 3 is recommended by Moran et al., (2003), Pluck et al., (2012) suggests that the case can be made for using a cut-off of score of two, if the particular use of the SAPAS called for greater emphasis on not missing true cases of PD. Pluck et al., (2012), found that a cut-off score of two has a sensitivity of 0.9 and would adequately fulfil this function. However, this increase in sensitivity is gained in the context of a drop in specificity to 0.6 and in positive predictive value to 0.87. Nevertheless this alternative cut-off score of two

could be appropriate in some contexts and is in accordance with proposed criteria for screening tools which suggest that they should optimally have a sensitivity of > 0.8 and a specificity of > 0.5 (Bagby, Taylor and Parker 1994; Pluck et al., 2012).

In addition Pluck et al., (2012), reports that the observed relationship between the SAPAS and the SCID – II, represented by the area under the curve of a receiver operator characteristic (ROC) analysis, is 0.87. Pines and Everett (2008) stated that a diagnostic test would be considered to have 'good' accuracy at the disease identification if the area under the curve was between 0.80 and 0.89 and 'excellent' if above this. This suggests that the SAPAS has a 'good' accuracy for case identification.

Pluck et al., (2012) also reported some discrepancies between the SAPAS and SCID-II. The SAPAS cut-off score of 3 detected PD in 58% of the individuals, whereas SCID – II detected PD in 75 %. Despite this discrepancy, the kappa statistic indicated a good level of agreement, and the level of false negatives could easily be reduced, by adopting a lower cut-off score.

In order to assess the validity of the SAPAS in substance abusers Hesse et al., (2008) used the nurse ratings of functioning, including withdrawal, intoxication, externalising behaviour and a Global Assessment of Functioning (GAF) as a criterion for validity. The study used the mean of all scores over all observation in a 6-month period. The convergent validity correlations with withdrawal and intoxication were non-significant, but the correlation with externalising behaviour and GAF, calculated with the use of the Spearman correlation coefficient were

significant, with the externalising behaviour value of rho = 0.38, ($p<.01$) and GAF rho = - 0.29, ($p=.03$) (Hesse et al., 2008). The results supported the validity of the SAPAS for use with substance abusers.

Clinical utility of the SAPAS among patients with first episode of depression conducted by Bukh et al., (2010) was the largest study to date on the performance of the SAPAS as a screen for PDs. It was also the first assessment of the capability of the SAPAS to predict comorbid PDs exclusively among patients with a clinical diagnosis of depression in Denmark.

The study sample was defined as all outpatients and inpatients with the diagnosis of a single depressive episode according to ICD-10, code DF32-32.9 (WHO, 1990), reported to the Danish Psychiatric Central Research Register. A 130 (33%) of the total sample of 394 participants fulfilled the criteria for one or more PDs according to the SCID-II; with 15 (3.8%) of participants meeting criteria for cluster A, 51 (3.8 %) meeting criteria for cluster B, and 70 (17.8 %) cluster C. The reliability coefficient based on the agreement between the interviewers of the diagnosis of a personality disorder of any kind was reported to be 0.76 (Bukh et al., 2010).

The performance of the SAPAS was assessed by reference to sensitivity, specificity, predictive values, and power to predict a diagnosis of PD according to the SCID-II. In addition, logistic regression was performed to assess the association between the SAPAS score and the prevalence of PD according to SCID-II adjusted for the effect of residual depressive symptoms using Ham-D 17

score (Bukh et al., 2010). The results of the SAPAS performance are presented in Table 9.

Table 9

Performance of the SAPAS at different cut-off scores (Bukh et al., 2010)

Cut-off score	N (%)	Sensitivity	Specificity	(+) predictive value	(-) predictive value	Correctly classified (%)
≥2	290 (73.6)	0.95	0.37	0.43	0.94	56.3
≥3	184 (46.7)	0.80	0.70	0.57	0.88	73.1
≥4	110 (27.9)	0.57	0.86	0.67	0.80	74.6

Although a cut-off score of both 3 and 4 correctly classified approximately three quarters of the participants, a cut-off of 3 seems to offer the best balance of sensitivity (0.80) and specificity (0.70). Approximately one half of the participants (46.7%) obtained a SAPAS score of 3 or less. The prevalence of PD in this group was 56% and was distributed among the clusters as following: cluster A: 7.6% cluster B: 23.4%, and cluster C: 31%. 12.4%. The other half of the population obtained a SAPAS score greater than 3 with cluster A of 0.5%, cluster B: 3.8% and cluster C: 6.2%. The prevalence of all types of PD was low among participants with the SAPAS score greater than 3 in comparison to the group with SAPAS score lower or equal to 3 (Bukh et al., 2010).

Furthermore, Bukh et al., (2010) examined whether residual symptoms of depression influenced the association between the SAPAS score and the

prevalence of comorbid PD. This was established by adjusting for the effect of residual depressive symptoms using the Ham-D 17 score in the regression analysis. The study reported that the association between the SAPAS score and a diagnosis of PD was not dependent on the severity of depressive symptoms at the time of the assessment.

This study was the first assessment of the capability of the SAPAS to predict comorbid PD exclusively with a clinical diagnosis of depression. A cut-off of 3 on the SAPAS correctly classified 73.1% of the participants and offered the best balance between a sensitivity of 0.80 and a specificity of 0.70. Even though these values are somewhat lower than those found in the original study by Moran et al., (2003), they are still significant, and the findings provide evidence for the clinical utility of the SAPAS as a short screening measure for PD in a clinical population.

Content Validity & Construct Validity

Content validity is the extent to which the content of a screening tool measures the construct under consideration, and construct validity is the extent to which content of the screening tool measures the characteristics being investigated and the extent to which the conceptual definitions match the operational definitions (Haynes, Richard and Kubany, 1995). It is important to mention that the content validity of questionnaire designed to measure a particular construct can sometimes be valid for screening purposes only, and it may not be valid for diagnostic purposes or treatment planning (Haynes et al., 1995).

The relevance of a screening measure refers the extent to which items on the test are appropriate markers for the construct of interest and for the intended use of the measure. As a result, the relevance of a screening tool designed to measure symptoms of PDs should co vary with the degree that the measure contains items that reflect facets of PD (Ayearst and Bagby, 2011). As content validity is evaluated and defined by the degree to which item content is relevant to, and representative of, the construct of interest, understanding the construct and what should be included and excluded from its content domain needs to be thoroughly considered (John and Soto, 2007).

Establishing content validation is particularly challenging when the construct has poorly defined boundaries or inconsistent definitions. Therefore it is not uncommon to find multiple measures, designed to assess the same construct, that result in different test scores due to the divergent conceptualizations about the domain and facets of the construct of interest (Hynes et al., 1995). When it comes to PD assessment, research has demonstrated that alternative measures of disorders often converge poorly, which may be due in part to differing conceptualization of the disorder, and therefore different sampling of the content domains (Clark, Livesley and Morey 1997; Ayearst and Bagby, 2011).

The SAPAS consists of eight dichotomously rated items, which authors had taken from the opening section of an informant - based semi-structured interview, the SAP (Mann, Jenkins, Cutting, and Cowen, 1981; Mann et al., 1999). The SAP allows an ICD–10 or DSM diagnosis of personality disorder to be made. Each of the eight questions from the opening section of the SAP corresponds to a

descriptive statement about the person and can be scored 0 or 1. The scores on the eight items can be added together to produce a total score between 0 and 8.

An exploratory analysis of the SAP ratings of a sample of 303 primary care patients (Moran et al., 2001; Rendu et al., 2002) showed that the total score on these eight official probe items satisfactorily predicted the final SAP diagnosis of personality disorder obtained after more detailed questioning of the informant with the area under the curve (AUC) =0.79, 95% CI 0.74–0.84. The overall inter-rater reliability for SAP is kappa 0.76 with a range of kappa 0.6 (dependent) to kappa 0.82 (paranoid and anxious personality disorders) (Pilgrim, Mellers and Boothby, 1993). Inter-temporal reliability ranges from kappa 0.54 (impulsive) to kappa 0.75 (anankastic). Inter-informant reliability has been reported as kappa 0.93 (anankastic) and kappa 0.96 (anxious) (McKeon, Roa and Mann, 1984). The performance of these eight items of SAP suggested that they might also act as a patient-based screen for a diagnosis of personality disorder.

The eight items of the SAPAS have a low homogeneity, suggesting that this particular set of items may have several hidden attributes. According to Germans et al., (2008), the lack of interrelatedness of these items suggest that the content of the SAPAS is multifaceted and in turn, is likely to reflect the heterogeneous content of the concept of 'personality disorder'. The fact that SAPAS is not a uni-dimentional tool that measures only one concept with a strong internal structure is supported by the outcomes of the factor analysis that identified three factors that relate fairly well to the three clusters of personality disorder (Germans et al., 2008).

Moran et al., (2003) examined the screening properties of the SAPAS and reported that the cut-off score of 3 or 4 correctly classified over 80% of the positive cases. Although, both thresholds performed similarly, arguably the cut-off score of 3 offers the best balance of sensitivity (0.94) and specificity (0.85).

Convergent Validity

Hesse and Moran (2010) established convergent validity of the SAPAS with other measures of personality disorders, and assessed how well the SAPAS measures the full range of personality pathology. This was achieved by conducting a series of secondary analyses of data from a randomized controlled trial of personality disorder psychoeducation for substance use disorders.

The total sample consisted of 54 cases. The SAPAS (Moran et al., 2003), the Kessler 6 (K6, Kessler et al., 2003), the Adult ADHD Self-Reported Scale (ASRS, Adler et al., 2006), the Psychiatric Research Interview for Substance and Mental Disorder (PRISM: Hasin et al., 1996), the Alcohol Use Disorder and Associated Disabilities interview Schedule-IV (AUDADIS-IV, Torrens et al., 2004), and the Narcissistic Personality Inventory – 16 (NPI-16, Ames, Rose and Anderon, 2003) were administered.

The Spearman rank order correlations between the SAPAS and number of personality disorder criteria by cluster (excluding schizotypal and narcissistic personality disorder), and a series of linear regressions to assess the association between the SAPAS and number of personality disorders criteria were performed

controlling for various confounders, one for each cluster, and one for the total number of personality disorder criteria.

Results revealed that among 54 participants, the most commonly detected personality disorders were: Antisocial PD (PRISM, 52%), Paranoid PD (AUDADIS, 44%), Borderline PD (PRISM, 41%), and Histrionic PD (AUDADIS, 37%). Furthermore it was reported that 35 (65%) of the total sample scored 3 or above on the SAPAS, and 49 (91%) received a diagnosis of at least one personality disorder based on either PRISM (borderline or antisocial) or the AUDADIS interview (other personality disorders). Although weak ($k = 0.22$, $p = 0.02$) the agreement was statistically significant (Hesse and Moran, 2010).

With regards to the correlations between the SAPAS and the criteria count for each personality disorder and by cluster, the results varied substantially. The correlations between the SAPAS and paranoid (rho = 0.53), and avoidant (rho = 0.55) personality disorder features were large and statistically significant. The correlations between the SAPAS and schizoid (rho = 0.40), dependent (rho = 0.48) and borderline (rho = 0.48) personality disorder features were found to be moderate, and the correlations between the SAPAS and antisocial (rho = 0.04), histrionic (rho = 0.26), and obsessive compulsive (rho = 0.25) personality disorder features were low and statistically insignificant (Hesse and Moran, 2010).

The regression of the SAPAS on criteria for personality disorders after controlling for gender, age and symptoms of anxiety and depression as measured by the Kessler 6 interview (Kessler et al., 2003), hyperactivity and attention deficit disorder on the ADHD Self-Report Scale (Adler et al., 2006) remained

significantly associated with the total number of PD criteria ($p = 0.03$), with the number of cluster A criteria ($p = 0.003$), and cluster C criteria ($p = 0.01$), but not cluster B criteria ($p = 0.95$) (Hesse and Moran, 2010).

In the multivariate analyses, Hesse and Moran (2010), found that cluster A criteria were additionally associated with attention disorder ($p = 0.02$), cluster B criteria were only associated with hyperactivity severity ($p = 0.006$), and cluster C criteria were additionally associated with symptoms of anxiety, depression, and low degree of substance use ($p = 0.03$).

Based on the above, the SAPAS as a dimensional measure of the construct of personality disorder presents several good properties. It correlates highly with the number of interview-based criteria for personality disorder, and this correlation remains significant even after controlling for gender, age, symptoms of anxiety, depression, attention deficit disorder symptoms and substance use. The association between the SAPAS and both cluster A, and C disorders was also robust across all confounders tested.

However, the study also highlighted some limitations of the SAPAS. It seems that it does not cover the full range of personality disorders equally well, for example the SAPAS does not correlate highly with antisocial, histrionic and obsessive-compulsive personality disorders and the trait of narcissism in a sample of substance abusers. The additional limitation of this study is the small sample size.

Normative data

Although SAPAS has been validated for use in a number of European psychiatric samples (Bukh, et al., 2010; Moran et al., 2003), those with substance dependence (Hesse et al., 2008) and among those on probation (Pluck et al., 2012; Shaw, Minoudis and Craissati, 2012) providing sufficient evidence for its usefulness as a screening measure for personality disorder in routine clinical settings, no data is available on how this measure will perform in the general population.

It is important to acknowledge that SAPAS has been validated mainly on clinical samples, where prevalence of PD is significantly higher, in comparison to that of the general population. Study by Coid et al., (2006), on the prevalence rates of personality disorders in Great Britain yield weighted prevalence rate of 4.4% (95% CI 2.9 - 6.7). According to Moran et al., (2003) if the SAPAS were to be applied to a population with a lower prevalence of personality disorder, its predictive power would diminish. Consequently, the SAPAS is probably not suitable for use in general community or primary care settings, where the prevalence of personality disorder is in the range 10 – 20 %. It is however, likely to have greater predictive power in samples where personality disorder prevalence is high, such as forensic settings and within CJS. As a result the SAPAS requires further replications in larger and more divers samples.

Application of the SAPAS in forensic settings

Overall the evidence presented throughout this chapter has shown that the SAPAS is a reliable and valid screening measure of PDs in a number of clinical populations and there is growing evidence to suggest that the SAPAS could be

successfully utilise in populations where probability of the presence of personality disorder is thought to be high such as for example forensic settings. Although the SAPAS is merely a screening tool and does not provide a definitive diagnosis of PD, however as such could be successfully used as a first step of a two-stage assessment for case identification. Research has showed that SAPAS can rapidly identify individuals at high risk of PD with good levels of psychometric properties. An advantage of the SAPAS is that it does not require formal training to administer and therefore could be use by various professionals within the CJS, where prevalence rates of PD are significantly higher than those found in general population.

It is unknown if the psychometric properties of the SAPAS found to date mainly in clinical and rather small samples, might be generalised to different settings and populations. Therefore future research should aim to validate the SAPAS on larger samples and across different settings. Especially the exploration of the utility of the SAPAS in a forensic context would be beneficial, as offender characteristics are considered important factors in the prediction of future risk of reoffending. Incorporation of an item reflecting antisocial traits would be useful in order to evaluate the SAPAS accuracy in identifying antisocial cases. An alternative to the above would be as suggested by Minoudis, Shaw and Craissati (2012) to introduce a combined screening approach.

Clinically the SAPAS can be used in routine screen assessment as it is short, simple to use, does not require training, and therefore fulfils many of the criteria for a desirable screening measure. While this could address the problem of limited

resources it could also introduce a number of associated problems. Irrespective of setting, appropriate use of any psychometric tool is vital. The SAPAS lacks a manual and the guidance for its application is very limited. Therefore, the professional administering the SAPAS must be familiar with the use of self-report measures that are not intended to be diagnostic in nature, and therefore do not provide clear diagnosis at the end of the assessment. This also could be the case for the person, which is being assessed. Consequently, the SAPAS could be used inappropriately as a diagnostic measure rather than a screening tool to establish if further assessment is necessary.

The misuse of any psychometric tool may have significant implications on other aspects, for example used inappropriately in various CJS settings may introduce further complications and have significant impact on risk assessments and development of management plans, resulting in inaccurate reporting i.e. suggesting that the final score on the SAPAS above cut off of three would indicated a diagnosis of personality disorder, and as a result raised concerns regarding the risks, as the presences of personality disorders within CJS is frequently associated with dangerousness.

Furthermore, the lack of clear guidance for the administration of the SAPAS could also be problematic. Professionals administrating the SAPAS who are unfamiliar with psychometric measures and especially screening tools may attempt to assist the person undergoing assessment by explaining the questions, consequently producing unreliable results.

Another aspect to consider when using the SAPAS within CJS settings is what resources are available for further personality assessment if it is identified as necessary. If no such resource exists, one could question the ethics of administering a screening measure. Despite this, a competent professional could use the SAPAS to gain a better understanding of their client and aid development of formulation.

It is important to state, the nature of a screening measure does not allow professionals to assess whether the person is responding to the questions appropriately therefore caution needs to be taken in drawing any conclusion from this assessment as response bias might be present. This can also have an impact on the scoring of the SAPS, which is rather transparent. Person undergoing the assessment may have concerns regarding potential implications, especially within CJS system, where the outcome of the assessment might have an impact on discharge or release and as a result the person might respond to questions in more socially desirable manner.

Despite the limitations inherent in any screening tool, the SAPAS can be successfully used in clinical and research settings. Research has shown that the SAPAS can be used in routine screen assessment as it is short, simple to use, does not require training. The SAPAS could be used across the CJS as a very quick and simple method that could aid an understanding of individual personality, their view of the world and themselves, which is often overlooked in these settings, as a primary focus is concerned with the risk.

A routine use of a personality screening measure like the SAPAS within CJS could provide a rationale for more in depth assessments of personality. This can have further implications on treatment provision and development of specialist personality disorder services addressing these complex needs. With the introduction of a dimensional classification system for personality disorder in the DSM-5 (APA, 2013), the SAPAS could be of great value to both clinicians and researchers. Widiger and Simonsen (2005) suggested that future research of the SAPAS as a dimensional approach to the personality disorders would be advantageous, as it will allow rating both the presence and severity of the symptoms along a continuum, where indistinct boundaries exist between normal and abnormal personality.

Conclusion

In summary, there is evidence to support the clinical utility of the SAPAS as a valid psychometric measure. Furthermore, the evidence for its utility within forensic populations is also growing. Future research should focus on the issue of the SAPAS sensitivity to detect antisocial cases in forensic populations. With introduction of the new dimensional approach to classification of PD, the SAPAS as a continuous measure is advantageous compared to categorical measures of personality disorder. Due to a number of positive characteristics identified within this chapter including its practical utility, and with the developing evidence base supporting its validity and reliability with forensic populations, the SAPAS has been chosen to screen for case identification in the empirical, presented in chapter five of this thesis.

Rationale for Chapter 4

Chapter one indicated high levels of psychomorbidity including PD and social needs in offender populations. The presence of complex mental health and social needs was also evidenced in a single case study presented in chapter two. The following chapter presents a systematic review on the prevalence of mental disorders in offenders on probation. This review aims to establish the current state of knowledge with regards to the frequency of mental disorders among probationers. Furthermore it addresses some important aspects related to determining prevalence rates and aids development of the research questions for an empirical study presented in chapter five.

Chapter Four

A Literature Review Following a Systematic Approach

Mental Health of Offenders on Probation

Abstract

The understanding of the prevalence of mental disorders has important implication for epidemiology and service planning. The aims of this review are to systematically identify and collate studies describing the prevalence of mental disorders among offenders on probation and summarise their findings.

A total of 18 studies published between 1993 and 2013 were reviewed, suggesting significant lack of research in this area. The little research that exists demonstrates mixed findings as the prevalence of mental disorders reported varies making a comparison between the papers difficult. However, despite the above where possible weighted average prevalence rates were calculated.

The estimated overall prevalence of PD was 19%, any current mental disorder 6%, alcohol misuse 62%, drug abuse 54, anxiety 13% and depression 10%.

Limitations of the current review are highlighted and recommendations are offered for future research in this area.

Keywords: probation, offender, mental health, mental disorder, personality disorder, substance misuse.

Introduction

Previous research has highlighted excess health morbidity in offender populations. However, only a small number of studies have described health problems within probation settings. The understanding of the prevalence of mental health problems has very important implications for epidemiology, health service planning and future offending.

To date the majority of the research on offender health has focused on prisoners (i.e. Singleton, Meltzer, Gatward, Coid & Deasy, 1998; Fazel, Hope, O'Donnell , & Jacoby, 2001; Hek, Condon and Harris, 2005; Plugge, Douglas and Fitzpatric, 2006; Sirdifield, Gojkovic, Brooker and Ferriter, 2009), and comparatively little research has examined the prevalence of mental disorders amongst offenders in the community. The available literature suggests that the health of this population is worse than that of the general population, but similar to that found in prisoners (Sirdifield et al., 2009). Furthermore, offenders managed within community settings who experience mental health problems are also more likely to experience physical health problems, and to be socially excluded in a number of areas such as level of education, housing, employment and relationships (Singleton, Bumpstead, O'Brien, Lee & Meltzer, 2000). Consequently, there is increasing focus on addressing the mental health and unmet needs of offenders throughout the Criminal Justice System (CJS) not only due to moral obligation, but also with the hope of breaking the cycle of offending.

The British government has been advocating for greater investment in addressing both mental and physical health needs of the country population with particular

focus on individuals within the CJS. The *No Health Without Mental Health* directive highlights the need to identify offenders with mental health problems as early as possible in order to divert them away from the CJS and into treatment as appropriate (HM Government and Department of Health, 2011). It also emphasise that individuals in CJS should receive an equivalent standard of health care to those in the community, which is justified not only on moral, economic, and public health grounds but also as a pathway out of reoffending (Brooker et al, 2009; HM Government and Department of Health, 2011; Pluck, Sirdifield, Brooker & Moran, 2012).

In 2009, Lord Bradley published a review of people with mental health problems or learning disabilities within the CJS, and highlighted the need for criminal justice and mental health teams to be established in order to improve early identification and diversion of mentally disordered offenders at all stages of the CJS. In addition the report made a recommendation for improvement of service provision for this vulnerable group by providing mental health awareness training for staff within the CJS, and suggested that more research is needed to establish the health and social needs of offenders in the community.

Therefore, the knowledge with regards to prevalence of mental disorders amongst offenders on probation is a key to establishing uniformity of not only service provision but also for planning treatment for those identified and diverted away from the CJS by liaison and diversion services. High prevalence rates might have further implication with regards to CJS staff needs for specialist training or support, or the need to consider possible interaction between mental health and an

increased risk of factors such as reoffending, self-harm, suicide and substance misuse (Pluck et al., 2012).

Existing Review

A preliminary literature search of the Cochrane Library, MEDLINE, EMBASE, PsycINFO, was conducted on 6th of December 2012 to establish whether previous systematic reviews had already been published addressing mental health problems of offenders on probation. Research in this area appeared to be rather limited with no systematic review identified, however one literature review on the prevalence of mental health disorders amongst offenders on probation was found and deemed relevant to discuss.

Sirdifield (2009) conducted a literature review on the prevalence of mental health disorders amongst offenders on probation, and although this review was not systematic, according to the author, many of the principles of systematic reviewing were employed. A total of 16 studies published in a period of less than five were reviewed, suggesting a relative lack of research in the probation population and reported a wide range of prevalence rates of mental disorders in the existing literature. These were attributed to: the different methodological approaches adopted, variation in the range of disorders under investigation, discrepancy in providing information regarding diagnostic process, and small and often not randomised sample sizes. This made it difficult to directly compare the rates across the papers and shown that there is a significant lack of research into this area. As a result, there is a need for further high quality research in this field

in order to inform evidence-based practice and commissioning of health services for this vulnerable group.

The Current Review

Aims and Objectives

The aim of the current review was to identify and review studies that looked at the prevalence rates and typology of mental health disorders amongst offenders on probation using a systematic approach. It focuses on the studies that have applied structured diagnostic measures to provide an estimate of common mental disorders among probationers. To date much of the literature has focused on prisoners. This is potentially the first systematically informed review on probation population. The review followed the methodology detailed in the *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins and Green, 2006) except for the exclusion of unpublished and non-English studies due to time constraints and limited resources.

The objectives were:

1. To determine the prevalence rates of mental health disorders amongst offenders on probation.
2. To report the typology of the most commonly identified mental health disorders among probationers.

Method

Inclusion/Exclusion Criteria

Preliminary searches of electronic databases and previous literature review in the area aid development of specific inclusion and exclusion criteria, and helped with

the identification of the timeframe for the publication search. Due to limited resources the author chose to limit the search to a twenty year timeframe and review references published from 1993 onwards. This was deemed appropriate for the following reasons; the 1990's were marked by increasing research from psychiatry and psychology in examining the relationship between serious mental disorders and offending (i.e. Hodgins, 1992; Monahan and Steadman, 1994; Mullen 1997), it was also the period when the first reliable estimates of the prevalence of psychiatric morbidity among prisoners in England and Wales (i.e. Maden, Taylor, Brooke and Gunn, 1996, Singelton et al., 1998; Birmingham, 2003) were reported. Furthermore this time frame reflected developments in government strategy for providing health care in prisons. In 1996 a report entitled "Patient or Prisoners?" highlighted weaknesses in prison health care (Her Majesty's Inspectorate of Prisons, 1996). The following year the Health Advisory Committee for the Prison Service (1997) recommended that prisons should provide prisoners access to the same quality and range of health care services as the general public receives from the National Health Service (NHS). As a result, the reform was proposed, initiating the establishment of a joint Prison and NHS in order to address health issues of offenders.

Studies that met the criteria according to the Population, Intervention, Comparator, and Outcome (PICO) were included in the current review:

Population: Adult Probationers (Males & Females aged 18 and over)

Exposure: Mental health assessment based on clinical judgment informed by the International Classification of Diseases (ICD-10: WHO, 1992) or the Diagnostic and Statistical Manual of Mental Disorders (DSM IV 2000) criteria and self-reported symptoms indicative of mental disorders.

Outcome: Diagnoses of a specific mental disorder recorded by a psychiatrist or by staff from the forensic psychiatric service based on ICD-10 or DSM criteria, self-reported symptoms of mental disorders and previously established clinical diagnoses.

Study design: Any prospective, retrospective cross-sectional and cohort studies.

Exclusion: Narrative reviews, editorials, commentaries, studies looking only at juvenile offenders, case reports, expert opinion reports, non – English papers.

The inclusion and exclusion of studies were carried out by the primary reviewer (AZ), using a predefined form. This criterion was applied to all studies from the initial literature search, with the aim of obtaining only relevant studies. Studies whose abstracts did not provide significant information to apply the inclusion and exclusion criteria, but were thought to be valuable were fully reviewed. Examples of studies that were excluded according to the identified criteria and reasons for their exclusion are presented in Appendix 5 p. 233. Studies that fulfilled all the inclusion criteria were then quality assessed according to predefined form (Appendix 6, p. 235) by primary reviewer. 10% check of the inclusion assessment was carried out by independent reviewer (AF).

Sources of Literature

A search of nine electronic databases was conducted on 6th December 2012 and repeated in February and March 2013. Databases that were searched included:

Cochrane Library (2003 – 4th February 2013)

Campbell Library (2005 – 4th February 2013)

EMBASE (1993 - to Week 4, March 2013)

PsycINFO (1993 - to Week 4, March 2013)

CINAHL (1993 – to week 4, March 2013)

MEDLINE (1993 – to Week 4, March 2013)

Ingenta Connect (1967 – to Week 4, March 2013)

ASSIA (1993 - to Week 4, March 2013)

ERIC (1993 – to 20.03.2013)

Search Strategy

In order to identify primary studies with regards to the prevalence rates of mental disorders in offenders on probation a preliminary search of electronic databases was run in December 2012. The purpose of this scoping was to gain a better understanding of the available literature in this area. Other methods included reference list and in order to increase the likelihood of finding relevant articles and possible "grey" literature, for that purpose the Google Scholar search was conducted. An expert in the field was also approached. The databases were accessed electronically, which allowed limits to be placed on the conducted searches. These were limited to articles that were written in English, primarily due to financial and time constraints. Unpublished papers were omitted for similar reasons, and in addition some of the grey literature was also excluded at this

point, as there was no access to the full texts. It is recognised that this may have excluded more recent findings. Editorials and opinion papers were also excluded to reduce the bias of individual perspectives. The same searches and terms were applied to all electronic databases however, relevant search tools for each individual database were applied, consequently creating some degree of variation in the output. Initial search results were then assessed for their relevance, using the title and abstracts of articles. At this stage all studies deemed irrelevant to the current review, or duplicates of included studies were excluded. Unfortunately, due to the time constrains, hand searches of specifically relevant journals were not conducted however, the electronic search provided sufficient data based on the consultation with the experts in the field.

Search Terms

A comprehensive review of the literature was conducted using the following terms:

Offender* and/or Probation*, probationers, combined with following key words – prevalence, mental health* or mental disorder* or mental illness*, schizophrenia* or psychosis* or learning disability* or substance misuse* or comorbidity* or personality disorder*.

All search terms used were modified to meet the requirements of each individual database, to accommodate the differences between them. The search was restricted to English language and full text publications (for the recorded output of the searches please see Appendix 7, p. 238).

Quality Assessment & Data Extraction

Following the process of sorting of the studies, according to inclusion and exclusion criteria, each included study was then quality assessed using the checklist adapted from the Critical Appraisal Skills Programme. A weighted scoring system was applied to each study based on the following criteria:

The criterion fully met = 2

The criterion partially met = 1

The criterion not met = 0

A further point was then assigned to the study for each of the following: the use of standardised/validated tools, clinical interviews used to determine formal diagnosis, and collection of collateral information. The significant variables assessed were: study design, hypotheses of the study, representativeness of the sample under research, validity and reliability of the measures used, outcome quality, management of potential bias, statistical analyses, reliability and applicability of the results, and appraisal of the limitations. Relevant data was extracted by primary reviewer using data extraction sheet (Appendix 8, p. 241). The information extracted included, geographic location, sample size, methods, assessment used and findings.

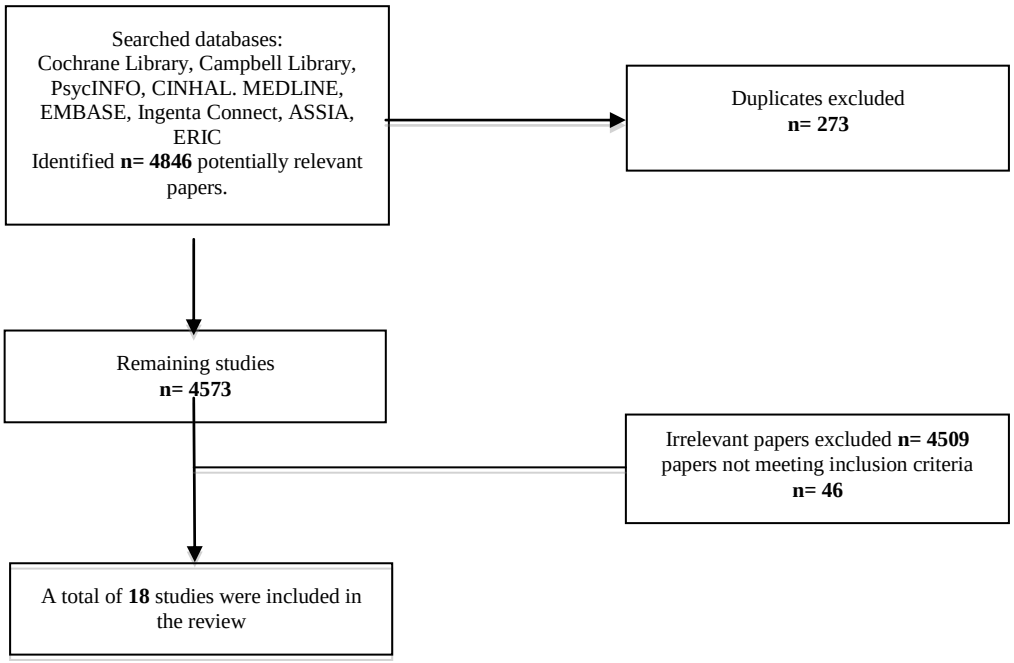
Results

The initial searches of the electronic databases using the specified search terms identified a total of 4846 studies potentially relevant to the overall systematic review. Of these, 273 were duplicates, 4509 were found to be irrelevant and 46 not meeting the inclusion criteria and therefore, excluded on these grounds. A

total of 18 papers were included in the review. Data selection process is summarised below in Figure 1.

Figure 1

The process of study selection and search results



Study characteristics

The characteristics, methodological aspects and the findings of included studies are summarised in Tables 10 and 11. The review consisted of 18 publications, twelve British papers, five studies from the United States and one from Canada published between 1993 and 2013. Presented below are the most significant findings. Where possible the average prevalence adjusted for sample size was calculated for most prevalent conditions.

Table 10. Characteristics of Included Studies and Summary Conclusions

	Author/s Year	Study Hypotheses/ Aims	Setting	Participants Sample Size	Method & Assessments used	Results Estimates of prevalence	Quality assessment score
1	Brooker, Sirdifield, Blizard, Denney & Pluck (2012)	Establish prevalence of mental illness & substance abuse	Probation sample Lincolnshire, UK	Stratified randomized sample of 173 adult offenders (23 Females &150 Males)	Epidemiological Survey Alcohol Use Disorders Identification Test (AUDIT) Drug Abuse Screening Test (DAST) Standardised Assessment of Personality-Abbreviated Scale (SAPAS) Prison Screening Questionnaire (PriSnQuest) Mini International Psychiatric Interview (MINI)	39% met the criteria for any of the DSM-IV Axis I psychiatric disorder measured by the MINI. Current Psychiatric disorders: Major depressive episode: 17% Manic or Hypomanic episode: 2% Psychotic disorder: 11% Mood disorder with psychotic features: 3% Psychotic disorder without a mood disorder: 8% Probable personality disorder: 47% Panic disorder: 1.2% Anxiety disorder: 27% Agoraphobia: 16% Social anxiety disorder: 6% Generalised anxiety disorder: 3.5% PTSD: 5% Alcohol abuse: 55% Drug abuse: 12%	55/68
2	Minoudis, Shaw, Bannerman & Craissati (2011)	To identify offenders who met the threshold on PD screening tool	Probation sample London, UK	Total sample comprised of three sampling methods and consisted of 341 participants (95.7% males)	OASys DSPD HCR-20 Matrix 2000	47% had a previously known psychiatric history 19% had a previous diagnosis of PD	44/68
3	Brooker, Syson-Nibbs, Barrett & Fox (2009)	Pilot health needs assessment of community managed offenders	Probation sample Nottinghamshire Derbyshire, UK	183 adult offenders (150 Males 31 Females 2 no information)	The health needs assessment, based on the self-reported questionnaire, which included SF-36 and questions about mental health.	15% reported contact with mental health service in preceding 12 months 27% of the sample indicated that they had been seen by mental health services at some point in their lives	44/68
4	Hatfield, Ryan, Pickering, Burroughs, Crofts (2004)	Establish prevalence rates of mental health problems in cohort residents within approved premises.	Probation sample Grater Manchester, UK	Sample of 533 (457 males, 58 females) residents across seven approved premises.	General Health Questionnaire (GHQ) The Health of the Nation Outcome Scale Global Assessment of Functioning.	Depression: 14% Anxiety disorder: 7% Schizophrenia: 3% PD: 3% Active psychosis/bipolar disorder: 0.4% Other psychoses: 2% Alcohol misuse: 31% Drug misuse: 34%	42/68

Table 10. Characteristics of Included Studies and Summary Conclusions (continued)

	Author/s Year	Study Hypotheses/ Aims	Setting	Participants Sample Size	Method & Assessments used	Results Estimates of prevalence	Quality assessment score
5	Keene, Janacek & Howell (2003)	To give an indication of the proportions of each criminal justice population with mental health problems	Probation population, UK	Individuals aged 16+ in one English county total (n=3979, 3398 males, 581 females)	Tracking method Combination of criminal justice and mental health records Mentally disordered was defined as individuals who were accessing secondary care service	14% of the probation sample had been in contact with mental health service	31/68
6	Richardson, McInnes & Davis (2003)	Descriptive study of demographic, psychiatric and offending variables in a point prevalence sample of patients subject to probation	Probation sample Leicestershire UK	31 (26 males, 5 females) adult participants	All current probation orders with a condition of psychiatric treatment were identified from probation service computerised records in April 1999. Data was collected on socio-demographic, criminological and psychiatric variables from available medical records.	55% Psychotic illness 48% was felt to have personality difficulties but not meeting criteria for personality disorder 84% of the participant had known substance misuse problem Schizophrenia: 29% Other psychotic disorders: 16% Personality disorder (emotionally unstable) 13% Bi-polar affective disorder: 10% PTSD: 10% Depressive Disorder: 7% Moderate mental retardation: 3% Mixed anxiety and depression: 3% Childhood emotional disorder: 3% Habit and impulse disorder: 3%	27/68
7	Nadkarni, Chipchase & Fraser (2000)	Report on mental health problems of the residents	Probation approved premises, Newcastle, UK	12 residents of approved premises (gender not reported)	Participants assessed by the forensic service staff using ICD-10 criteria	Substance use disorder: 83% Depressive episode: 17% PD: 17% Adjustment disorder: 8% Acute psychotic episode: 17%	35/68
8	Geelan, Griffin, Briscoe & Haque (2000)	Service evaluation	Probation approved premises, UK	83 men residents of approved premises between April 1997-April 1998.	Information obtained from existing records, offender self-reports and diagnoses made by mental health professionals according to ICD-10 criteria	Schizophrenia: 30% Drug induce psychosis: 2% Other psychotic disorders: 11% Alcohol abuse/dependence: 29% Personality disorder: 18% Depressive episodes: 6% General anxiety: 32% Mania: 4% OCD: 1% Unknown diagnosis: 8%	42/68
9	Vaughan, Pullen & Kelly (2000)	Characteristics of community managed mentally disordered offenders (MDOs)	Probation Service, Hampshire UK	A sample of 150 (127 males, 23 females)	Interview of the leader manager of the service using semi structured interview schedule designed to elicit information about the current wellbeing and needs MOD's	18% of MOD's were on probation order with condition of psychiatric treatment PD: 33% LD: 20%	25/68

Table 10. Characteristics of Included Studies and Summary Conclusions (continued)

	Author/s Year	Study Hypotheses/ Aims	Setting	Participants Sample Size	Method & Assessments used	Results Estimates of prevalence	Quality assessment score
10	Cohen, Bishop & Hegarty (1999)	Characteristics of probationers, a survey of cases	Probation referrals to psychiatric service, UK	76 (males) referrals made to MH service over 30 months period starting in May 1994 were reviewed	Estimates are based on previous psychiatric diagnoses	51% had one previous psychiatric diagnosis PD: 28% LD: 16% Schizophrenia/Psychotic disorder: 13% Substance misuse: 13% Affective disorder: 10%	36/68
11	Hucle, Travier & Scarf (1996)	Descriptive study of psychiatric probation sample	Psychiatric Probation Service, UK	100 (92 males, 8 females) probation clients assessed over 3 year period	Clinical diagnoses made by the staff from forensic psychiatric service	PD: 35% Substance misuse: 11% Schizophrenia: 10% PTSD: 9% LD: 7% Affective Disorder: 6%	42/68
12	Collins, Ball & Costello (1993)	Descriptive study of probation sample	Probation Psychiatric Clinic, UK	45 (38 males, 7 females) probation clients assessed over 2 year period	Diagnoses made by psychiatrist following clinical interview	PD: 38% Chronic psychosis: 15%	30/68
13	Cirlly, Caine, Lamberti, Brown & Friedman (2009)	Prevalence study of mental disorders symptoms among adult probationers who reported involvement with both probation service and a presence of at least one symptom of a mental health disorder	Probation sample, USA	140 participants (84 males, 56 females) aged 18-64 years	Data from the 2001 National Household Survey on Drug Abuse Symptoms only	Self-reported symptoms Depression: 65% PTSD: 49% Panic: 48% Phobia: 46% Psychosis: 37% General anxiety: 32% Mania: 19%	56/68
14	Lurigo, Ik Cho, Swartz, Johnson, Graf & Pickup (2003)	Prevalence study of substance, psychiatric and comorbid disorders	Probation Population, Illinois USA	Stratified random sample of 627 (469 males and 158 females) adult probationers	Drug use and Treatment needs assessed using DSM-III-R criteria Psychiatric prevalence assessed using International Neuropsychiatric Interview (MINI)	Current Psychiatric disorders: Major Depressive episode: 13% Manic episode: 3% Suicide risk: 18% PTSD: 3% Psychotic disorder: 19% Mood disorder with psychotic features: 9% Lifetime Psychiatric disorders: Major Depressive episode, recurrent: 7% Manic episode: 7% Hypomanic episode: 14% Psychotic disorder 11% Antisocial Personality Disorder 16%	58/68

Table 10. Characteristics of Included Studies and Summary Conclusions (continued)

	Author/s Year	Study Hypotheses/ Aims	Setting	Participants Sample Size	Method & Assessments used	Results Estimates of prevalence	Quality assessment score
15	Solomon, Draine & Marcus (2002)	A study assessing the extent in which psychiatric status explains violation of probation or parole	Probation Psychiatric Service, USA	250 male clients of psychiatric probation and parole service	Brief interview and screened for life time diagnosis of depression, mania and schizophrenia using Quick Diagnostic Interview Schedule (QDIS)	Schizophrenia: 15% Mania: 2% Depression: 26% Both Schizophrenia & mania: 2% Both Schizophrenia & depression: 18% Both mania & depression: 14% Schizophrenia, mania & depression: 22%	54/68
16	Ditton (1999)	Report on mental health and treatment needs of inmates and probationers	Probation Population, USA	Nationally representative sample of adults on probation across the USA	Data based on personal interviews conducted through the 1997 Survey of Inmates in State and Federal Correctional Facilities, the 1996 Survey of Inmates in Local Jails, and the 1995 Survey of Adults on Probation.	547,800 - 16% of probationers met the criteria for diagnosis of mental illness	36/68
17	Roskes & Feldman (1999)	Report on probationers referred for mental health assessment and treatment	Probation Psychiatric Service, USA	16 (14 males, 2 females) offenders referred for community based assessment and treatment	Diagnosis made by psychiatrist based on DSM criteria	PD: 44% Bipolar disorder: 31% Schizophrenia: 25% Schizoaffective disorder: 19% Major Depression: 19% OCD: 6% Anxiety disorder: 6%	37/68
18	Wormith & McKegue (1996)	Report on the mental health survey completed by probation and parole officers on their clients	Probation and parole offices, Ontario, Canada	Sample of 2500 offenders on probation (2050 males, 450 females)	Questionnaire completed by staff based on DSM-III-R diagnosis criteria Global Assessment of Functioning Scale (GAF)	Alcohol/drugs disorder: 5% Schizophrenia/Psychotic disorder: 2% Depression/Bipolar disorder: 3% PD: 3% Anxiety/Adjustment disorder: 2% Mental retardation/other disorder: 0.4%	46/68

Table 11. Quality Assessment of Included Studies

Study	Study Type	Sample Type	Adequate Total Sample	Clear Definition of aims/hypotheses	Adequate Measures Used for identification of mental health problems	Measurement Consistent across all participants	Confounding factors dealt with	Attrition dealt with	Appropriate statistical analysis
Brooker *et al.*, (2012)	Cross-Sectional	Probation, UK	Y	Y	Y	Y	P	P	Y
Minoudis *et al.*, (2011)	Cross-Sectional	Probation, UK	Y	Y	P	Y	P	P	Y
Brooker *et al.*, (2009)	Cross-Sectional	Probation, UK	Y	Y	P	Y	Y	P	Y
Hatfield *et al.*, (2004)	Cohort	Approved Premises, UK	Y	Y	P	Y	Y	P	Y
Keene *et al.*, (2003)	Cohort	Probation, UK	Y	P	N	Y	U	U	Y
Richardson *et al.*, (2003)	Cross-Sectional	Probation, UK	P	P	N	Y	U	U	Y
Nadkarni *et al.*, (2000)	Cross-Sectional	Approved Premises, UK	P	Y	Y	Y	P	Y	Y
Geelan, *et al.*, (2000)	Cross-Sectional	Approved Premises, UK	Y	Y	P	Y	U	Y	Y
Vaughan *et al.*, (2000)	Cross-Sectional Survey	Probation, UK	Y	P	P	Y	N	P	Y
Cohen *et al.*, (1999)	Cross-Sectional Survey	Probation, UK	Y	Y	P	Y	P	U	Y
Hucle *et al.*, (1996)	Cross-Sectional	Probation, UK	Y	Y	P	Y	U	U	Y
Collins *et al.*, (1993)	Cross-Sectional	Probation, UK	P	Y	N	Y	U	U	Y
Cirlly *et al.*, (2009)	Cross-Sectional Survey	Probation, USA	Y	Y	P	Y	Y	Y	Y
Lurigio *et al.*, (2003)	Cross-Sectional	Probation, USA	Y	Y	Y	Y	Y	P	Y
Solomon *et al.*, (2002)	Cross-Sectional	Probation, USA	Y	Y	Y	Y	P	P	Y
Ditton (1999)	Cohort	Probation, USA	Y	P	U	Y	U	U	U
Roskes & Feldman (1999)	Cross-Sectional	Probation, USA	P	Y	Y	Y	P	P	Y
Wormith & McKegue (1996)	Cross-Sectional Survey	Probation, Canada	Y	Y	P	Y	Y	Y	Y

Y= Yes, N=No. P= Partially, N/A=not applicable

Descriptive Data Synthesis

The majority (15) of the studies included in this review employed cross-sectional designs with a mean sample size of 160 participants (range from 12 to 3979). The final three were cohort studies (Ditton, 1999; Hatfield, Ryan, Pickering, Burroughs & Crofts, 2004; Keene, Janacek & Howell, 2003). It is important to state that females were underrepresented in majority of the studies, which seems to be consistent underrepresentation in the literature and research across the CJS. This will be further addressed within discussion section of this chapter.

Three studies reported findings on the samples consisting solely of male participants (Cohen, Bishop & Hegarty, 1999; Geelan, Griffin, Briscoe & Haque, 2000 and Solomon, Draine & Marcus, 2002) and only eight studies included in this review provided information with regards to their sample ethnicity, five of which were British papers (Geelan et al., 2000; Hatfield et al., 2004, Minoudis, Shaw, Bannerman & Craissati, 2011 and Richardson, McInnes & Davis, 2003). Out of five British papers, four reported that majority of their sample was mostly of White ethnicity, and only one study by Minoudis et al., (2011) had a sample of greater ethnic distribution recruited from four London boroughs comprising of a greater ethnic mix than England and Wales.

Within reviewed studies eleven were of prospective design (Brooker, Syson-Nibbs, Barrett & Fox, 2009; Brooker, Sirdifield, Blizard, Denney & Pluck, 2012; Collins, Ball & Costello, 1993; Hatfield et al., 2004; Hucle, Travier & Scarf, 1996; Lurigio et al., 2003; Nadkarni, Chipchase & Fraser, 2000; Roskes and Feldman, 1999; Solomon et al., 2002; Vaughan, Pullen & Kelly, 2000 and

Wormith and McKegue, 1996), six were of retrospective design (Cohen et al., 1999; Cirlly, Caine, Lamberti, Brown & Friedman, 2009; Ditton, 1999; Keene et al., 2003; Minoudis et al., 2012 and Richardson et al., 2003) and one employed mixed retrospective and prospective design (Geelan et al., 2000).

Twelve British papers reported findings on mental health disorders amongst offenders on probation (Brooker et al., 2009; Brooker et al., 2012; Cohen et al., 1999; Collins et al., 1993; Geelan et al., 2000; Hatfield et al., 2004; Huckle et al., 1996; Keene et al., 2003; Minoudis et al., 2011; Nadkarni et al., 2000; Richardson et al., 2003 and Vaughan et al., 2000). Three of the studies investigated mental disorders of offenders residing in approved premises (Geelan et al., 2000; Hatfield et al., 2004 and Nadkarni et al., 2000), which house probationers whose risk to the public has been identified as high and therefore these samples are unlikely to be representative of the wider probation population, and the findings have limited generalisability.

Five papers published in United States between 1993 and 2013 (Cirlly et al., 2009; Ditton, 1999; Lurigio et al., 2003; Roskes and Feldman, 1999; and Solomon et al., 2002) and one study published in Canada by Wormith and McKegue, (1996) met the inclusion criteria for this review. Data from these papers is summarised in Table 12, which also includes the estimates of the overall average prevalence rates.

Table 12. Summary of reported clinical diagnoses & estimates of the overall average prevalence

Study Settings	Total Sample (N)	Estimates of Prevalence (psychiatric history)	Estimates of Prevalence – Psychotic disorders (current)	Estimates of Prevalence Affective disorders	Estimates of Prevalence Personality disorders	Estimates of Prevalence Substance use disorder	Estimates of Prevalence LD
Brooker *et al*., (2012) Probation, UK	N = 173		Psychotic disorder 11%	Major Depressive Episode 17% Hypomanic Episode 2% Anxiety Disorder 27% Agoraphobia 16% Social anxiety disorder 6% Generalised anxiety disorder 3.5%	Probable PD (SAPAS) 47%	Alcohol 55% Drug 12%	
Minoudis *et al*.,(2011) Probation, UK	N = 342	47%			Established PD 19%		
Brooker *et al.*,(2009) Probation, UK	N = 183	27%				Alcohol 50% Drug 39%	
Richardson *et al.*, (2003) Probation, UK	N = 31		Schizophrenia 29% Psychotic disorder 16%	Depression 7% Bipolar Disorder 10%	Established diagnosis of Emotionally Unstable PD 13%	84%	3%
Keene *et al.*, (2003) Probation, UK	N = 3979	14%					
Vaughan *et al*.,(2000) Probation, UK	N = 150				Established PD 33%		20%
Cohen *et al*., (1999) Probation, UK	N = 76	51%	Schizophrenia / Psychotic disorder 13%	Affective disorder 10%	Established PD 28%	13%	16%
Hucle *et al.*, (1996) Probation, UK	N = 100		Schizophrenia 10%	Affective disorder 6%	Established PD 35%	11%	7%
Collins *et al*., (1993) Probation, UK	N = 45		Chronic Psychosis 15%		Established PD 38%		
Hatfield *et al.*, (2004) Approved Premises, UK	N = 533	25%	Schizophrenia 3% Other Psychosis 2%	Depression 14% Bipolar disorder 2% Anxiety disorder 7%	Established PD 3%	Alcohol 31% Drug 34%	
Nadkarni *et al*., (2000) Approved Premises, UK	N = 12		Acute psychotic episode 8%	Depressive episode 17%	Established PD 17%	83%	
Geelan, *et al*.,(2000) Approved Premises, UK	N = 83		Schizophrenia 30% Drug induced psychosis 2% Other psychotic disorders 11%	Depressive episodes 6% General anxiety 32% Mania 4%	Established PD 18%	Alcohol 29%	
Cirlly *et al*., (2009) Probation, USA	N = 140		Psychosis 37%	Depression 65% Anxiety 32% Mania 19%			

Table 12. Summary of reported clinical diagnoses & estimates of the overall average prevalence (continued)

Study **Settings**	**Total Sample (N)**	**Estimates of Prevalence (psychiatric history)**	**Estimates of Prevalence – Psychotic disorders (current)**	**Estimates of Prevalence Affective disorders**	**Estimates of Prevalence Personality disorders**	**Estimates of Prevalence Substance use disorder**	**Estimates of Prevalence LD**
Lurigio *et al.*, (2003) Probation, USA	N = 627	11%	Current psychotic disorder 11%	Depression 13% Hypomanic episode 14% Manic episode 7%	Established diagnosis of ASPD 16%	Alcohol 98% Drugs 88%	
Solomon *et al.*, (2002) Probation, USA	N = 250		Schizophrenia 15%	Depression 26% Mania 2%			
Ditton (1999) Probation, USA	Nationally representative sample of adults on probation across the USA	16% (547800)					
Roskes & Feldman, (1999) Probation, USA	N = 16		Schizophrenia 25% Schizoaffective disorder 19%	Depression 19% Bipolar Disorder 31% Anxiety Disorder 6%	Established PD 44%		
Wormith & McKegue, (1996) Probation, Canada	N = 2500		Schizophrenia/Psychotic disorder 2%	Depression 3% Bipolar Disorder 3% Anxiety 2%		5%	0.4%
Estimates of average prevalence rates							
Weighted Average		18%	Schizophrenia 4% Current psychotic disorder 6%	Depression 10% Bipolar Disorder 3% Anxiety Disorder 13%	19%	Alcohol 62% Drug 54% Any 7%	5%
Average		27%	Schizophrenia 16% Current psychotic disorder 13%	Depression 19% Bipolar Disorder 12% Anxiety Disorder 18%	26%	Alcohol 53% Drug 43% Any 39%	10%

Personality Disorders

A total of 12 papers were identified that included information relating to personality disorder (PD). Ten of these papers were British, and two were published in the United States. The reported rates varied significantly from 3% found in a sample of 533 probationers in the study conducted by Hatfield et al., (2004) to 47% of probable PD cases assessed using the SAPAS in the sample of 173 probationers in Lincolnshire conducted by Brooker et al., (2012). This study also reported high levels of comorbidity in their sample. Overall, 89% of those with a current mental illness also had a probable personality disorder, as compared to 37% of those who did not have a current mental illness. In addition, 92% of those with a current anxiety disorder, 88% with a current mood disorder and 79% with current psychotic disorder also had probable personality disorder (Brooker et al., 2012).

This significant difference in the reported prevalence rates might be explained by the difference in the sample size and the assessment measures used to identify the cases of PD. It is important to state that some studies obtained the prevalence rates based on the assessment with the use of screening measure like for example Brooker et al., (2012), while others (i.e. Cohen et al., 1999; Minoudis et al., 2011; Richardson et al., 2003 and Vaughan et al., 2000) reported estimates based on the information obtained from existing records without explanation how these were established. These ranged from 19% in a sample of 342 probationers reported by Minoudis et al., (2011) to 33% in a sample of 150 probationers established by Vaughan et al., (2000). One study (Richardson et al., 2003) reported estimates of 13% for Emotionally Unstable PD in their sample of 31 probationers.

Five prospective papers included in this review reported overall prevalence rates of PD (Collins et al., 1993; Geelan et al., 2000; Hucle et al., 1996; Nadkarni et al., 2000 and Roskes and Feldman, 1999) based on DSM criteria and one reported rates of Antisocial PD (Lurigio et al., 2003). The reported prevalence rates of PD ranged from 17% (Nadkarni et al., 2000) to 44% (Roskes and Feldman, 1999). The prevalence of Antisocial PD was 16% (Lurigio et al., 2003).

Thus these studies indicate high rates of PD in probation populations around the world, with rates varying between studies which partially can be attributed to sample size, methodological differences between studies and the use of different diagnostic measures. The prevalence rates of PD in included studies varied from 3% reported by Hatfield at el., (2004) to 47% by Brooker et al., (2012). The overall average prevalence of PD based on twelve papers was 26%, weighted average was 19%.

Psychotic disorders

Of the 18 studies included in this systematic review, 16 reported prevalence of psychotic disorders in probationer populations using information obtained from existing records and/or a range of different screening measures (i.e. the Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1994), Quick Diagnostic Interview Schedule (QDIS; Robins, Marcus & Bucholz, 1991) and Global Assessment of Functioning Scale (GAF; APA, 1994)).

Minoudis et al., (2011) found that 47% of study participants had psychiatric history. It has to be emphasised that this study focused on identifying PD cases and as a result did not provide a detailed description of psychiatric morbidity.

Cohen et al., (1999), reported high rates of psychiatric morbidity based on previously established psychiatric diagnoses. Although, the study sample was significantly smaller in comparison to the study by Minoudis et al., (2011), 51% had one previous psychiatric diagnosis, with 13% identified as suffering from schizophrenia or psychotic disorder.

The study by Cirlly et al., (2009) utilised data from the 2001 National Household Survey on Drug Abuse, and found that self-reported symptoms of any mental disorders were present in 22% of the total sample (n=140) and 37% reported symptoms associated with psychosis. Slightly higher rates of psychiatric diagnoses of 29% were reported by Hatfield et al., (2004) in a sample of 533 residents of approved premises. Among the total sample 3% had schizophrenia and 2% other psychoses.

Keen at al., (2003) employed the tracking method and combined criminal justice and mental health records in a sample of 3979 probationers. Overall 14% had been found to be in contact with the CJS and the mental health service over the period of the study. Furthermore 11% of the sample who were in contact with mental health services, had not been identified as having poor mental health by probation.

Ditton (1999) found that 16% of offenders on probation in the USA were identified as mentally ill. The estimates were based on the findings from the 1995 Bureau of Justice statistic survey with a national representative sample of adults on probation.

Brooker et al., (2012) reported that 39% of probationers were found to be positive for any of the DSM-IV Axis I criteria for psychiatric disorders measured by the MINI. The overall prevalence of current psychotic disorders was 11%. Lurigio et al., (2003) reported similar findings in the study on a stratified random sample of 627 probationers. This study also used MINI and found that 19% of the sample had a lifetime psychotic disorder and 11% had a current psychotic disorder.

High prevalence rates of psychotic disorders were also reported by Geelan et al., (2000) based on diagnoses established by mental health professionals according to ICD-10 criteria. The study reported that 30% of the sample was diagnosed with schizophrenia, 11% with other psychotic disorders, and 25% had drug induced psychosis.

Similar findings although, in much smaller sample (n=16) were reported by Roskes and Feldman (1999). Participants were assessed and diagnosed by a psychiatrist according to DSM-III criteria. 25% were diagnosed with schizophrenia, and 19% with schizoaffective disorder. The study by Richardson et al., (2003) also examined various psychiatric variables in slightly bigger although still relatively small sample (n=31) of probationers, and found that 29% met diagnostic criteria for schizophrenia and 16% for psychotic disorders.

In another study included in this review the psychiatric morbidity of 250 probationers was assessed, using Quick Diagnostic Interview Schedule (QDIS) (Solomon et al., 2002). The results indicated that 15% of the sample screened positive for schizophrenia.

In descriptive paper Huckle et al., (1996) reported psychiatric morbidity of 100 probationers referred to a psychiatric clinic over a three-year period. 10% of the sample had been diagnosed with schizophrenia. In another descriptive paper Collins et al., (1993) also reported diagnoses of 47 probation clients referred to a psychiatric service over a two year period. In this study 15% of referrals had a chronic psychosis. However, it was unclear what diagnostic criteria were used to reach diagnoses in both studies.

In a much larger (n=2500) Canadian study of offenders on probation, Wormith and McKegue, (1996), found that 13% of the sample had psychiatric diagnoses and 2% suffered from schizophrenia/a psychotic disorder.

Finally, a descriptive paper by Nadkarni et al., (2000) presented an overview of a community forensic psychiatry service providing care to residents of approved premises in Newcastle. The paper reported that 8% (n=12) had experienced an acute psychotic episode over a 12-month period.

With regards to psychiatric history, the reported rates varied from 11% reported by Lurigio et al., (2003) in a sample of 627 to 51% in a sample of 76 reported by Cohen et al., (1999). The overall mean rate of past psychiatric history in included

studies is 27%, and weighted average 18%. With regards to the estimates of current psychotic disorders, these ranged from 2% in study by Hatfield at el., (2004) and Wormith and McKegue, (1996) to 37% reported by Cirlly et al., (2009), with the estimated average prevalence of 13%, weighted average of 6%.

Affective disorders

Overall, 12 papers included in this review reported prevalence rates of affective disorders, 2 studies reported overall prevalence rates (Cohen et al., 1999; Huckle et al., 1996) and further 10 reported prevalence of specific disorders (i.e. Depression, Bipolar Disorder, Anxiety Disorder).

Cohen et al., (1999) reported the estimates of affective disorders based on previously known psychiatric diagnoses to be 10% in a sample of 76. Slightly lower prevalence rates of affective disorders (6%) were reported by Huckle et al., (1996) in a sample of 100 probationers. However, there is significant limitation to these studies as it was unclear what criteria were used to determine the diagnoses.

The following ten studies provided prevalence of Depression, Bipolar and Anxiety Disorders. High levels (65%) of depressive symptoms, anxiety (32%) and mania (19%) were reported by Cirlly et al., (2009) in a sample of 311 American probationers. It has to be emphasised that reported rates were based on self-reported symptoms, rather than clinical diagnoses.

Solomon et al., (2002), reported that out of the 250 clients in the sample, 65 (26%) screened positive for depression and 4 (2%) for mania using QDIS.

Significantly higher prevalence rates (31%), possibly due to the small sample size (n=16) of bipolar disorder were reported by Roskes and Feldman, (1999). Depression was diagnosed in 19% and anxiety in 6% of the sample.

In another study, on an even smaller sample (n=12) Nadkarni et al., (2000) found that 17% had experienced a depressive episode. Similar levels of depression but in a larger sample (n=173) were reported by Booker et al., (2012). Major depressive episodes were found in 17% of probationers, 27% screened positive for anxiety disorder, social anxiety disorder was found in 6% and hypomanic episode was found in 2%.

Hatfield et al., (2004) reported prevalence rates for depression (14%), bipolar disorder (2%) and anxiety disorder (7%) in a large (n=533) sample of residents of approved premises.

Similar levels of depression (13%) were reported by Lurigio et al., (2003) in a study of 627 probationers. Furthermore, hypomanic episode was diagnosed in 4% and manic episode in 7% of the sample. Lower levels of depression (7%) however in a much smaller sample (n=31) was reported by Richardson et al., (2003). The study also found that 10% of the sample had diagnoses of bipolar disorder.

Green et al., (2000) reported that 6% of the sample (n=83) met the diagnostic criteria for depressive episode, 32% general anxiety and 4% mania according to ICD-10 criteria. Finally, in a Canadian paper, Wormith and McKegue, (1996),

reported that 3% of the sample (n=2500) suffered from depression, a further 3% from bipolar disorder and 2% had anxiety disorders. The mean average of Depression based on the reported rates is 19%, weighted average 10%, Bipolar Disorder 12%, weighted average 3%, and Anxiety Disorder 18%, weighted average 13%.

Substance misuse

With regards to substance misuse, out of 18 papers included in this review, ten reported on prevalence rates. Five studies (Cohen et al., 1999; Hucle et al., 1996; Nadkarni et al., 2000; Richardson et al., 2003 and Wormith and McKegue (1996) described overall frequency of substance misuse in their samples, and five (Brooker et al., 2009; Brooker et al., 2012; Geelan et al., 2000; Hatfield et al., 2004; and Lurigio et al., 2003) reported prevalence rates for alcohol and drug misuses.

The highest overall prevalence rates of substance misuse among the five studies were reported by Nadkarni et al., (2000) 83% and Richardson et al., (2003) 84%, both obtained from small samples n=12, Nadkarni et al., (2000) and n=31, Richardson et al., (2003).

A further three studies (Cohen et al., 1999; Huckle et al., 1996 and Wormith & McKegue, 1996) reported lower rates of substance misuse in their samples. Cohen et al., 1999, found that 10% of the sample (n=76) had previous diagnoses of substance misuse. Huckle et al., 1996 reported that 11% of the sample (n=100) were diagnosed with substance misuse, and finally Wormith and McKegue,

(1996) reported that 5% had established alcohol/drug disorder among the sample of 2500 probationers.

There were significantly higher prevalence rates of alcohol abuse in comparison to drug abuse reported in the remaining five studies. The highest rates of alcohol abuse 98% and drug abuse 88% were reported by Lurigio et al., (2003). Brooker et al., 2009 found that 50% of the sample (n=183) had alcohol abuse and 39% had drug abuse. In a more recent study by Brooker et al., (2012) the prevalence rates for alcohol abuse are even higher at 55%, but only 12% of the sample (n=173) scored positive for drug abuse. The overall estimates of prevalence of substance abuse as being either alcohol or drug abuse was 60% (Brooker et al., 2012).

With regards to alcohol Geelan et al., (2000) reported that 29% of the sample (n=83) had alcohol dependence. Similar findings are presented by Hatfield et al., (2004) alcohol misuse having been identified in 30% of the sample (n=467) and drug misuse in 34%.

The average estimates of the prevalence rates of Alcohol abuse is 53%, weighted average 63%, Drug abuse 43%, weighted average 54% and the mean prevalence of either drug or alcohol or both is 39%, and weighted average 7% based on the information provided within included studies.

Learning disability

Only five papers included in this review reported prevalence of learning disability [LD] in their samples. The highest rate of LD, 20% was reported by Vaughan et

al., (2000). Based on previously known diagnoses Cohen et al., (1999) found that 16% had a diagnosis of LD. Lower rates (7%, n=100) of LD were reported by Huckle et al., (1996). The remaining two papers reported significantly lower prevalence rates of LD. Wormith and McKegue, (1996) found that 0.4% of the sample (n=2500) had diagnoses of LD and Richardson et al., (2003) reported 3% (n=31) prevalence rate of LD. The average prevalence rate of LD is 10 %, weighted average 5%.

Comorbidity of mental disorders

Only five papers included in this review acknowledged and reported the comorbidity of mental disorders. The study by Brooker et al., (2012) reported high levels of comorbidity in their sample. For example among 47 participants who screened positive on the PriSnQuest and scored positive for a current mental illness on the MINI, 72% were found to also have a substance abuse problem. In addition the extent of comorbidity between the personality disorder and the major diagnostic groups was reported. Overall, 89% of those with a current mental illness also had a probable personality disorder, as compared to 37% of those who did not have a current mental illness. Furthermore, 92% of those with a current anxiety disorder, 88% with a current mood disorder, and 79% with current psychotic disorder also had probable personality disorder (Brooker et al., 2012).

High rates of comorbidity were also reported by Hatfield et al., (2004). 41% of the sample (n=533) were known to have a secondary diagnosis. Similar rates of comorbidity (39%) of two diagnoses and 10% of three diagnoses were found by Geelan et al., (2000). According to Cohen et al., (1999) 21% of the study sample

(n=76) had multiple diagnoses, and finally Solomon et al., (2002) found that 2% of the cases had comorbidity of schizophrenia and mania, 18% had schizophrenia and depression, 14% had mania and depression and 22% had co-occurrence of schizophrenia, mania and depression.

Discussion

Methodological Considerations

The studies included in this review reported high rates of psychomorbidity amongst offenders on probation providing some insight into prevalence. Despite this valuable contribution it is difficult to directly compare the results because of variations in the nature of the service within which the studies were conducted, the way in which mental disorder was defined, the questions asked and assessment measures utilised. Therefore, it is hard to determine whether differences in findings are a reflection of real differences in prevalence rates or a result of variation in methodology and as a result the findings should be interpreted with the caution. Despite the above, where possible the average prevalence adjusted for sample size was calculated. Two papers (Hatfield at el., 2004; Wormith and McKegue, 1996) with large samples heavily influence the weighted averages. Therefore these results need to be interpreted with the caution.

A number of studies included in this review reported findings based on previously established diagnoses (i.e. Cohen et al., 1999; Geelan et al., 2003; Richardson et al., 2003) and failed to specify the most important factors in this kind of research i.e. the operational definition of mental disorder, the means by which it is assessed and the population under examination. Some of the studies reviewed have been

limited to specific diagnoses (i.e. serious mental illness, mental disorder, or axis I disorders, for example Brooker et al., 2012; Hucle et al., 1996; Lurigio et al., 2003), whilst others have included diagnosis regardless of severity (i.e. had a previously known psychiatric diagnoses, for example Ditton, 1999 and Minoudis et al., 2011,). The recording of lifetime versus current disorders also presents problems, as it leads to very different rates, with the former being considerably higher than the latter. Some studies (i.e. Brooker et al., 2012; Geelan et al., 2000; Heatfield et al., 2004; Lurigio et al., 2003; Nadkarni et al., 2000 and Solomon et al., 2002) have undertaken original assessments of probationers, including administration of screening tools (with known levels of validity and reliability) and clinical interviews, whilst others relied of file records, existing data or self-reports. Therefore, consideration needs to be given into how the mental disorder was in fact identified. If studies relying on existing records like for example 'known diagnoses' (i.e. Keene et al., 2003) or they are relying on the knowledge of the probation officers (i.e. Hatfield et al., 2004), there is then a significant risk of under reporting due to incomplete records or inability by the probation officer to detect presence of mental disorder. This review also included studies that reported contact with mental health services as a proxy measure (i.e. Keene et al., 2003), suggesting that probationers who are not accessing services were not represented in the findings.

Another aspect worth consideration that highlights significant limitations is the report of prevalence rates based only on self-reported symptoms, despite the literature supporting reliability of such data (i.e. Cirlly et al., 2009). A significant problem with this type of data is that the symptoms prevalence is not a proxy for

diagnosis, and second problem was that although the overall sample was nationally representative, it was not possible to verify if the subgroup data were representative.

A consideration of possible confounding variables was rarely addressed in included papers and as a result the majority of the studies obtained a relatively low quality assessment score. Only one study of the prevalence of mental illness amongst offenders on probation (Lurigio et al., 2003) included in this review, achieved a score of 58 out of possible 68. This is perhaps the most comprehensive study to date.

Furthermore, consideration needs to been given to the difference in reported prevalence rates of identified disorders in the reviewed studies. This may be due to the settings where the studies had been conducted, sample size but also measures employed to reach diagnoses. It also has to be noted that there are significant differences across criminal justice systems in different countries, and how this may impact the profile of probationers. Studies included in this review looked at the samples from the UK, USA and Canada, and some of the papers used the sub-group of the probation population focusing on those who resided in probation approved premises, or probationers clients of psychiatric services (i.e. Geelan et al., 2000; Hucle et al., 1996; Nadkarni et al., 2000 and Roskes et al., 1999). Although these papers provided valuable information, the findings are unlikely to be representative of the wider probation population. Where possible an average prevalence adjusted for sample size was calculated. As the weighted average doesn't not work for missing data a representative average was

calculated. This is more robust than arithmetic average as it takes the larger samples into account. This is why some of the averages are very different.

Other important factors that need to be taken into consideration are the samples, their size and way they were identified. Amongst included papers often the sampling methods were rarely made explicit. In addition there is a wide discrepancy with regards to sample sizes, with many reporting their findings on small sample sizes (i.e. Nadkarni et al., 2000, Richardson et al., 2003 and Roskes et al., 1999), and few studies with larger samples that employed randomisation to increase the generalisability of their findings (i.e. Keene et al., 2003, Wormith and McKegue, 1996). These differences in sample sizes make drawing conclusions difficult. It is important to highlight that there was a significant underrepresentation of females across the reviewed studies, with majority consisting solely of male participants. There was also limited information with regards to the ethnicity of the samples under investigation, with the majority of the British papers reporting findings on mostly Caucasian participants. These findings, although significant in their contribution to the greater understanding of mental disorders in probationers, are not reflecting the current ethnic diversity of the British society. Therefore, with such variability in the quality of the studies reviewed conclusions need to be drawn tentatively.

Limitations of the Current Review

The current inclusion criteria included studies on adult probationers and on this basis a number of studies were excluded since many were conducted on juveniles, suggesting that this review does not achieve an accurate representation of the

research in this area. A further weakness may be evidence of publication bias since unpublished studies were not included and the current search was limited to full text English language only publications.

Furthermore, six of the studies included in this review used validated but different measures for screening mental disorders (i.e. MINI, SAPAS, QDIS and GAF), and it was difficult to establish which outcomes were the most reliable for detection of mental disorders. Similar limitations were evident in relation to the definition of mental disorders, some considered previously known diagnoses as an indicator of mental health problems with no information as to how these have been established, while other papers referred to the past contact with mental health services as a proxy for prevalence estimates. Finally, some studies were reporting prevalence based on current assessments conducted by various mental health professionals (Psychiatrists, staff from the forensic psychiatric service) making the comparison of reported findings impossible. These issues are considered in the empirical study presented in the following chapter.

There is also a significant limitation with regards to generalisability of the findings. The sample size varied significantly, the reviewed papers included studies form the USA and Canada, which reduces the generalisability of findings to the UK samples, and the few studies conducted in the UK did not reflect the current ethnical diversity of the British society.

The UK is a multi-ethnic society, and ethnic identities have important implications for people's lives. Despite significant heterogeneity, minority ethnic

groups are worse than the majority White-British population across a wide range of welfare indicators (Platt, 2007). The exclusion of minority ethnicities especially in more ethnically diverse areas limits the generalisability or external validity of findings since samples are not representative of the target populations to which they are intended to apply. Therefore future research should consider ethnicity as a variable of analysis.

Conclusion

The understanding of psychiatric morbidity in any population has very important implications for both epidemiology and health service planning. High prevalence rates of mental disorders have been identified in forensic populations. The little research that exits in this area demonstrates mixed findings and has a number of methodological limitations. As a result, it is difficult to reach a firm conclusion on what is the likely prevalence of mental disorders in a probation population. Therefore, more robust research is needed, not only to establish more accurate prevalence rates and gain better understanding of the complex relationship between presences of mental disorders and offending behaviour.

The current review highlighted a number of methodological limitations that had significant impact on comparability and quality of the existing evidence. Whilst the eighteen papers included in this review contribute greatly to this research area, future studies should build on existing research and address some of the highlighted limitations to improve the quality of the findings.

The reviewed studies reported high psychiatric morbidity amongst probationers. In most studies the personality disorder appears to be the most prevalent with rates of 47% reported by Brooker et al., (2012). The overall average prevalence of PD based on the information included in the reviewed studies was 26%, weighted average 19%. Rates of substance misuse (Brooker et al., 2009), psychotic disorders (Geelan et al., 2000; Cirlly et al., 2009), affective disorders, i.e. depression (Cirlly et al., 2009; Hatfield et al., 2004), anxiety (Brooker et al., 2012; Cirlly et al., 2009) and bipolar (Richardson et al., 2003) were also high. With the average reported prevalence for alcohol misuse 53%, weighted average 62%, drug abuse 43%, weighted average 54%, and any substance with either drug or alcohol or both 39%, weighted average 7%.

The epidemiological literature included in this review reported a range of prevalence rates for major mental disorders and substance misuse in probationers. It highlighted that available research has its limitations. Despite the above, it is possible to conclude that the prevalence of mental disorders appears to be high, and there appear to be high rates of comorbidity. This emphasises the need for further high quality research in this area, which has been essential in influencing the overall aim of this thesis and in particular the empirical study presented in the following chapter.

Future research can have significant impact on evidence-based practice and development of appropriate interventions and services to address the needs of offenders on probation. This review also identified a lack of evidence with regards to treatment options, and this should be a priority for future research, both with

regards to identification of available interventions and their effectiveness, including their potential impact on future offending. These should be supported by clear policies and procedures, in order to ensure that, where possible, the identification of needs is conducted by suitable qualified staff with the use of reliable and valid diagnostic measures and that identified needs of probationers are met. Finally, the current review highlighted the need for future research to be more gender and ethnically diverse, as little is known about the mental disorders and needs of women managed by the Probation Service and also the need for the research to reflect the current make up of British society.

Rationale for Chapter 5

The little research that exits with regards to the prevalence of mental disorders in probationers demonstrates mixed findings and has a number of methodological limitations. Therefore, it is difficult to reach a firm conclusion on what is the likely prevalence of mental disorders in a probation population. Thus, more robust research is needed, not only to establish more accurate prevalence rates to inform service provision but also to further the understanding of the complex relationship between mental disorders and offending behaviour in order to develop the most effective interventions addressing the above.

Chapter Five

Empirical Research Study

Prevalence of mental disorders and unmet needs in a sample of probationers

Abstract

Existing literature describes high levels of psychiatric morbidity in offenders. A small number of studies to date have researched mental disorders within probation, and the little research that do exist demonstrates mixed findings and has a number of methodological limitations.

This study aims to establish the prevalence rates of mental disorders and unmet needs in a sample of offenders managed by the Lambeth Probation Service.

Current and lifetime presence of mental disorders were investigated based on structured clinical interviews using a number of screening measures.

Anxiety disorders, mood disorders and substance use disorders were common among offenders on probation, as were symptoms indicative of a likelihood of personality disorders. Based on the MINI, the prevalence of any current mental disorder was detected in 61% of the overall sample.

The results of the present study confirm previous findings of high psychiatric morbidity amongst offenders on probation.

Consideration should be given to modifying probation screening for mental health and associated problems, so that needs of offenders managed in the community are met.

Introduction

The systematic review presented in chapter four has identified significant lack of research into the prevalence of mental disorders amongst offenders on probation. The existing research demonstrates mixed findings and has a number of methodological limitations, making a comparison of the results very difficult and suggests that the prevalence of mental disorders is an under researched area. Despite the above, the literature also suggests that the health of offenders managed in the community is worse than that of the general population and high levels of psychiatric morbidity. While, there is a growing concern regarding the prevalence, nature and treatment of mental disorders among offenders, there has been little work to assess the extent of such conditions among those managed within community setting. This empirical study aims to address some of the previously identified gaps in this field, by studying sample of offenders managed by the Probation Service in London Borough of Lambeth. Lambeth is one of the six most deprived boroughs in the United Kingdom, with high numbers of people who experience high levels of social exclusion and poor education, employment and health outcome.

The understanding of psychiatric morbidity in any population has very important implications for both epidemiology and health service planning. In April 2009 Lord Bradley published a review, which emphasized the paucity of information on the health needs, of offenders at various stages of the pathway through the Criminal Justice System (CJS) stating:

"Currently data is not routinely collected in relation to offenders' health needs at every stage of the criminal justice system, and therefore it is difficult to estimate the full scale of need. This in turn makes it difficult to inform the commissioning and planning of appropriate services" (Bradley, 2009, p.138).

The Bradley Report (2009) has also identified the need for specific provisions related to mental health of offenders in the CJS to be developed. These to date have directly informed projects designed to provide specialist knowledge and bridge the gap between criminal justice and mental health services resulting in development of liaison and diversion services (L&DS).

The L&DS provide the opportunity to identify offenders with mental disorders and refer them to appropriate services. A key principle in diversion is that when criminal behaviour suggests presence of mental disorder, offenders should receive treatment rather than punishment. Furthermore, the principle of equivalence states that the standards of care for offenders with mental disorders should be equivalent to standards of care provided to clients with mental health problems in the community who did not come into contact with CJS (Wilson, 2004).

The health of offenders in general is poor as highlighted by the Bradley Report (2009). This is supported by the findings form the literature review presented in previous chapter, which establish high prevalence of psychomorbidity (i.e. Richardson, McInnes & Davis, 2003; Geelan, Griffin, Briscoe & Haque, 2000; Cirlly, Caine, Lamberti, Brown & Friedman, 2009) substance misuse (i.e. Brooker, Sirdifield, Blizard, Denney & Pluck, 2012; Hatfield, Ryan, Pickering,

Burroughs & Crofts, 2004; Richardson et al., 2003; and Nadkarni, Chipchase & Fraser, 2000) and highlighted the lack of research in the population of offenders managed by Probation Service.

The most comprehensive study to date conducted in the UK by Brooker et al., (2012) explored the prevalence of current and lifetime mental illness and substance misuse in offenders under probation supervision in Lincolnshire. They estimated that 39% of probationers were suffering from mental illness, and 11% from current psychotic disorders. Furthermore 17% suffered from depression and 27 % from anxiety. The most prevalent mental disorder reported was probable personality disorder identified in 47% of the sample. The overall estimate of substance misuse was 60% and comorbidity as high as 89%.

The literature presented throughout this thesis reported high rates of psychomorbidity and in general poor mental health among offenders on Probation. The mortality rates among this population have also been identified as high, suggesting that community offenders are four times more likely to die than the general male population, and twice as likely to die as prisoners (Sattar, 2001). Many studies also showed that offenders managed within the community are socially excluded, and experience difficulty in accessing services to meet their needs (Social Exclusion Unit, 2002, DoH, 2007). Furthermore, a review of research on offenders managed in the community by Skeem and Louden (2006) showed that services for mentally disordered offenders receiving community supervision are not equipped towards the needs of this population.

A wide range of prevalence rates, differences in sources of data and variations in methodology in available literature made it difficult to establish the likely prevalence of mental disorders in probationers and highlighted a need for further research in this area to inform evidence-based practice and commissioning of health services to respond to the needs of this vulnerable group. Therefore the primary aim of this study is to establish the prevalence of mental disorders and unmet needs, by employing a prospective study design to assess probationers managed by the Lambeth Probation Service.

Rationale, Aims and Objectives of the Study

Based on the literature review, it is evident that more robust research is needed, not only to establish more accurate prevalence rates of mental disorders but also to gain understanding of the complex needs of this this population, their impact upon offenders' health, reoffending, and the implication for clinical practice and service provisions. It is hoped that the information gained from this study will aid the commissioning process by highlighting the current mental and general healthcare needs of offenders managed in the community. The data analysis will provide a snap shot of current needs of this sample, which can assist commissioners in making informed policy decisions, to ensure that these are at the forefront of local healthcare, social care and criminal justice strategies. It is intended that the results of this study will also contribute to a wider assessment of health needs of offenders in the community.

The hypothesis behind this study is that offenders on probation are a disadvantaged group, characterised by a range of mental health problems, social

needs and suffering from social exclusion, which prevents them from accessing the care they require. Therefore, the overall aim is to determine the levels of mental disorders and unmet needs amongst offenders under probation supervision in Lambeth. This will be achieved by identifying those who report symptoms associated with major mental illness, personality disorder, substance misuse. Next this study will also explore what are the 'unmet needs' (a complex mixture of clinical and social needs) of this population.

Principal research question/objective

Q_1. What is the prevalence of mental disorders in probationers managed by Lambeth Probation Service?

Secondary research questions/objectives

Q_2. How many probationers are known to have a history of mental health problems?

Q_3. What are the levels of substance misuse of probationers?

Q_4. What is the extent of comorbidity in this sample?

Q_5. What are the levels of unmet needs?

Based on the literature it was hypothesised that:

H_1. Up to 39% of offenders would meet criteria for any of the DSM-IV Axis I criteria for psychiatric disorders measured by the MINI (Brooker et al., 2012)

H_2. Probationers are more likely to have high rates of substance misuse than those found in general population

H_3. Probationers are more likely to have higher levels of psychiatric comorbidity in comparison to general population

H_4. High proportion of probationers will have significant unmet needs (i.e. unemployment, housing problems, and financial difficulties) in comparison with general population.

Method

The study is based on the data from a sample of offenders managed in the community by the Lambeth Probation Service. The Borough of Lambeth is the second largest of the 14 boroughs, which make up inner London. It is one of the most densely populated and ethnically diverse London boroughs, with a population of around 303,000, and the second highest proportion of Black Caribbean people in the country. It is likely, that this will be reflected in our sample, and as a result, will have a significant impact upon generalisability of the findings. However, it is still vital to study the needs of this sample as this geographical area, is characterised by high level of crime and socio economic needs associated with mental health.

The Lambeth Probation Service works with over 2,000 offenders at any one time, where approximately 1,200 are managed in the community. All probationers managed by the Lambeth Probation Service were invited to take part in the study. The criteria for selection were that the offender was at least 18 years of age and able to provide informant consent. It should be noted that the population used was a small one and from most densely populated and ethnically diverse borough in the Country and as a result, is not necessarily representative of the entire community offender population.

Probationers were initially approached through their probation officers, with the hope that by involving a professional with prior knowledge of the probationer will increase the likelihood of participation. The assistance of the probation officers was also important in addressing potential barriers to participation in the study for example English language proficiency, the need for an appropriate adult if necessary and the initial opinion whether the potential participant would be able to provide informant consent. Furthermore, the study required the presence of a professional to witness the participant giving informed consent. In total 360 probationers were approached during the study period (between 5th June 2013 and 19th August 2013) and initially 176 agreed to take a part, however only 68 participants completed the interview and screening. The interviews took varying times to complete, depending on the individual; typically the duration of the interview was less than 60 minutes.

The data was collated by the author (AZ), each case was assigned an individual study number and was referred to by this number at all times. The confidentiality of all participants was maintained in line with the Data Protection Act (1998). No other identifiable information such as name was recorded and as such, the data could not be traced back to the probationer without the list of corresponding research numbers. This list was stored on a password protected computer and was accessible only by the researcher. Additionally, the completed assessments for each participant were stored in a locked filing cabinet. The identity of each participant was not identifiable to anyone other than the researcher. Once complete, the data from the assessment was coded and transferred to SPSS for statistical analysis.

Ethical approval and considerations

Ethical approval for this research was granted by the Research Ethics Committee (REC) for Wales and the National Offender Management Service (London Probation Trust), prior to the commencement of this study (Appendix 10, p. 245).

Study design

The study employed a cross sectional design with one assessment point. This approach was chosen as there are certain benefits for example it allows a quick collection of data with regards to outcomes and consequently meets financial and ethical restrictions of conducting research within the CJS. However, it also has its limitations, as does not allow to determine it cause and effect. One possible way around this problem could be to do a similar study over certain time periods and monitor the changes within the population.

Sample and Procedure

There were two sampling methods employed in this study. First method involved recruiting participants through initial contact with the Probation Officers, by approaching potential participants during their scheduled appointments and in the presence of their probation officer explain the study aims, and to establish whether the potential participant would be able to give informed consent. The second opportunistic method of sampling was introduced in order to increase recruitment. This method involved approaching each probationer directly while they were waiting for their appointment.

The inclusion criteria were:

- Probationers who were able to provide informed consent

- Probationers able to communicate in English

The exclusion criteria were:

- Probationers unable to speak sufficient English, as the resources for the study were limited and unfortunately it was impossible to cover expenses for interpreters.
- Probationers who were unable to provide informed consent

Once the participant agreed in principle to taking part, the appointment with the researcher (AZ) was coordinated to coincide with an individual's next appointment at probation. This provided the potential participant with sufficient amount of time to consider taking part in the study and reduced the impact on participant time and probation department resources such as availability of interview rooms. Probationers who agreed to take part were taken through study documents, i.e. participant information sheet, following this participants were asked to sign a consent form (Appendix 11, p. 248). In the situation where potential participant declined to take part, where possible, the reasons for this were elicited.

The most often reported reason for not taking part was time needed to complete the interview and screening. Probationers who provided informed consent were interviewed to obtain basic demographic information, social and any clinical information (i.e. previous contact with mental health services) using a brief demographic information schedule specially developed for the purpose of the study (Appendix 12, p. 250). These were included to enable the researcher to describe the characteristics of the sample. Following this, participants were taken through a series of standardised screening questionnaires to establish the presence

of symptoms rather than make a psychiatric diagnosis of mental illness, personality disorder, post-traumatic stress disorder, attention deficit and hyperactivity disorder, drug and alcohol dependence, and unmet needs.

Measures

Some of the measures were chosen to enable a comparison of the current findings with previously conducted studies. Information on mental health problems were measured using the Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1997) and the Brief Psychiatric Rating Scale (BPRS; Overall and Gorman, 1962). The MINI is a short diagnostic interview, which screens for a combination of current and lifetime DSM-IV and ICD-10 mental disorders. This tool was selected as it is reliable, validated, has a relatively short administration time, and it has been used in a number of studies conducted in forensic populations (i.e. Brooker et al., 2012; Lurigio et al., 2003).

The BPRS is a 24-item interview schedule based on an individual's self-reported (items 1-14) and observed behaviour and speech (items 15 -24). Ratings of 2 – 3 indicate a non-pathological intensity of a symptom whereas ratings of 4 – 7 indicate a pathological intensity of that symptom this measure has been successfully used in studies with mentally disorder offenders (i.e. Gray et al., 2003; Donnelly & McGlloway, 2004).

To estimate levels of personality disorder (PD) the participants were assessed using the Standardised Assessment of Personality Abbreviated Scale (SAPAS; Moran et al., 2003). This is a brief (eight-item) screening interview that identifies

the likelihood of personality disorder in general, rather than identifying particular types of PD. This tool was selected for use in the study for a number of reasons. Firstly, it is brief to administer and does not require specialist training to use, meaning that it may be suitable for use by probation staff as part of their everyday practice. Secondly, the evaluation of this tool in previous chapter found that it performs well in forensic settings, and finally, a study by Pluck et al., (2012), confirmed that it is a valid screen for personality disorder among probationers, and that a score of three or above has a good accuracy for case identification.

Following personality assessment the participants were screened for symptoms of Post-traumatic stress disorder (PTSD) with Trauma Screening Questionnaire (TSQ; Brewin et al., 2002) and the symptoms of ADHD in adulthood using the Attention Deficit and Hyperactivity Disorder Self-Report Scale (ASRS; Adler et al., 2006). TSQ has been validated in adult victims of assault by Walters et al., (2006) and was found to be an effective means for predicting PTSD. The ASRS was chosen as it was previously successfully used in the studies with offenders (Adler et al., 2006; Ginsberg, Hivikoski and Lindefors, 2010).

The levels of substance abuse were measured using the Drug Abuse Screening Test short version (DAST; Skinner, 1982), and The Michigan Alcohol Screening Test (MAST; Porkorny, Miller and Kaplan, 1972). The DAST is a twenty-item screen for drug abuse (including both use of illegal drugs and misuse of prescription drugs). A score of over 11 indicates a substance use problem; a score of above 12 is definitely a substance abuse problem. This tool was selected for inclusion in the study as it is quick and easy to administer and has been shown

(i.e. McPherson and Hersch, 2000) to be reliable and to have good levels of sensitivity and specificity when used in forensic populations. The Michigan Alcohol Screening Test (MAST; Porkorny et al., 1972) similar to DAST is a quick twenty-two item self-rated questionnaire that helps to identify problem drinking. The score for hazardous drinking is 6 or more.

Finally, the unmet needs, these refer to social (i.e. financial, unemployment, housing problems), psychological needs (i.e. high level of anxiety, low mood, isolation) that impact day to day functioning and may have significant impact on reoffending. These were assessed using the Camberwell Assessment of Need - Forensic version (CAN-FOR–S, Thomas et al., 2008). The short version was included in the study assessing needs in 25 domains of the person's life ranging from psychological, social and clinical needs. This tool was included in the study as a means of investigating self-reported 'needs', and it was used to investigate the extent to which participants were receiving what they perceived to be 'adequate support' in areas in which they identified that they had a need.

Statistical analysis

Data from interviews was entered into the statistical software package (SPSS version 21), checked for accuracy and quality. Due to the nature of the study descriptive statistics were used to summarise the data and cross-tabulations to describe the characteristics of the sample, determine the prevalence of mental disorders, detect comorbidity and scores for unmet needs. Percentages were rounded up to the nearest full percent. The associations between the categorical variables were examined using Pearson's chi-square test. In addition a number of

simple logistic regressions were performed (using the forced entry method) to identify if there is association between 'current disorder' and risk factors.

Results

Sample characteristics

Out of the total sample (n=68), the majority 91% were male (n=62), and 9% were female (n=6). Overall, the average age was 33 years old (SD = 9.9, median 32, range 41). The eldest person in the sample was 60 and the youngest was 19 years old. Age was then categorised into four groups; under 25, 25-34, 35-44, 45 and over. From this initial analysis it became apparent that there is a very small proportion of females in the sample, which seems to be consistent with previous research in the area (i.e. Brooker et al., 2012) and supports the overall view that females are underrepresented in the studies across the CJS. As a result, general characteristics of female participants will be described but they will be excluded form statistical testing, as the female group was not large enough to provide a reliable estimate.

Examination of the sample characteristics shows that the study participants were predominantly of Black Afro-Caribbean origin (39%). Within that ethnic group 31% were Black Caribbean and 18% Black African. This was anticipated, as the sample was recruited from the second highest proportion of Black Caribbean people in the country. Therefore caution needs to be taken when interpreting and generalising findings of this study. In addition 29% of participants were White British, 10 % White-Other, 10% of mixed ethnicity and further 1.5% were Asian. Furthermore, the majority (66%) of the sample reported to be single, 38% left

school with no formal qualifications and 62% were currently unemployed.

With regards to forensic histories, 62% of the overall sample reported to have between 1 and 5 previous criminal convictions. The majority of committed offences (34%) were violence against the person, the frequencies with regards to the reason for the arrests are presented below in table 13.

Table 13. Forensic history of the overall sample (n=68)

Reason for arrest	**Overall Sample**	
	N	**(%)**
Violence against person	23	34
Theft, fraud and kindred off.	6	9
Burglary	10	15
Drug Related offences	9	13
Public order offences	8	12
Murder/manslaughter	2	3
Sexual offence (rape)	7	10
Harassment	2	3
Carrying offensive weapon	1	1.5
Number of Previous Convictions		
1-5	42	62
6-10	16	23
11-15	1	1.5
20+	8	12

The Prevalence of Mental Disorders

Within the overall sample no participant reported being currently involved with mental health services. Previous contact with mental health services was reported by 22% of the participants, among those 8% admitted to have previous psychiatric admission. Overall 16% of the sample reported previous contact with community mental health services, and 28% admitted to be currently taking some form of

medication. The results for prevalence of the current and the past/lifetime mental disorders derived from the MINI and the SAPAS is presented in Table 14. These show that 61% of all interviewed probationers met the criteria for at least one current disorder measured by the MINI. The most prevalent type was the likelihood of antisocial personality disorder, which was reported by 45% of the sample. In addition the likelihood of personality disorder in general as assessed by the SAPAS was found in 53% of the total sample. 24% reported anxiety disorder. Furthermore, 55% of participants reported history of symptoms indicative of mental disorders. The most common category of past disorders were mood disorders, reported by 29% of the sample. The presence and severity of current psychiatric symptoms, measured using the Brief Psychiatric Rating Scale (BPRS; Overall and Gorham, 1962) is presented in Table 15.

A significant proportion of the sample reported to have experienced some form of psychiatric symptoms with different levels of severity over the two weeks prior to the assessment. The most prevalent self-reported symptoms were: guilty feelings (over concern or remorse for past behaviour, not including guilty feelings from depression, anxiety or neurotic defences) experienced by 66% of the sample, followed by anxiety (fear, panic or worry) reported by 40% and symptoms of depression were experienced by 34% of the sample. With regards to the severity of the symptoms, the participating probationers reported to have experienced pathological intensity of the guilty feelings (31%), anxiety (6%) and depression (8%).

Table 14. The prevalence of current and past/lifetime disorders and likely personality disorder

Disorder	Current		Disorder	Past/Lifetime	
	N (%)	CI (95%)		N (%)	CI (95%)
Mood Disorders			**Mood Disorders**		
Major Depressive Episode	7 (10)	(.01 -.15)	Recurrent Depressive Episode	5 (8)	(.01 - .15)
MDE with Melancholic Features	3 (5)	(-.01-.10)	Mood Disorder with Psychotic Features	5 (8)	(.01 - .15)
Dysthymia	6 (10)	(.02-.17)	Manic Episode	5 (8)	(.01 - .15)
				3 (5)	(-.01 - .10)
Anxiety Disorders			**Anxiety Disorders**		
Panic Disorder	2 (3)	(-.01-.08)	Panic Disorder	4 (6)	(.00 - .13)
Agoraphobia	2 (3)	(-.01-.08)			
Social Anxiety	2 (3)	(-.01-.08)			
Generalised Anxiety	15 (24)	(.13-.35)			
Post-Traumatic Stress Disorder	2 (3)	(-.01-.08)			
Any Psychotic Disorders	0		**Any Psychotic Disorders lifetime**	5 (8)	(.01 - .15)
Any Current Mental Illness	16 (26)	(.15-.37)	**Any Psychotic Disorders**	5 (8)	(.01 - .15)
Any Mental Illness	38 (61)	(.49-.74)	**Any Mental Illness**	34 (55)	(.42 - .68)
Likely Personality Disorder ASPD (MINI)	28 (45)	(.32-.58)			
Likely Personality Disorder (SAPAS)	33 (53)	(.40-.66)			

* Data derived from the MINI and the SAPAS, (n=62). For PD, the prevalence estimate is based on the SAPAS scores above the cut-off point of 3. Confidence intervals shown are for the percentage prevalence estimates.

Table 15. The severity of self-reported symptoms according to BPRS

Symptom	Frequencies		Severity		
	N	(%)	Mild N (%)	Moderate N (%)	Severe N (%)
Somatic concern	8	13	2 (3)	4 (6)	2 (3)
Anxiety	25	40	8 (12)	13 (21)	4 (6)
Depression	21	34	12 (19)	4 (6)	5 (8)
Guilt	41	66	10 (16)	12 (19)	19 (31)
Hostility	8	13	7 (11)	1 (1.5)	0 (N/A)
Suspiciousness	14	22	7 (11)	4 (6)	3 (5)
Unusual thought content	4	6	2 (3)	1 (1.5)	1 (1.5)
Grandiosity	12	19	2 (3)	7 (11)	3 (5)
Disorientation	2	3	2 (3)	0 (N/A)	0 (N/A)
Suicidality	1	1.5	0 (N/A)	1 (1.5)	0 (N/A)
Self Neglect	1	1.5	0 (N/A)	1 (1.5)	0 (N/A)
Bizarre Behaviour	3	5	1 (1.5)	1 (1.5)	0 (1.5)

*(n=62), BPRS

Participants were also screened for current symptoms of PTSD with the Trauma Screening Questionnaire (TSQ) and ADHD in adulthood with the ASRS. There were no positive reports of PTSD symptoms from the TSQ. However, 10% of the sample reported to have experienced symptoms of ADHD in adulthood (95% CI [.02 – .16]).

The Prevalence of Substance Misuse

In order to establish rates of substance misuse the data from the MAST and the DAST was analysed. Alcohol abuse was defined as scoring 6 or more on the MAST screening tool, a cut-off indicative of problematic drinking. Overall, 16% of the sample scored positive on the MAST (95% CI [.07–.26]), indicating a strong likelihood of hazardous/harmful alcohol consumption.

Drug abuse was defined as scoring 11 or more on the DAST screening tool, a cut off indicative of at least a 'substantial' level of drug abuse (Skinner, 1982). Overall, 39% of the sample scored positive on the DAST (95% CI [.26 – .51]).

Current Mental Disorder & Substance Misuse

26% of the sample had both a substance misuse problem (defined as scoring 6+ on MAST or 11+ on DAST) and a current mental illness, suggesting that dual diagnosis is present in this population. In addition, 25% of those without a current mental illness had a drug misuse problem and 8% had an alcohol misuse problem. Table 16 below presents the prevalence of current major disorders with substance misuse.

Table 16. Comorbidity of current major disorders and substance misuse

Disorder	Alcohol Problem (MAST score of 6+)			Drug Problem (DAST Score of 11+)		
	N	%	CI (95%) (%)	N	%	CI (95%) (%)
Any Current Mental Illness	10	16	(.12-.88)	24	39	(.13-.54)
Major Depressive Episode	5	8	(-.28-1.08)	5	8	(.24-1.36)
MDE with Melancholic Features	3	5	(-.77-2.10)	0	N/A	N/A
Generalised Anxiety	3	5	(-.03-.43)	9	14	(.32-.88)
Probable Personality Disorder ASPD (MINI)	10	16	(.23-.97)	28	45	(.45-.83)
Probable Personality Disorder (SAPAS)	10	16	(.50-1.10)	24	39	(.50-1.10)

* (n = 62)

Current Mental Disorders & Personality Disorder

Overall, 53% (95% CI [.11-.43]) of the sample who screened positive on the MINI for a current mental illness also had a probable personality disorder according to the SAPAS screen. Table 17 shows the extent of comorbidity between the major diagnostic groups for current disorders according to MINI and personality disorder measured by the SAPAS.

Table 17. Comorbidity of current major disorders and likely PD

Disorder	**Probable Personality Disorder (SAPAS Score of 3+)**		
	N	**%**	**CI (95%) (%)**
Major Depressive Episode	33	53	(.02-.28)
Generalised Anxiety	15	24	(.32-.88)
Panic Disorder	2	3	(-.5.85-6.85)

*(n = 62)

Thus in summary, the present study found high rates of mental disorders among the sample. It also established that dual diagnosis and comorbidity are a common feature in probationers managed in Lambeth.

Unmet Needs

In order to establish the level of unmet needs, information provided in the Camberwell Assessment of Need - Forensic version (CAN-FOR–S; Thomas et al., 2008) was analysed. For each domain, the goal was to identify whether the probationer has any difficulties, and then if they do then to establish what level of help they needed and how much they were actually receiving.

With regards to the basic needs domain, 25% of the probationers reported problems with accommodation and 13% with daytime activities as the areas of unmet need. Psychological distress was the most frequently reported area of need with regards to the health domain, affecting 16% of the sample, followed by alcohol (7%), drugs (3%) and physical health needs (3%). There were no significant needs reported by probationers on the social domain. Finally, 26% of participants reported benefits (money concerns) as the area of unmet need.

Additional analyses were conducted to explore the relationship between: age, ethnicity, number of previous convictions and type of the offences using a Pearson's Chi Square tests. However, the conducted analyses did not show any statistically significant association between these categorical variables. Furthermore, the analyses were extended to examine the association between 'current disorder' and potential risk factors using unvariet and multivariate analyses. The results presented below are summarised into three domains: demography, crime and clinical factors.

Univariate Model

Simple logistic regression was used to examine association between 'any current disorder'; (i) any mental illness, (ii) any current mental illness and (iii) generalised anxiety disorder, since they all showed some differences in the descriptive analysis and they all have enough spread across yes/no responses for analysis**.** Age in years was used; ethnicity was transformed to dummy variables for grouped categories (White, Black, Mixed/Other); and marital status (married

or not), employment (employed or not) and education (no formal education or some) were transformed to binary variables.

Demography

Table 18 below summarises the results for each variable of interest. Overall, the analyses revealed four significant associations. The age compared to other demographic variables increased the risk of any current mental illness: Odds ratio= 1.1 (1-1.1), $p<0.05$, and also increased the risk for GAD: Odds ratio= 1.1 (1.0-1.1), $p<0.05$. In addition being employed compared to other demographic variables reduced the risk of any mental illness: Odds ratio= 0.16 (.50-.51), $p<0.05$ and any current mental illness: Odds ratio= 0.2 (.04-.99), $p<0.05$.

Table 18. Univariate odds ratios for demographic variables and current disorders

					N	**%**
ANY MENTAL ILLNESS					38	61
ANY CURRENT MENTAL ILLNESSS					16	26
GENERALIZED ANXIETY DISORDER (CURRENT)					15	24
	Any mental illness		**Any current mental illness**		**Generalised anxiety**	
	Odds ratio (CI)	Sig	Odds ratio (CI)	Sig	Odds ratio (CI)	Sig
Age	1.01 (.95, 1.1)	(0.87)	1.1 (1, 1.1)	**(0.035)**	1.1 (1.0, 1.1)	**(0.04)**
Employed	0.16 (.05, .51)	**(0.01)**	0.2 (.04, .99)	**(0.05)**	0.4 (.1, 1.6)	(0.02)
Married	0.55 (.17, 1.8)	(0.33)	0.73 (.18, 3.1)	(0.67)	0.45 (.1, 2.3)	(0.33)
Education	0.37(.12,1.12)	(0.08)	1.1 (.33, 3.5)	(0.91)	1.4 (.4, 4.6)	(0.62)
Ethnicity	1.1-.63 (.1-3.7)	(0.89)	.5-.9, (.1- 5.9)	(0.9)	2.2-1.3 (.12-22.3)	(0.9)

Crime

With regards to previous forensic history, there was one participant who did not have any previous convictions, as a result they were excluded from this analysis. The remaining n=61, were divided in two groups; five or less (n=40), and more than five (n=21).

The analyses showed that having more than 5 previous convictions is associated with higher odds (4 times higher) of any mental illness: Odds ratio= 4.3 (1.2-14.9), p<.05. The study also explored the types of convictions and 'any current disorder', and found only one significant association, were an arrest for public order compared to the other offences reduced the risk of any mental illness (Odds ratio= 0.17 (.03-.91); p<.05). Please see below table 19 for the summary of the results.

Table 19. Univariate odds ratios reasons for arrest and current disorders

					N	**%**
VIOLENCE AGAINST PERSON					23	34
THEFT, FRAUD AND KINDRED OFFENCES					6	9
BURGLARY					10	15
DRUG RELATED OFFENCES					9	13
PUBLIC ORDER OFFENCES					8	12
	Any mental illness		**Any current mental illness**		**Generalised anxiety**	
	Odds ratio (CI)	Sig	Odds ratio (CI)	Sig	Odds ratio (CI)	Sig
Violence	1.4 (.47-4.3)	(0.54)	0.36 (.09-1.4)	(0.15)	0.4 (.1-1.6)	(0.2)
Theft/Fraud	1.97(.19-20.1)	(0.57)	3.14 (.41-24.4)	(0.28)	1.05 (.1-10.9)	(0.97)
Burglary	0.94 (.24-3.7)	(0.93)	0.28 (.03-2.4)	(0.24)	0.75 (.14-4)	(0.74)
Drugs	0.43 (.09- 2.1)	(0.3)	0.44 (.04-4)	(0.47)	0.49 (.05-4.4)	(0.52)
Public Order	**0.17 (.03-.91)**	**(0.04)**	0.95 (.17-5.3)	(0.96)	0.41 (.05-3.6)	(0.42)

Clinical

Another simple logistic regression examined the associations between the alcohol (MAST), drugs (DAST) and antisocial personality disorder (MINI), as only these three categories had sufficient samples for analyses. Only one significant association was established, a positive score for DAST is associated with higher odds (8 times higher) of any mental health illness: Odds ratio= 8.65 (2.2-33.9), p<0.05. Table 20 summarises the findings.

Table 20. Univariate odds ratios: PD and substance misuse (MAST & DAST)

					N	%
MAST 6+					10	16
DAST 11+					24	39
ANITSOCIAL PERSONALITY DISORDER (LIFETIME)					28	45
	Any mental illness		Any current mental illness		Generalised anxiety	
	Odds ratio (CI)	Sig	Odds ratio (CI)	Sig	Odds ratio (CI)	Sig
MAST 6+	2.9 (.57-15.2)	(0.20)	3.7 (.9-15.2)	(0.07)	1.4 (.32-6.4)	(0.64)
DAST 11+	8.65 (2.2-33.9)	**(0.002)**	1.88 (.59-5.9)	(0.29)	3.2 (.96-10.6)	(0.06)
ASPD	n/a	(0.93)	0.65 (.4-4.1)	(0.65)	3.2 (.14-4)	(0.06)

Multivariate Model - Without clinical associated factors

None of the individual mental health outcomes had more than one significant association with the demographic or crime factors apart from 'any mental illness'. Increased age, more than 5 previous convictions and an arrest for public order compared to other offences were associated with changes in the odds for 'any mental illness'. Once the number of previous convictions were controlled for, age and public order arrest the association was no longer significant, as it reduced the odds of 'any mental illness'. The number of previous convictions was the only remaining predictor. Having more than 5 previous convictions was associated with much higher odds of having 'any mental illness', with an Odds ratio = 3.714 (1.03-13.5), $p<0.05$. There were no other significant findings.

Multivariate Model - With clinical associated factors

Three clinical factors (DAST+11, MAST+6 and ASPD) were included in this multivariate model because overall they were all related to the outcomes. 'Any mental illness' was tested for consistency. Increased age, more than 5 previous convictions and an arrest for public order were also included because they might

be related to the new factors (i.e. age might be correlated with substance) and this controls for these relationships. When DAST+11 and MAST+6 were added to the model, the DAST+ was the only significant co-efficient, and increased the likelihood of mental illness by 7 ($p=0.008$). None of the other factors have significant coefficients ($p>0.05$). The lack of more striking associations is likely to be due to the small sample size.

Discussion

The purpose of this study was to establish the prevalence of mental disorders and unmet needs in offenders managed by the Lambeth Probation Service. This section discusses the findings according to proposed research questions and hypotheses. It considers their implications, acknowledges limitations, and discusses directions for future research.

The literature on the prevalence of mental disorders suggests high rates in all diagnostic categories among offenders compared to general population. The results of the present study confirm these findings. The high overall prevalence of mental disorders (61%), as well as high rates of probable personality disorders, substance misuse, and comorbidity indicates that mental health needs of Lambeth probationers presents significant challenges to probation and the local mental health services.

The present study estimated that 61% of probationers suffer from a variety of Axis I disorders, which is higher than that found by Brooker et al., (2012), who reported rates of 39%. The most prevalent current disorder in probationers was

probable personality disorder found in 53%, of the sample. In addition, anxiety, mood, and substance use disorders were also of comparable prevalence to previous studies (i.e. Minoudis et al., 2011; Brooker et al., 2012). When the present findings were compared with the Office of National Statistics (ONS) surveys of psychiatric morbidity in the prison and general populations (Singleton et al., 2001), it showed that the current study corresponds closer to the prevalence of mental disorders in the prison population than to the rates found in the general population. This also confirmed previously stated hypotheses of a high prevalence of mental disorders, substance misuse and comorbidity among offenders on probation. When we look closely the to the overall prevalence of 61 % for all current mental disorder prevalence for the Lambeth sample with 8% experiencing psychosis at some point in their lives compared to 3.5% in the general population (Perala et al., 2007). Previous studies of the prevalence of mental health disorders in prison populations have all pointed to the complexity of presentations and co-morbidity of mental illness with substance misuse and personality disorder (e.g. Sirdifield et al., 2009). This sample exhibited many of the same features.

In addition this study explored unmet needs, and found that a significant proportion of probationers reported experiencing financial (26%) and housing (25%) problems, psychological distress (16%), alcohol (7%), drugs (3%) and physical health needs (3%), which also supported previously stated hypothesis.

The present study confirms previous finding of the high prevalence of mental disorders and unmet needs in offenders managed in the community. These are of concern and indicate the need for assessment and intervention. Currently,

probation supervision and management of offenders in the community is concern with identification and management of criminogenic factors. This study established presence of a number of risk factors (i.e. personality disorders, substance misuse, financial problems, accommodation) previously associated with offending behaviour. The high occurrence of personality disorder and psychomorbidity among community supervised offenders has also very important implications for their management, and highlights the need for the Probation and community mental health service to further consider ways of addressing identified needs, and to review the current provisions around mental health needs. It seems that in order to address the vast needs presented by this population it is necessary for the local services to work alongside and develop multiagency approach to provide treatment and support for this group. It is clear that mental health needs for those under probation supervision require a much higher priority in terms of service delivery, education, and research. Future policy need to take a longer term view, with consideration of reoffending and the importance of adequate aftercare provision. The results of the present study contribute to our understanding of the mental health needs of offenders managed in the community and may inform the development of appropriate intervention approaches. The recognition and treatment of identified mental disorders are especially relevant due to the fact that the probability for a successful rehabilitation can be increased and relapse can be reduced. The vast number of needs identified require a collaboration from a number of services to work together to address the needs of offenders, and support the positive change in their lives. It is also very important to recognise the challenges related to identified clinical needs and its impact on motivation and client engagement in treatment and rehabilitation.

Limitations and Future Research

Whilst the current study has a number of strengths, it does have several limitations, which warrant discussion. Firstly, it is possible that a small sample size may have resulted in an over or under classification of the cases. The initial aim was to interview 130 probationers, in order to have a precision of +/- 5% (95% Confidence Interval) on the prevalence estimate, based on the previous estimates of mental illness being present in 39% of the probation population (Brooker et al., 2012) and the information on operational capacity figures obtained from the Lambeth Probation Service. Overall 360 probationers were approached and 176 initially agreed to take part. However, the study encountered a number of recruitment challenges that impacted the overall sample size. These included, stigma surrounding mental health, and more practical reasons such as time devoted to complete the interview. It has to be emphasized that a substantial proportion of approached probationers refused to take a part as they felt it will take too much of their time. Furthermore, a significant number failed to attend previously schedules appointment without any explanation. It has to be acknowledged that a lot of probationers lead fairly chaotic lifestyle within community, which partially could explain their not attendance. Another aspect is their motivation for taking part. On reflection there are steps that could improve the recruitment process in the future i.e. building even more close relationships with Probation/Offenders Managers especially in the circumstances where new cases were assigned to them and suggest that initial screening of offenders' mental health and needs could potentially contribute to better understanding of their clients presenting problems.

Because of ethical guidelines, no sociodemographic data was collected and therefore could not be evaluated for the non-participating offenders on probation. For that reason, sample selection bias is possible. This is a difficult population to study. The study sample disproportionately included probationers who had wanted help from the services. This study found that over a half of the participants reported to have been currently experiencing symptoms associated with mental disorders. Therefore reporting bias needs to be taken into consideration, as some of the probationers viewed participation in the study as way of addressing some of their problems, which presents potential overestimation of some of the difficulties experienced and under reporting of others. As a result, caution needs to be taken when interpreting the findings of the present study.

Another important aspect worth consideration is that the sampling pool for the present study consisted solely of the Lambeth Probation Service, therefore the sample was not nationally representative and as a result the findings cannot be generalised to the rest of the country and are relevant mostly to Lambeth, as it is the most ethnically diverse area in the whole country. Furthermore, it is important to state that there was under representation of women in the overall study sample as compared to the proportion in the Lambeth Probation Population, this however, seems to be consistent with studies conducted within the CJS (i.e. Brooker et al., 2012). Women were less likely to agree to take part in the study, and the one that did presented with significant psychological needs. In the light of previous research (Hollin and Palmer, 2006b) suggesting that male and female offenders have different and varying levels of need, more gender specific research is needed

in order to establish potential health and social difficulties experience by this sub-group.

An additional limitation of the current study is use of the self-report measures, which may introduce possible response bias, because those questions may be answered subjectively. These may have further implications of underreporting or overrating symptoms. Response bias include the under reporting of negatively perceived symptoms and the over reporting of positive traits and behaviours, and conversely, the over reporting of symptoms. It has been argued that socially desirable responding may be more evident in forensic context, where reporting of various aspects may have significant outcomes for the participants. Due to potential presence of the response bias the findings of this study need to be interpreted with the caution. Furthermore, the symptom prevalence is not a proxy for diagnosis, although the literature supports the reliability of such data for this population (Brooker et al., 2012).

A strength of this study is the use of a primary data, rather than analysis of available information from file reviews. The prevalence of major mental disorders identified in this study is consistent with previous findings, and has important implications for staffing skills needed for early recognition of mental health problems experienced by individuals under their supervision. The levels of functional dependency as a result of unmet needs, combined with behavioural and psychiatric problems can make the task of case management difficult for probation officers, who frequently report they lack the experience and training to be confident in recognising early signs of mental health problems. Therefore

training in mental health awareness and closer collaboration with the local mental health and social services may not only benefit the client but also provide the probation officer responsible for case management with support and help develop confidence in working with probationers presenting with complex needs.

The main purpose of this study was to establish the prevalence of mental disorders amongst offenders on probation. This study examined a number of variables, and found that 61% of offenders on probation supervised by the Lambeth Probation Service are experiencing current symptoms indicative of mental disorders.

Furthermore, the study found high levels of psychiatric morbidity with regards to anxiety, substance misuse and personality disorders, and high levels of comorbidity. Overall, the results of the present study suggest that this population has significant mental health problems and needs. Therefore, it is important that those involved in the management of offenders in the community fully understand the implications of the present study that showed how vulnerable this population is, and that they are working to ensure that offenders on probation are receiving appropriate community based mental health services. As the early recognition and appropriate treatment, are especially relevant due to the fact that the probability for successful rehabilitation can be increased and relapses can be reduced. Previous studies showed that substance abuse and antisocial personality disorder are regarded as solid risk factors for general criminality and violence among offenders (Silver et al., 2008). Therefore addressing these problems may have impact on reducing the rates of future offending by probationers suffering from mental health problems.

The results of the present study also provide a significant indication for the relevance of offense-related aspects and psychopathological features that should be acknowledged in probationers' research more intensively in future. The findings from previous research and diagnostic knowledge about mentally disordered offenders could help to develop more effective and more specific treatments for offenders in the community. That addresses spontaneously criminogenic, mental health and social needs. Additional studies with larger sample sizes and gender specific populations will allow for analyses with increased statistical power and for more detailed examinations of offenders health and criminogenic needs.

It is acknowledged that the present study does not represent the whole country and that here might be a danger of over generalisation in reporting. This research however did explain many issues that will be helpful for future research. Although the study is not without its limitations, it has shown that the prevalence of mental disorders in probation is high and many needs are unmet.

Chapter Six

Thesis Discussion

The purpose of this thesis was to examine the mental health of offenders on probation. In order to investigate these aims, four pieces of work have been completed exploring various aspects of this topic. Firstly, this thesis presented a single case study that described the risk and needs assessment of a prolific offender managed by the probation service. The findings from this study were used as a prelude to further more in depth research on the prevalence of mental disorders amongst community managed offenders presented in chapter five. This study also showed the utility of the SAPAS, a screening tool for personality disorders as a first step of a two-stage assessment. Next chapter explored the psychometric properties of the SAPAS a brief screening measure for personality disorder case identification. Following this, findings from the literature review on the prevalence of mental disorders in offenders on probation were presented, which together with the findings of previous chapters informed the empirical research project investigating the prevalence rates of mental disorders of offenders managed by the Lambeth Probation Service.

Main Findings

Chapter Two

Presented in chapter two was a full clinical picture of presenting problems based on the clinical history and structured psychological assessment of Mr X's personality, substance misuse and unmet needs. The findings indicated that a high risk of future offending in Mr X's case is associated with the relapse of mental illness, and a long-standing and complex substance misuse problem. Recommendations were made on how to best manage Mr X's actual risk for future offending and how to support the client's extensive clinical needs. This

case study helped to conceptualised the mental health needs considered and explored in more depth in an empirical study on the prevalence of mental health problems in probationers presented in chapter five. Furthermore this case study provided some support for the use of the SAPAS (Moran et al., 2003) as a brief screening measure for case identification.

Most of Mr X's recognised needs correspond with previously identified risk factors for offending, therefore not addressing these will have significant impact upon Mr X, and even further implications on the society if he continues to offend in order to support his substance misuse habit. Furthermore, the presence of probable PD in this case raised additional questions, first of all despite Mr X extensive forensic and psychiatric history his personality was never assessed, which suggest how important early identification is, in determining appropriate pathway. Secondly, Black African and Caribbean offenders tend to be over represented in mental health services for people with severe mental illness, but underrepresented in personality disordered offender services. It is not quite clear why this is, but it is important to be mindful and consider possible biases in attitudes and assumptions when assessing for personality disorder in black and ethnic minority offenders. Also when considering the cumulative effect of identified risk factors in this case, the presence of a major mental illness and probable personality disorder will have significant impact on Mr X's engagement in treatment, which needs to be taken into consideration by treatment providers. Moreover this study provided a valuable insight into complex needs of offender managed in the community.

Chapter Three

This critique provided an overview of the available literature on the validity and reliability of the SAPAS and concluded that this screen measure possesses adequate psychometric properties and demonstrates desirable clinical utility. Although, the SAPAS is merely a screening measure and does not provide a definitive diagnosis of personality disorder, it can be successfully used as a first step of a two-stage assessment for case identification as presented in a single case study. Furthermore, this chapter emphasised that this tool can be useful in case identification in populations where the likelihood of PD is high. As result, this tool has been used in empirical study. However, in order to overcome some of the identified disadvantages, i.e. inability to detect antisocial cases the SAPAS was used alongside the MINI in the empirical study presented in chapter five of this thesis.

Chapter Four

This chapter provided a review of the prevalence of mental health disorders amongst offenders on probation, and reported high prevalence rates and highlighted the lack of high quality research in this area. One of the limitations of the review was the small number of studies included and the methodological issues they presented. The variation in the quality with regards to: definitions of mental disorders, diagnostic processes, difference in reported prevalence and statistical procedures made the comparison between the studies difficult. The review used qualitative approach to establish the likely prevalence of mental health problems of offenders on probation, however where possible the overall average prevalence rates were established. As a result, caution needs to be taken

when generalising these findings to a wider population. Additionally the findings from the review emphasised the need for further high quality research in this area, which has been essential in influencing the overall aim of this thesis and in particular the empirical study.

Chapter Five

Finally, chapter five presented the results of the empirical study on the prevalence of mental disorders and unmet needs of offenders managed by the Lambeth Probation Service. This was the first study of psychiatric morbidity conducted in offenders on probation in Lambeth, a borough of London known for its ethnical diversity and the highest proportion of Black Afro-Caribbean people in the country, which was reflected in the study sample, and as a result in the findings that are mostly relevant to this particular geographical area, highlighting the limitation of this study with regards to generalisability. Despite the above, the study contributed to the general knowledge and understanding of psychiatric morbidity and social needs in the probation population of the geographical area known for high morbidity of health and social needs. The study findings have implication for the practices of Lambeth Probation Service and service provision of the local healthcare providers.

Theoretical and Practical Applications

The findings of this thesis are now discussed in relation to the existing literature and service provision for offenders managed in the community.

The literature reviewed for the purpose of this thesis highlighted high levels of psychomorbidity and social needs in offenders. It also suggested that offenders frequently experience significant problems gaining access to appropriate health and social care services, enhancing their exclusion and increasing their risk of future offending. This thesis aimed to establish the current mental and social needs in order to inform treatment provision that will reduce future offending behaviours that are health related or linked to the offenders' mental health problems, reduce rates of current mental health symptoms and prevent the onset of more serious mental health problems.

The case study together with the findings from literature review and the empirical research project supported previous research in the area that highlighted high prevalence rates of mental disorders and unmet needs. These findings are of concern and indicate the need for specialised assessment and intervention strategies for offenders in the community. Currently, probation assessments and protocols tend to focus on the identification of criminogenic factors known to be related to offending behaviour, which was partially reflected in the single case study, and aid the formulation of Mr X's risk of reoffending. Despite the significant developments in risk assessment, that considers the presence of mental disorders, and personality psychopathology as important indicator of risk, these are rarely considered by Probation Service. Although, offenders may have adequate documentation of their mental health history, this thesis indicate the need for a systematic, focused, and specialised assessment protocol of mental health needs upon entry into the CJS. The recommendation made by Lord Bradley (2009), resulted in creation of the Criminal Justice Liaison and Diversion services,

which provide the opportunity to identify offenders with mental health problems at the point of entry to the CJS, and refer them to appropriate services. Unfortunately, the current study indicates that a contrary environment exists. Probationer present with significant levels of unmet health and social needs and have difficulties in accessing appropriate services to have their needs met. This thesis therefore contributes to the general understanding of the mental health needs of offenders on probation, and may inform the design and planning of appropriate intervention strategies that could improve the health and social needs of this vulnerable group.

The empirical study showed that offenders in Lambeth experience poor mental health have a number of psychosocial needs which if not addressed increase their risk of reoffending. There is some evidence with regards to positive outcomes for offenders, these involved the accurate assessment of individual offender needs and providing tailored interventions to address them. It is evident form the finding of this thesis that offenders often present with multiple needs linked to their offending and addressing them in a holistic way is an important aspect of rehabilitation and the prevention of reoffending. Therefore, integrated case management and multiagency approach to working with offenders is a key to addressing the complex needs identified throughout this thesis and reducing reoffending.

It is hoped that the future research will have an impact on evidence-based practice and the development of appropriate interventions to address the needs of offenders on probation. The literature review also identified a significant lack of

evidence with regards to treatment options. This should be a priority for future research, both with regards to identification of available interventions and their effectiveness, including their potential impact on reoffending. These should be supported by clear policies and procedures, in order to ensure that, where possible, the identification of needs is conducted by suitable qualified staff with the use of reliable and valid diagnostic measures and that the health needs of probationers are met. Finally, this thesis highlighted the need for future research to be gender specific, as little is known about the mental health and needs of women offenders on probation. Overall the findings of this thesis supported the existing literature and added insight into the knowledge with regards to health and social needs of offenders on probation.

Conclusion

Despite a plethora of literature on offenders' mental health, this thesis was successful at identifying gaps in the knowledge and exploring these areas. Firstly, there had been research interest into the prevalence of mental disorders in offenders, however the majority of the studies have been conducted in prison settings and the available research with regards to mental health of offenders on probation was limited. The little research that exits in this area demonstrates mixed findings and has a number of methodological limitations, which makes a simple conclusion about the extent of mental health problems among this population difficult. This is not an easy population to study, which partially can explain the lack of more robust research, and account for some of their limitations. However, despite this several wider implications can be drawn from this thesis, which not only shows that probationers suffer from a variety of Axis I

disorders, likely personality disorders and substance misuse but also experience difficulties with regards social needs such as financial, housing difficulties and unemployment, which have been previously identified as significant risk factors for future reoffending.

Overall, this thesis suggests that offenders on probation experience significant mental health problems and social needs. Based on these findings, one can conclude that there is a need for the mental health and substance misuse needs of offenders to be given a higher priority in terms of service delivery, education and research. Information from this thesis can be used to provide an evidence base from which commissioners can work to ensure that appropriate services are provided to meet identified needs and that steps are taken to address some of the ongoing barriers to service access for offenders in the community. Furthermore a greater collaboration between probation and primary health service providers such as GPs is needed in order to improve access to specialised services within the community.

This thesis was exploratory in nature and therefore the subsequent findings are tentative, although promising. As such, they provide a significant indication for the relevance of a detailed structured diagnostics in offenders on probation. Additional studies with larger sample sizes will allow for analyses with increased statistical power and for more detailed examinations of offenders. As such, future research is recommended to develop both the validity and applicability of the findings. This could be achieved by repeating the research with a larger sample size, perhaps utilising multiple sites.

The understanding of the psychomorbidity has very important implications for epidemiology, health service planning and rates of future reoffending. The further offending and worsening mental health are interlinked. While the offending may have been a risk factor for mental health problems in the first place, it has long been understood that mental health problems in turn go on to be a risk factor for continued offending. As a result, an early detection may reduce the likelihood of reoffending. Although, not without is limitation this thesis met the proposed aims and objectives and has contributed to a better understanding of the psychiatric morbidity of offenders on probation.

Reference

Adler, L. A., Spencer, T., Farone, V. S., Kessler, R. C., Howes, J. M., & Biederman, J. (2006). Validity of pilot Adult ADHD Self-Report Scale (ASRS) to rate Adult ADHD symptoms. *Analysis of Clinical Psychiatry,* 18, 145-158.

Adler, R. H. (2009). Engel's biopsychosocial model is still relevant today. *Journal of Psychosomatic Research,* 67,607-611.

Allport, G.W. (1937). *Personality: a psychological interpretation*. Oxford, England: Holt.

Allport, G.W. (1961). *Pattern and growth in personality*. New York: Holt, Rhinehart & Winston.

American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (4th ed., text rev.). doi:10.1176/appi.books.9780890423349

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing.

Ames, D. R., Rose, P., & Anderson, C. P. (2003). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality,* 40, 440-450.

Andrews, D. A., Bonta, J., & Hoge, R. D. (1990). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behaviour,* 17, 19-52.

Andrews, D.A. (1995). 'The psychology of Criminal Conduct and Effective Treatment'. In J. McGuire (ed.) *what works: reducing offending?* Chichester: Wiley.

Andrews, D. & Bonta, J. (2003). *The Psychology of Criminal Conduct* (3rd edition). Cincinnati: Anderson.

Andrews, D. A., & Bonta, J. (2006). 'The recent past and near future of risk and/or need assessment'. *Crime & Delinquency*, 52(1), 7-27.

Andrews, D. A., Bonta, J., & Wormith, J. S. (2011). The risk-need-responsivity (rnr) model: Does adding the good lives model contribute to effective crime prevention? *Criminal Justice and Behaviour*, 38,735-755.

Antony, M. M., & Barlow, D. H. (2011). *Handbook of assessment and treatment planning for psychological disorders*. New York: The Guilford Press.

Arseneault L, Moffitt T.E., Caspi A, Taylor P.J., & Silva P, A. (2000). Mental Disorders and Violence in a Total Birth Cohort. *Archives of General Psychiatry*, 57, 979-986.

Ayearst, L. E., & Bagby, M. R. (2011). Evaluating the psychometric properties of psychological measures. In M. M. Antony and D. H. Barlow, (Eds). *Handbook of Assessment and Treatment Planning for Psychological Disorders*. (2nd edn). (pp. 21-61). Guilford Press: London, New York.

Bagby, R.M., Taylor, G.J., & Parker, J.D.A. (1994). The Twenty-Item Toronto Alexithymia Scale - II. Convergent, discriminant, and concurrent validity. *Journal of Psychosomatic Research*, 38, 33-40.

Bandura, A. (1973). Aggression: A social learning analysis. Engle-wood Cliffs, NJ: Prentice Hall.

Baker, K., Jones, S., Roberts, C. & Merrington, S. (2002). *Validity and reliability of ASSET: findings from the first two years of the use of ASSET*. Oxford: Probation Studies Unit, Centre for Criminological Research, University of Oxford.

Bartol, C. R., & Bartol, A. M. (2005) History of Forensic Psychology. In I. B. Weiner & A. K. Hess (Ed.), The Handbook of Forensic Psychology (pp.1-27). Hoboken, NJ: Wiley.

Birmingham, L. (2003). The mental health of prisoners. *Advances in Psychiatric Treatment,* 9, 191-201.

Blumstein, A., Cohen, J., Roth, J. & Visher, C. (1986). *Criminal careers and career "criminals",* Washington DC: National Academy Press.

Bonta, J., Law, M., & Hanson, K. (1998). 'The prediction of criminal and violent recidivism among mentally disordered offenders: A meta-analysis'. *Psychological Bulletin,* 123, 123-142.

Bradley, K. (2009). Review of people with mental health problems or learning disabilities in the criminal justice system. London: Ministry of Justice.

Brennan, P. A., Mednick, S. A., & Hodgins, S. (2000). Major mental disorder and criminal violence in a Danish birth cohort. *Archives of General Psychiatry*, 57, 494-500.

Brewin, C.R., Rose, S., Andrews, B., Green, J., Tata, P., & McEvedy, C. (2002). A brief screening instrument for posttraumatic stress disorder. *British Journal of Psychiatry*, 181, 158–162.

Brooker, C., Repper, J., Beverley, C., Ferriter, M., & Brewer, N. (2002). *Mental Health Service and Prisoners: A review*. Sheffield, UK: Mental Health Task Force.

Brooker, C., Syson-Nibbs, L., Barrett, P., & Fox, C. (2009). Community managed offenders' access to healthcare services: Report of a pilot study. *Probation Journal,* 56(1), 45–59.

Brooker, C., Sirdifield, C., Blizard, R., Maxwell-Harrison, D., Tetley, D., Moran, P., Pluck, G., Chafer, A., Denney, D. & Turner, M. (2011). *An Investigation into the Prevalence of Mental Disorder and Pattern of Health Service Access in a Probation Population.* Lincoln: University of Lincoln. Retrieved 12th September

2013,fromhttp://www.ohrn.nhs.uk/resource/policy/UniversityofLincolnMHProbation.pdf

Brooker, C., Sirdifield, C., Blizard, R., Denney, D., & Pluck, G. (2012). Probation and mental illness. *The Journal of Forensic Psychiatry & Psychology,* 23(4), 522-537.

Bukh, J. D., Bock, C., Vinberg, M., Gether, U., & Kessing, L. V. (2010). Clinical Utility of Standardised Assessment of Personality-Abbreviated Scale (SAPAS) among patients with first episode depression. *Journal of Affective Disorders,* 127, 199-202.

Carter, P. (2003). *Managing Offenders, Reducing Crime.* London: Strategy Unit.

Cattell, R.B. (1966). *The scientific analysis of personality*. Chicago: Aldine

Clark, L. A., Livesley, W. J., & Morey, L. (1997). Personality disorder assessment: the challenge of construct validity. *Journal of Personality Disorders,* 11, 205-231.

Cohen, A., Bishop, N., & Hegarty, M. (1999). Working in partnership with probation: The first two years of a mental health worker scheme in a probation service in Wandsworth. *Psychiatric Bulletin*, 23(7), 405–408.

Coid, J., Yang, M., Tyrer, P., Roberts, A., & Ullrich, S. (2006). Prevalence and correlates of personality disorder in Great Britain. *British Journal of Psychiatry,* 188, 423-431.

Collins, P., Ball, H., & Costello, A. (1993). The psychiatric probation clinic. *Psychiatric Bulletin,* 17(2), 145–146.

Copas, J. B., Ditchfield, J., & Marshall, P. (1994). *Development of a new risk predictor score.* Research Bulletin 36. London: Home Office.

Cornish, D., & Clarke, R. (1987). Understanding crime displacement: An application of rational choice theory. *Criminology*, 25(4), 933-947.

Costa, O. & McCrae, R. (1992). The five factor model of personality and its relevance to personality disorders. *Journal of Personality Disorders*, 6, 343-359.

Cottle, C., Lee, R., & Heilbrun, K. (2001). 'The prediction of criminal recidivism in juveniles'. *Criminal justice and behaviour*, 28(3), 367-394.

Crilly, J. F., Caine, E. D., Lamberti, S., Brown, T., & Friedman, B. (2009). Mental health services use and symptom prevalence in a cohort of adults on probation. *Psychiatric Services*, 60(4), 542–544.

Cronbach, L., & Meehl, P., E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52.

Dawson, P. (2007). *The National PPO evaluation – research to inform and guide practice*, Home Office Online Report 09/07, London: Home Office.

Department of Health (2007). A Strategy for Improving Health and Social Care Services for People Subject to the Criminal Justice System. London: Department of Health.

Department of Health (2008). Improving Access to Psychological Therapies. Implementation Plan: Equality Impact Assessment. London: Department of Health.

Department of Health/Ministry of Justice. (2011). *The Offender Personality Disorder Strategy*. Retrieved 14th September, 2012, from http://www.personalitydisorder.org.uk/criminal-justice/about-dspd-programme/

Ditton, P. (1999). Mental health and treatment of inmates and probationers. Washington, DC: Bureau of Justice Statistics.

Donnelly, M., & McGilloway, S. (2004). Mental illness in the UK criminal justice system: A police liaison scheme for Mentally Disordered Offenders in Belfast. *Journal of Mental Health*, 13(3), 263-275.

Draine, J., & Solomon, P. (2000). Anxiety and depression symptoms and quality of life among clients of a psychiatric probation and parole service. *Psychiatric Rehabilitation Journal*, 24(1), 38–45.

Ekselsius, L., Lindstrom, E., Von Konorring, L., Bodlund, O., & Kullgren, G. (1994). SCID II interviews and the SCID II screen questionnaire as diagnostic tool for personality disorders in DSM-III-R. *Acta Psychiatrica Scandinavica*. 90, 120-123.

Engel, G. (1977). The need for a new medical model: A challenge for biomedicine. Science, 196: 129-136.

Engel, G. (1980). The clinical application of the biopsychosocial model. *American Journal of Psychiatry*, 137: 535-544.

Eysenck, H. J. (1947). *Dimensions of personality*. London: Routledge & Kegan Paul

Eysenck, H. J., & Eysenck, S. G. B. (1976). *Psychoticism as a dimension of personality.* London: Hodder and Stoughton.

Eysenck, H.J. (1977). *Crime and personality* (3rd edn). London: Paladin.

Eysenck, H.J. & Gudjonsson, G.H. (1989). *The causes and cures of criminality*. New York: Plenum Press.

Farrington, D.P., & West, D.J. (1990). The Cambridge Study in delinquent development: a long-term follow up of 411 London males. In G, Kaiser & H.J Kerner (Eds.), *Criminality, Personality, Behaviour, Life History*. Heidelberg: Springer-Verlag.

Farrington, D. P. (1989). *Cambridge Study in delinquent development: long-term follow-up.* Cambridge: University of Cambridge Institute of Criminology.

Farrington, D. P. (2002). 'Developmental criminology and risk-focussed prevention'. In M. Maguire, R. Morgan and R. Reiner (eds.) *The Oxford Handbook of Criminology*. Oxford: Clarendon Press.

Farrington, D. P., Coid, J. & Murray, J. (2009). Family factors in the intergratational transmission of offending. *Criminal Behaviour and Mental Health*, 19, 109-124.

Farrington, D. P. (2003). Key results from the first 40 years of the Cambridge Study in Delinquent Development. In Thornberry T., P. & Krohn, M.D. (Eds.) *Taking Stock of Delinquency: An Overview of Findings from Contemporary Longitudinal Studies.* (pp. 137–183). New York: Kluwer/Plenum.

Fazel, S., Hope, T., O'Donnell, I., & Jacoby, R. (2001). Hidden psychiatric morbidity in elderly prisoners. *British Journal of Psychiatry*, 179, 535–539.

Fazel, S., & Grann, M. (2004). Psychiatric morbidity among homicide offenders: a Swedish population study. *American Journal of Psychiatry*, 161, 2129-31.

Fazel, S., & Grann, M. (2006). The population impact of severe mental illness on violent crime. *American Journal of Psychiatry*, 163, 1397-1403.

Fazel, S., & Lubbe, S. (2005). Prevalence and characteristics of mental disorders in jails and prison. *Current opinion in Psychiatry*, 18(5), 550-554.

Field, A. (2000). *Discovering statistics using SPSS (2nd Edition).* Sage: London

First, M. B., Gibbon, M., & Spitzer, R. L. (1997). *User's guide for the structured clinical interview for DSM-IV axis II personality disorders.* Arlington, VA, American Psychiatric Press, Inc.

Freud, S. (1961). The Complete Works of Sigmund Freud (Vol. 19). London: Hogarth.

Garb, H. N., Lilienfeld, S., & Fowler, K. A. (2008). Psychological assessment and clinical judgment. Psychopathology: Foundations for a contemporary understanding. In J. E. Maddux & B. A. Winstead. New York, Routledge.

Gary-Little, B., Williams, S. L., & Hancock, T. D. (1997). An item response theory analysis of the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin,* 23, 443-451.

Geelan, S., Griffin, N., & Briscoe, J. (1998). A profile of residents at Elliot House, the first approved bail and probation hostel specifically for mentally disordered offenders. *Health Trends*, 30(4), 102–105.

Geelan, S., Griffin, N., Briscoe, J., & Haque, S. (2000). A bail and probation hostel for mentally disordered defendants. *The Journal of Forensic Psychiatry*, 11(1), 93–104.

Geelan, S., Campbell, M. J., & Bartlett, A. (2000). What happens afterwards? A follow-up study of those diverted from custody to hospital in the first two and a half years of a Metropolitan diversion scheme. *Medicine Science and the Law*, 41(2), 122-128.

Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: What works! *Criminology,* 31, 401-433.

Germans, S., Van Heck., G. L., Moran, P., & Hodiamont, P. G. (2008). The self report Standardised Assessment of Personality Disorder Abbreviated Scale: Preliminary Results of a brief screening test for personality disorders. *Personality and Mental Health*. 2 (2), 70-76.

Ginsberg Y, Hirvikoski T, Lindefors N (2010) Attention Deficit Hyperactivity Disorder (ADHD) among longer-term prison inmates is a prevalent, persistent and disabling disorder. *BMC Psychiatry*, 10: 112.

Girard, L. & Wormith, J. S. (2004). 'The predictive validity of the Level of Service Inventory – Ontario Revision on general and violent recidivism among various offender groups'. *Criminal Justice and Behaviour,* 31, 150-181.

Goldberg, L.R. (1990). An alternative "description of personality": The Big Five factor structure. *Journal of Personality and Social Psychology, 59,* 1216-1229. doi: 10.1037/0022-3514.59.6.1216

Goodwin, L. D., & Goodwin, W. L. (1999). Research design and methodology section: Measurement myths and misconceptions. *Psychology Quarterly,* 14, 408-427.

Graham, J., & Bowling, B. (1995) *Young People and Crime.* London: Home Office.

Grant, B. F., Stinson, F. S., Dawson, D. A., Chou, P. S., June Ruan, W., & Pickering, R. (2004). Co-occurrence of 12-month alcohol and drug use disorders and personality disorders in the United States. Results from the National Epidemiologic Survey of Alcohol and Related Conditions. *Archives of General Psychiatry***,** 61, 361-368.

Gray, N. S., Hill, C., McGleish, A., Timmons, D., MacCulloch, M. J. & Snowden, R. J. (2003). Prediction of violence and self harm in mentally disordered offenders: A prospective study of HCR-20, PCL-R, and psychiatric symptomatology. *Journal of Consulting and Clinical Psychology*, 71, 443-451.

Groth-Marnat, G. (2005). *Handbook of Psychological Assessment (8thedn).* Wiley New Jersey

Hare, R. D., McPherson, L. M., & Forth, A. E. (1993). 'Male psychopaths and their criminal careers'. *Journal of Consulting and Clinical Psychology,* 56, 710-714.

Hare, R., Clark, D., Grann, M., & Thornton, D. (2000). Psychopathy and the predictive validity of the PCL-R: an international perspective. *Behavioural Sciences and Law,* 18(5), 623-645.

Harper, G., Man, L., Taylor, S., & Niven, S. (2005). 'Factors associated with offending'. In G. Harper and C. Chitty (eds.) *The impact of corrections on reoffending: a review of 'what works'.* Home Office Research Study 291. London: Home Office.

Hart, J. L., O'Toole, S. K., Price-Sharps, J. L., & Shaffer, T. W. (2007). The risk and protective factors of violent juvenile offending: An examination of gender differences. *Youth Violence and Juvenile Justice,* 5, 367-384.

Harris, E. C. & Barraclough, B. (1997). Suicide as an outcome for mental disorders. A meta-analysis. *British Journal of Psychiatry*, 170, 205-228.

Hasin, D., Trautman, K., Miele, G., Samet, S., Smith, M. & Endicott, J. (1996). Psychiatric Research Interview for Substance and Mental Disorders (PRISM): Reliability for substance abusers. *American Journal of Psychiatry, 153,* 1195-1201.

Hatfield, B., Ryan, T., Pickering, L., Burroughs, H., & Crofts, R. (2004). The mental health of residents of approved premises in the Greater Manchester probation area: A cohort study. *Probation Journal*, 51(2), 101–115.

Haynes, S. N., Richard, D. C. S., & Kubany, E. S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological Assessment,* 7, 238-247.

Hek, G., Condon, L., & Harris, F. (2005). *Primary care nursing in prisons: a*

systematic overview of policy and research literature. Retrieved 24 March 2013 from, http://www.phrn.nhs.uk/ workstreams/primarycare/

Hernandez-Avila, C. A., Burleson, J. A., Poling, J., Tennen, H., Rounsaville, B.J., & Kranzler, H. R. (2000). Personality and substance use disorders as predictors of criminality. *Comprehensive Psychiatry*, 41, 276-283.

Hesse, M., & Moran, P. (2010). Screening for personality disorder with the standardise assessment for personality disorder abbreviated scale: further evidence of concurrent validity. *BMC Psychiatry*. 10, 1-6.

Hesse, M., Rasmussen, J., & Pedersen, M. K. (2008). Standardised Assessment of Personality - A study of validity and reliability in substance abusers. *BMC Psychiatry*, 8, 7.

Higgins, JPT, Green S (eds). 2006. Cochrane Handbook for Systematic Reviews of Interventions Version 5.0.1. The Cochrane Collaboration. Available: http://www.cochrane-handbook.org

Hiscoke, U. L., Langstrom, N., Ottosson, H., & Grann, M. (2003). Self reported personality traits and disorders (DSM-IV) and risk of criminal recidivism. *Journal of Personality Disorders*, 17(4), 293-305.

HM Government. Cross-Government Strategy: Mental Health Division. (2009). New horizons: A shared vision for mental health. London: Department of Health.

HM Government & Department of Health. (2011). No health without mental health: A cross-government mental health outcomes strategy for people of all ages. London: Department of Health.

HM Government (2006). *A Five Year Strategy for Protecting the Public and Reducing Reoffending*. London: The Stationery Office.

HM Government (2007). *PSA Delivery Agreement 16: Increase the proportion of socially excluded adults in settled accommodation and employment, education or training,* London: Home Office.

HM Inspectorate of Prisons (2007). *The mental health of prisoners: A thematic review of the care and support of prisoners with mental health needs,* London: HM Inspectorate of Prisons.

Hodgins S. (1992). Mental disorder, intellectual deficiency and crime: evidence from a birth cohort. Archives of General Psychiatry, 49: 476-483.

Hoge, R., Andrews, D. & Leschied, A. (2006). An investigation of risk and protective factors in a sample of youthful offenders. *Journal of Child Psychology and Psychiatry*, 37, 419-424.

Hollin, C. R. & Palmer, E. J. (2006a). 'The Level of Service Inventory – Revised profile of English prisoners: risk and reconviction analysis'. *Criminal Justice and Behaviour*, 33, 347- 366.

Hollin, C. R. & Palmer, E. J. (2006b). 'Criminogenic need and women offenders: A critique of the literature, *Legal and Criminological Psychology*, 11: 179-195.

Home Office. (2004a). *Joint inspection report into persistent and prolific offenders.* London: Author.

Home Office. (2004b). *Prolific and other priority offender strategy—Initial guidance: Catch and convict framework.* July 2004. London: Author.

Home Office. (2004c). *Prolific and other priority offender strategy—Supplementary guidance: Rehabilitate and resettle framework,* September 2004. London: Author.

Home Office. (2004f). *Reducing reoffending: National action plan—Reference document, July 2004.* London: Author.

Home Office. (2005). *Prolific and other priority offenders—Headline measures, February 2005.*

Huckle, P., Travier, T., & Scarf, S. (1996). Psychiatric clinics in probation offices in South Wales. *Psychiatric Bulletin*, 20(4), 205–206.

Huebner, B. M., Varano, S. P. & Bynum, T. S. (2007). 'Gangs, guns, and drugs: Recidivism among serious young offenders'. *Criminology and Public Policy,* 6, 187-222.

Hunsley, J., & Mash, E. J. (2010). The role of assessment in evidence based practice. In D. H. B. M.M Anthony, *Handbook of assessment and treatment planning for psychological disorders* (pp. 3-21). New York: The Guilford Press.

Hyler, S. E., Skodol, A. E., Oldham, J. M., Kellman, H. D., & Doidge, N. (1992).Validity of the Personality Diagnostic Questionnaire-Revised: A replication in an outpatient sample. *Comprehensive Psychiatry,* 33, 73-77.

John, O. P., & Benet-Martinez, V. (2000). Measurement: Reliability, construct validation, and scale In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 339-369). New York: Cambridge University Press.

John, O. P., & Soto, C. J. (2007). The importance of being valid: Reliability and the process of construct validation. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of Research Methods in Personality Psychology* (pp. 461-494). New York: Cambridge University Press.

Johnson, J.G., Cohen, P., Smailes, E., Kasen, S., Oldham, J.M., Skodol, A.E., & Brook, J.S. (2000). Adolescent personality disorders associated with violence and criminal behaviour during adolescence and early adulthood. *American Journal of Psychiatry,* 157, 1406-1412.

Kaplan, R. M., & Saccuzzo, D. P. (2001). *Psychological testing: principles, applications, and issues (5th edn.)*. Belmount, CA: Wadsworth, Thomson learning.

Keene, J., Janacek, J., & Howell, D. (2003). Mental health patients in criminal justice populations: Needs, treatment and criminal behaviour. *Criminal Behaviour and Mental Health*, 13(3), 168–178.

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., & Gfroerer, J. C. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry*, 60, 184-189.

Kline, P. (1986). A Handbook of Test Construction, Methuen, London.

Kohlberg, L. (1973). The Claim to Moral Adequacy of a Highest Stage of Moral Judgment. *Journal of Philosophy*, 70(18), 630–646.

Lance, C. E., Butts, M.M., & Michels, L.C. (2006). The sources of four commonly reported cut-off criteria: What did they really say? *Organisational Research Methods*, 9, 202-220.

Laub, J.H., Nagin, D.S. & Sampson, R.J. (1998). 'Trajectories of change in criminal offending: Good marriages and the desistance process'. *American Sociological Review*, 63, 225-238.

Lenzenweger, M. F., Loranger, A. W., Korfine, L. & Neff, C. (1997). Detecting personality disorders in a nonclinical population. Application of a 2-stage procedure for case identification. *Archives of General Psychiatry*, 54, 345-351.

Lin, L. I. (1989). A concordance correlation coefficient to evaluate reproducibility. *Biometrics*, 45, 255–268.

Lipsey, M. W. (1995). 'What do we learn from 400 research studies on the effectiveness of treatment with juvenile delinquents?' In McGuire, J. (ed.) *What*

Works: Reducing Reoffending – Guidelines from Research and Practice. Chichester: John Wiley & Sons.

Listwan, S. J., Colvin, M., Hanley, D., & Flannery, D. (2010). Victimization, social support, and psychological well-being. A study of recently released prisoners. *Criminal Justice and Behaviour*, 37(10), 1140-1159.

Listwan, S. J., Piquero, N. L., & Van Voorhis, P. (2010). Recidivism among a white collar smple: Does personality matter? Australian and New Zealand Journal of Criminology, 43(1), 156-174.

Little, T. & Goggin, C. (1996). 'A meta-analysis of the predictors of adult recidivism: What works?' *Criminology,* 34(4), 575-608.

Livesley, W. J. (1998). Suggestions for a framework for an empirical based classification of personality disorder. *Canadian Journal of Psychiatry*, 43, 757-766.

Lodewijks, H., de Ruiter, C., & Doreleijers, T. (2010). The impact of protective factors in desistance from violent reoffending: A study in three samples of adolescent offenders. *Journal of Interpersonal Violence*, 25, 568-587.

Lombroso, C. (1976). Crime: Its causes and remedies. In R. Loeber and D. Farrington (Eds.). Serious and Violent Juvenile Offenders: Risk factors and successful interventions (p. 86-105). Thousand Oaks, CA: Sage

Lurigio, A. J., Cho, Y. I., Swartz, J.A., Johnson, T.P., Graf, I., & Pickup, L. (2003). Standardized assessment of substance-related, other psychiatric, and comorbid disorders among probationers. *International Journal of Offender Therapy and Comparative Criminology*, 47, 630–652.

Maden, A., Taylor, C., Brooke, D., & Gunn, J. (1996). Mental disorder in remand prisoners. London: Home Office Research and Planning Unit.

Mann, A.H., Jenkins, R., & Cutting, J.C. (1981). The development and use of a standardized assessment of abnormal personality. *Psychological Medicine, 11*, 839-847. doi: org/10.1017/S0033291700041337

Mann, A. H., Raven, P., Pilgrim, J., Khanna, S., Velayudham, A. & Suresh, K. P. (1999). An assessment of the standardised assessment of personality as a screening measurement for the international personality examination: A comparison of informant and patient assessment for personality. *Psychological Medicine*, 29, 985-989.

May, C. (1999). *Explaining reconviction following a community sentence: the role of social factors.* Home Office Research Study 192. London: Home Office.

McGuire, J. (1995). *What Works: Reducing Reoffending Guidelines from Research and Practice.* Chichester: Wiley.

McGuire, J., Kinderman, P. & Hughes, C. (2002). *Offending Behaviour Programmes.* London: YJB.

McKeon, J. P., Roa, B., & Mann, A. (1984). Life events and personality traits in obsessive-compulsiveneurosis. *British Journal of Psychiatry*, 144, 185–189.

McMurran, M. & Ward, T. (2010). Treatment readiness, treatment engagement and behaviour change. Criminal Behaviour and Mental Health, 20, 75-85.

McPherson, T. L., & Hersch, R. K. (2000). Brief substance use screening instruments for primary care settings. *Journal of Substance Abuse Treatment*. 18, 193-202.

Millie, A. & Erol, R. (2006). Rehabilitation and resettlement: A study of prolific offender case management in Birmingham, United Kingdom. *International Journal of Offender Therapy and Comparative Criminology,* 50(6): 691–710.

Ministry of Justice (2008) Working in Partnership to Reduce Reoffending and

Make Communities Safer: A Consultation. London: Ministry of Justice.

Ministry of Justice (2009) Prison Population and accommodation briefing for 12th March 2009. National Offender Management Service.

Ministry of Justice (2010) Offender Management Caseload Statistics 2009. London: Ministry of Justice.

Ministry of Justice (2010a) *Compendium of reoffending statistics and analysis.* Ministry of Justice Statistics Bulletin. London: Ministry of Justice.

Ministry of Justice (2010b) Breaking the Cycle: Effective Punishment, Rehabilitation and Sentencing of Offenders. London: Ministry of Justice.

Ministry of Justice (undated) The National Offender Management Service Drug Strategy 2008-2011, London; Ministry of Justice.

Ministry of Justice (2012) Criminal Statistic Annual Report May 2012. National Offender Management Service.

Ministry of Justice (2012a) Prison Population Bulletin – Weekly 2 November 2012. From: http://www.justice.gov.uk/statistics/prisonsand- probation/prison-population-figures

Ministry of Justice (2012b) Offender Management Statistics Quarterly. January to March 2012. London: Ministry of Justice.

Minoudis, P., Shaw, J., Bannerman, A., & Craissati, J. (2011). Identifying personality disturbance in a London probation sample. *Probation Journal*, 59(1), 23-38.

Monahan, J., & Steadman, H. (1983). Crime and mental disorders: An epidemiological approach. In N. Morris & M. Tony Eds., Crime and justice: An annual review of research pp. 145-189. Chicago: University of Chicago Press.

Monahan, J., & Steadman, H. (Eds.). (1994). Violence and mental disorder: Developments in risk assessment. Chicago: University of Chicago Press.

Monahan J., Steadman H.J., Silver E., Appelbaum P.S., Robbins P.C., Mulvey E.P., (2001). Rethinking risk assessment: The Macarthur study of mental disorder and violence. New York: Oxford University Press.

Moran, P., M. Leese, T. Lee, P. Walters, G. Thornicroft & A. Mann (2003). Standardised Assessment of Personality-Abbreviated Scale (SAPAS): Preliminary validation of a brief screen for personality disorder. *The British Journal of Psychiatry*, 183, 228-232.

Morey, L. C. (2007). *Personality Assessment Inventory: Professional manual (2nd edition)*. Lutz, FL: Psychological Assessment Resources.

Mullen, P., E. (1984). Mental Disorder and Dangerousness. Australian and New Zealand Journal of Psychiatry, 18: 8-19.

Mullen, P., E. (1997). A reassessment of the link between mental disorder and violent behaviour, and its implications for clinical practices. *Australian and New Zealand Journal of Psychiatry*, 31, 3-11.

Mulder, R., T. (2002). Alcoholism and personality. *Australian and New Zealand Journal of Psychiatry*, 36, 44-52.

Nadkarni, R., Chipchase, B., & Fraser, K. (2000). Partnership with probation hostels: A step forward in community psychiatry. *Psychiatric Bulletin*, 24, 222–224.

National Audit Office (2008). *The National Probation Service: the supervision of community orders in England and Wales*, London: The Stationery Office.

National Offender Management Service (2004). *National Reducing Reoffending Delivery Plan.* London: Ministry of Justice.

Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures: Issues and applications.* Thousand Oaks, CA, Sage.

Niven, S. & Olagundoye, J. (2002). *Jobs and homes – a survey of prisoners nearing release.* Home Office Findings 173. London: Home Office.

Niven, S. & Stewart, D. (2005). *Resettlement outcomes on release from prison in 2003.* Home Office Findings 248. London: Home Office.

Nunnally, J. C. (1978). *Psychometric theory*. (2nd edn.) New York: McGraw-Hill.

Nuttall, C.P. (1996). *A note on first and second prison sentences with special reference to parole.* Home Office Research Unit. London: Home Office.

Oddone-Paolucci, E., Violato, C. & Schofield, M.A. (2000). *A review of marital and family variables as they relate to adult criminal recidivism.* National Foundation for Family Research and Education.

Overall, J., & Gorman, D. (1962). The Brief Psychiatric Rating Scale. *Psychological Reports*, 10, 799–812.

Pallone, N. J., & Hennessy, J. J. (1996). *Tinder-box criminal aggression: Neurology, demography, and phenomenology*. New Brunswick, NJ: Transaction Publishers.

Petrila, J. (2005). Diversion from the Criminal Justice System. *Behavioural Sciences and the Law*, 23, 161-162.

Pilgrim, J., Mellers, J. D., & Boothby, H. (1993) Inter-rater and temporal reliability of the Standardised Assessment of Personality and the influence of

informant characteristics. *Psychological Medicine*, 23, 779– 786.

Pines, J. M., & Everett. W. W. (2008). *Evidence based emergency care: diagnostic testing and clinical decision rules.* Chichester: John Wiley & Sons.

Platt, L. (2007). *Poverty and ethnicity in the UK*. Policy Press, Bristol, UK.

Pluck, G., Sirdifield, C., Brooker, C., & Moran, P. (2012). Screening for personality disorders in probationers: validation of the Standardised Assessment of Personality-Abbreviated Scale (SAPAS). *Personality and Mental Health***,** 6, 61-68.

Plugge, E., Douglas, E., & Fitzpatrick, R. (2006). The Health of Women in Prison: Study Findings. Oxford: Department of Public Health, University of Oxford.

Pokorny, A., MIiller, B., & Kaplan, H. (1972). The brief MAST: A shortened version of the Michigan Alcoholism Screening Test.

Ragatz, L. L., Fremouw, W., Baker, E. (2012). The psychological profile of white-collar offenders: Demographics, criminal thinking, psychopathic traits and psychopathology. *Criminal Justice and Behaviour*, 39(7), 978-997.

Raynor, P., Kynch, J., Roberts, C. & Merrington, S. (2000). *Risk and need assessment in probation services: an evaluation.* Home Office Research Study 211. London: Home Office.

Rendu, A. Moran, P. Patel, A. Knapp, M. & Mann, A. (2002). Economic impact of personality disorders in UK primary care attenders. *British Journal of Psychiatry*, 181, 62-66.

Richardson, T., McInnes, R., & Davis, S. (2003). Probation with Conditions of Psychiatric Treatment: A descriptive study. *Medicine Science and the Law*, 43(1), 80-84.

Rogers, A., & Pilgrim, D. (2003). Mental health and inequality. Basingstoke: Palgrave/Macmillan.

Roskes, E., & Feldman, R. (1999). A collaborative community-based treatment program for offenders with mental illness. *Psychiatric Services*, 50(12), 1614–1619.

Rutter, M., Giller, H. & Hagell, A. (1998). *Antisocial behaviour by young people.* Cambridge: Cambridge University Press.

Quinsey, V. L., Harris, G. T., Rice, M. E., & Cormier, C. A. (1998). *Violent Offenders: Appraising and Managing Risk*. Washington DC: American Psychological Associations.

Sattar, G. (2001). *Rates and Causes of Death among Prisoners and Offenders under Community Supervision*. Home Office Research Study 231. London: Home Office.

Salekin, R. T., Debus, S. A., & Barker, E. D. (2010). Adolescent psychopathy and the five factor model: Domain and facet analysis. *Journal of Psychopathology and Behavioural Assessment*, 32(4), 501-514.

Salekin, R. T., Leistico, A. M. R., Trobst, K. K., Schrum, C. L., & Lochman, J. E. (2005). Adolescent psychopathy and personality theory – the interpersonal circumplex: Expanding evidence of a nomological net. *Journal of Abnormal Child Psychology*, 33(4), 445-460.

Sameroff, A., Bartko, W., Baldwin, A., Baldwin, C. & Seifer, R. (1998).Family and the social influences on the development of child competence. In M. Lewis & C. Feiring (Eds.) Families, Risk and Competence (pp.161-185). Lawerence Earlbaum Associates Inc.

Schaeffer, K. D., & Hennessy, J. J. (2001). Intrinsic and environmental vulnerabilities among executed capital offenders: Revising the biopsychosocial model of criminal aggression. *Journal of Offender Rehabilitation*, 34(2), 1-19.

Schmeelk, K. M., Sylvers, P. & Lilienfeld, S. O. (2008). Trait correlates of relational aggression in a nonclinical sample: DSM-IV personality disorder and psychopathy. *Journal of Personality Disorders*, 22, 269-283.

Scott, D. A., McGilloway, S., Dempster, M., Browne, F., & Donnelly, M. (2013). Effectiveness of Criminal Justice Liaison and Diversion Services for Offenders With Mental Disorders: A Review. *Psychiatric Services*, 64(9), 843-849.

Selzer, M. L., (1971). The Michigan alcoholism screening test: The quest for a new diagnostic instrument. American Journal of Psychiatry, 127, 1653-1658.

Sheehan, D.V., Lecrubier, Y., Sheehan, K.H., Janavs, J., Keskiner, A., Schinka, J., Knapp, E., Sheehan, M.F., & Dunbar, G.C. (1997). The validity of the Mini International Neuropsychiatric Interview (MINI) according to the SCID-P and its reliability. *European Psychiatry*: 12:232–241.

Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavas, J., Weiller, E., Hergueta, T., Baker, R., Dunbar, G. C. et al. (1998). The Mini-International Interview (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry*, 59 (S20), 22-33.

Singleton, N., Meltzer, H., Gatward, R., Coid, J., & Deasy, D. (1998). *Psychiatric morbidity among prisoners in England and Wales*. London: HM Stationery Office.

Singleton, N., Bumpstead, R., O'Brien, M., Lee, A., & Meltzer, H. (2000). Psychiatric morbidity among adults living in private households. London: The Stationery Office.

Sirdifield, C., Gojkovic, D., Brooker, C., & Ferriter, M. (2009). A systematic review of research on the epidemiology of mental health disorders in prison populations: A summary of findings. *Journal of Forensic Psychiatry & Psychology*, 20(1), 78–101.

Skeem, L. L., & Louden, J. E. (2006). Toward evidence-based practice for probationers and parolees mandated to mental health treatment. *Psychiatric Services*, 57(3), 333-342.

Skinner, H., A. (1989). The Drug Abuse Screening Test. *Addictive Behaviours*, 7, 363-371.

Silver, E., Felson, R, B., & Vanseltine, M. (2008). The relationship between mental health problems and violence among criminal offenders. *Criminal Justice and Behaviour*, 35(4), 405-426.

Social Exclusion Unit (2002). *Reducing reoffending by ex-prisoners.* London: Office of the Deputy Prime Minister.

Solomon, P., Draine, J., & Marcus, S. (2002). Predicting incarceration of clients of a psychiatric probation and parole service. *Psychiatric Services*, 53(1), 50–56.

Spicer, K. & Glicksman, A. (2004). *Adult reconviction: results from the 2001 cohort.* Home Office Online Report 59/04. London: Home Office.

SPSS. (2006). SPSS 21 (Version 21). Chicago, IL: SPSS Inc

Steadmand, H. J., Mulvey, E. P., Monahan, J., Robbinson, P. C., Appelbaum, P. S., Grisso, T., Roth, L. and Silver, E. (1998). Violence by people discharged from acute psychiatric inpatient facilities and by others in the same neighborhoods. *Archive of General Psychiatry*, 55(5), 393-401.

Stewart, D. (2008). *The Problems and Needs of Newly Sentenced Prisoners: Results from a National Survey.* London: Ministry of Justice.

Thomas, S., Harty, M. A., Parrott, J., McCrone, P., Slade, M,, Thornicroft, G. (2008) CANFOR: *Camberwell Assessment of Need – Forensic Version. A Needs Assessment for Forensic Mental Health Service Users.* London: Gaskell.

Tiihonen, J., Isohanni, M., Rasanen, P, Koiranen, M., & Moring, J. (1997). Specific major mental disorders and criminality: A 26-year prospective study of the 1966 Northern Finland birth cohort. *American Journal of Psychiatry*, 154, 840-845.

Torrens, M., Serrano, D., Astals, M., Perez-Dominguez, G., & Martin-Santos, R. (2004). Diagnosing comorbid psychiatric disorders in substance abusers: validity of the Spanish versions of the Psychiatric Research Interview for Substance and Mental Disorders and the Structured Clinical Interview for DSM-IV. *American Journal of Psychiatry*, 161, 1231-1237.

Ullrich, S., Yang, M. & Coid, J. (2010). Dangerous and severe personality disorder: An investigation of the construct. International Journal of Law and Psychiatry, 33(2), 84-88.

Vaughan, P. J., Pullen, N., & Kelly, M. (2000). Service for mentally disordered offenders in community psychiatry teams. *The Journal of Forensic Psychiatry*, 11(3), 571-586.

Von Eye, A. & Mun, E., Y. (2005). *Analysing rater agreement: Manifest variable methods*. Mahwah: New Jersey.

Wasserman, J. D. & Bracken, B. A. (2003). Psychometric characteristics of assessment procedures. In J. R. Graham & J. A. Naglieri, *Handbook of psychology* (pp. 43-66). Wiley: New Jersey.

Webster, C. D., Douglas, K. S., Eaves, D., & Hart, S. D. (1997). HCR-20: Assessing the risk of violence— Version 2. Burnaby, British Columbia: Simon Fraser University and Forensic Psychiatric Service Commission of British Columbia.

Webster, C., MacDonald, R. & Simpson, M. (2006). 'Predicting criminality? Risk factors, neighbourhood influence and desistence'. *Youth Justice,* 6(1) 7-22.

Widiger, T. A., & Sanderson, C. J. (1995). Towards a dimensional model of personality disorders in DSM-IV and DSM-V. In W.J. Livesley (Ed). *The DSM-IV Personality Disorders* (pp. 433-458). New York: Guildford Press.

Widiger, T. A., & Simonsen, E. (2005). Alternative dimensional models of personality disorder: finding a common ground. *Journal of Personality Disorder,* 19(2), 110-130.

Wilson, S. (2004) The principle of equivalence and the future of mental health care in prisons. *British Journal of Psychiatry*, 184, 5-7.

World Health Organization (1992). *The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines*. Geneva.

Wolfgang, M.E., Figlio, R.M. & Sellin, T. (1972). *Delinquency in a Birth Cohort.* Chicago: University of Chicago Press.

Wormith, J. S., Olver, M. E., Stevenson, H. E., & Girard, L. (2007). The Long Term Prediction of Offender Recidivism using Diagnostic, Personality, and Risk/Need Approaches to Offender Assessment. *Psychological Services, 4*, 287 - 305.

Wormith, J. S., & McKeague, F. (1996). A mental health survey of community correctional clients in Canada. *Criminal Behaviour and Mental Health*, 6(1), 49–72.

Wright, K.N. and Wright, K.E. (1992). 'Does Getting Married Reduce the Likelihood of Criminality? A Review of the Literature', *Federal Probation,* Vol. 61, No. 3, 50-56.

Zanarini, M. C., Frankenburg, F. R., Chauncey, D. L., & Gunderson, J. G. (1987). The diagnostic interview for personality disorders. Interrater and test-retest reliability. *Comprehensive Psychiatry*, 28(6), 467-480.

Zimmerman, M. (1994). Diagnosing personality disorders: A review of issues and research methods. *Archives of General Psychiatry*, 51, 225-245.

Zimmerman, M. Rothschild. L. & Chelminski, I. (2005). The prevalence of DSM-IV personality disorders in psychiatric outpatients. *American Journal of Psychiatry*, 162, 1911-1918.

Zamble, E., & Quinsey, V.L. (1999). *The criminal recidivism process*. Cambridge: Cambridge University Press.

APPENDIX 1

Consent Form

The University of Nottingham
UNITED KINGDOM · CHINA · MALAYSIA

The University of Nottingham

Doctorate in Forensic Psychology (D.Foren.Psych)

Client Consent to course work Assignments

I understand that Aleksandra Kornalewska – Zaremba, 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 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 support offered to me.

Name of Client:

Client's signature:

Date: 9.3.13

Trainee: ALEKSANDRA K ZAREMBA

Trainee's signature: A.K. Zaremba

Date: 9.03.2013

APPENDIX 2

Session Plan

Date	Aim of Session
Session 1 6.02.13	To discuss referral and explain the nature of the assessment with Mr X
7.02.13	Begin reviewing Mr X's records
Session 2 13.02.13	Engagement, clinical interview (personal history) Part 1
14.02.13	Supervision with Dr F re Mr X & development of assessment plan
Session 3 20.02.13	Clinical interview Part 2, including forensic history, administration of the SAPAS
21.02.13	Supervision with Dr F re Mr X results of the SAPAS – PAI to be included in the assessment
Session 4 27.02.13	PAI & ASRS assessment
28.02.13	HCR -20
Session 5 6.03.13	Drug & Alcohol history, DAST & MAST assessment
Session 6 13.03.13	Exploring offending behaviour
14.03.13	HCR-20
Session 7 20.03.13	Need assessment CAN-FOR-S
Session 8 27.03.13	To discuss risk factors and develop management plan.
Session 9 10.04.13	RP plan, Closing session
11-12.04.13	Writing up report

APPENDIX 3

Assessments Used & Summary of test scores

The Structured Assessment of Personality Abbreviated Scale (SAPAS)

The SAPAS is a brief eight-item screening measure for personality disorder. Its purpose is to produce a dimensional score that represents the likelihood that a person has a personality disorder in general, rather than to screen for particular types of personality disorders or patterns. Each of the questions can be scored 0 (absent) or 1 (present), and the scores on the eight items are added together to produce a total score, ranging from 0 to 8. A score of 3 or more was established to be both sensitive and specific as a measure of the presence of a personality disorder according to the Structured Clinical Interview for the DSM-IV, Axis II (Moran et al., 2003).

Personality Assessment Inventory (PAI)

The PAI is a self-administered objective inventory of adult personality and psychopathology. It provides information relevant for clinical diagnosis, treatment planning, and screening for psychopathology. The 344 PAI items constitute 22 non overlapping scales covering the constructs most relevant to a broad-based assessment of mental disorders: four validity scales, 11 clinical scales, five treatment scales, and two interpersonal scales.

Mr X's Full Scale PAI Profile

VALIDITY SCALES			
Inconsistency	55	Negative Impression	70
Infrequency	51	Positive Impression	31
CLINICAL SCALES			
Somatic	52	Paranoia	63
Conversion	60	Hypervigilance	75
Somastisation	51	Persecution	48
Health Concerns	45	Resentment	61
Anxiety	72	Schizophrenia	62
Cognitive	75	Psychotic experiences	50
Affective	70	Social Detachment	64
Physiological	64	Thought Disorder	61
Anxiety Related Disorders	66	Borderline Features	83
Obsessive-compulsive	57	Affective Instability	63
Phobias	56	Identity Problems	68
Traumatic Stress	70	Negative Relationships	84
		Self-harm	95
Depression	74	Antisocial Features	67
Cognitive	72	Antisocial Behaviours	75
Affective	72	Egocentricity	45
Physiological	67	Stimulus-seeking	67
Mania	42	Alcohol Problems	63
Activity Level	54	Drug Problems	110
Grandiosity	35		
Irritability	46		
TREATMENT CONSIDERATION SCALES			
Aggression	61	Suicidal Ideation	58
Aggressive Attitude	59	Stress	73
Verbal Aggression	51	Non Support	67
Physical Aggression	69	Treatment Rejection	20
INTERPERSONAL SCALES			
Dominance	56	Warmth	38

The Drug Abuse Screening Test (DAST)

DAST is a 28-item self-report scale that has “exhibited valid psychometric properties” and has been found to be “a sensitive screening instrument for the abuse of drugs other than alcohol. A score of 6 or more has been found to provide excellent sensitivity for identifying patients with substance use disorders.

Michigan Alcohol Screening Test (MAST)

MAST is a 22-item self-report alcohol screening tests, effective in identifying dependent drinkers. Questions on the MAST test relate to the patient's self-appraisal of social, vocational, and family problems frequently associated with heavy drinking. A score of 6 or more suggests that help should be sought for alcohol problem.

Adult ADHD Self-Report Scale (ASRS-v1.1)

The ASRS has eighteen questions, which are consistent with the DSM-IV criteria and address ADHD symptoms in adults. Each question can be answered on a five-item Likert scale, based on a scale of frequency ranging from "Never" to "Very Often". Answers are scored as either positive or negative and the threshold is different for individual questions. Answers of "Never" and "Rarely" are always scored negative, answers of "Often and Very Often" are always scored positive, and answers of "Sometimes" are scored positively in only seven of the eighteen questions. Four or more positive answers in Part A is indicative of ADHD symptoms.

Camberwell Assessment of Need – Short Forensic Version

CANFOR-S is a tool for assessing the needs of people with mental health problems who are in contact with forensic services. Needs are assessed in 25 areas of life and cover a broad range of health, social, clinical and functional domains.

The Offender Assessment System (OASys)

The OASys is a national risk/need assessment tool used across probation areas and prison establishments in England and Wales. It is designed to fulfil the following purposes: to assess how likely an offender is to reoffend; to identify and classify offending-related needs, to assess risk of serious harm, risks to the individual and other risks, to assist with management of risk of serious harm, to link the assessment to the sentence plan, to indicate the need for further specialist assessments, and to measure change during the offender's sentence. The OASys consists of 73 questions across 12 scored sections each relating to different offending related factors: (i) offending information, (ii) analysis of offences, (iii) accommodation, (iv) education, training and employability, (v) financial management and income, (vi) relationships, (vii) lifestyle and associates, (viii) drug misuse, (ix) alcohol misuse, (x) emotional wellbeing, (xi) thinking and behaviour, and (xii) attitudes. The questions are scored: 0 = no problems; 1 = some problems; and 2 = significant problems. For each factor, an offender is assessed as having a 'criminogenic need' or offending-related need if the score for the section exceeds a designated cut-off point. The sections vary in their strength of association with reconviction and are therefore weighted in their contribution to an overall likelihood of reconviction score. The final weighted scores range from 0 to 168, banded into low (0–40), medium (41–99) and high (100–168).

The Historical, Clinical, Risk Management (HCR-20) (Version 2, Webster et al., 1997). The HCR-20 is a systematic guide for assessing risk of violence. It contains 20 items organized around 3 scales – Historical (10 items), Clinical (5 items), and Risk Management (5 items). The 10 Historical items (H) are mainly static in nature and are therefore unlikely to fluctuate over time. The 5 Clinical items (C) refer to current mental, emotional and psychiatric status and include risk markers that are dynamic and are therefore likely to change over time. The 5 Risk items (R) are concerned with forecasting the future social, living and treatment circumstances as well as anticipating the person's reactions to those conditions. The HCR-20 was developed based on the acknowledgement that it is extremely difficult to accurately assess the potential for future violent acts in mentally and personality disordered individuals. The 20 items included in the HCR-20 are empirically related to risk for violence. Because risk is considered dynamic (changing as the circumstances of the individual change) the HCR-20 should be updated every 6-12 months.

Mr X's HCR-20 assessment is presented below.

HISTORICAL ITEMS		SCORE
H1	**PREVIOUS VIOLENCE** *Violence is defined in the HCR-20 as 'actual, attempted or threatened harm to a person'. This item is based on the principle that past violent behaviour is generally the best predictor of future violent behaviour.*	**Y**
Mr X is classified as prolific offender with 48 previous convictions for 126 offences. These have included offences against the person and property, theft and kindred offences, public disorder and drug related offences. Mr X has spent majority of his adult life in prison.		
H2	**YOUNG AGE AT FIRST INCIDENT** *The literature on violence has demonstrated that the younger the person at the time of the first known violence, the greater the subsequent violent conduct.*	**Y**
Mr X first started getting into trouble with the police for violent behaviour from the age of fourteen.		
H3	**RELATIONSHIP INSTABILITY** *This item applies only to 'romantic', intimate or non-platonic relationships and excludes relationships with friends and family. The item evaluates whether an individual shows evidence of having the ability to form and maintain stable long-term relationships. "Instability" is defined as either many short-term relationships, absence of any relationships, or the presence of conflict within long-term relationships. Research demonstrates that men who are violent within relationships have strong potential to be violent generally.*	**Y**
There is a well-documented history of relationship instability		
H4	**EMPLOYMENT PROBLEMS** *General statistics on criminal reoffending have demonstrated a link between income, conduct on parole, unemployment and general criminal recidivism. The primary focus of this item is the presence or absence of employment problems. Full time education is considered full time employment.*	**Y**
Mr X spent most of his adult life in prison; during short periods of time spent in the community he has been unable to sustain meaningful employment over the years.		
H5	**SUBSTANCE USE PROBLEMS** *This item considers whether the individual has experienced impairment of functioning in areas of health, employment, recreation and interpersonal relationships that is attributed to substance misuse (It is insufficient to simply rate presence of substance abuse problems).*	**Y**
Mr X has a history of extensive substance abuse from the aged of 13.		
H6	**MAJOR MENTAL ILLNESS** *This item applies to illnesses involving disturbances of thought and affect. The item is definitely present when the evidence is unequivocal (e.g. course or severity is unclear) then the item should be rated as possibly present. Major mental illness is thought to be a moderate risk-elevating factor.*	**Y**
Mr X suffers from Paranoid Schizophrenia.		
H7	**PSYCHOPATHY** *This item is based on a psychopathy assessment using the Psychopathy Checklist Screening Version (PCL: SV). A score of 13 and above indicates*	**Y**

	"possible psychopathy" and a score of 18 and above indicates "definite psychopathy".	

Scores on the PCL-SV are as follows:
Part one
Superficial= 0
Grandiose= 0
Deceitful= 0
Lacks remorse= 1
Lacks empathy= 0
Doesn't accept responsibility= 2
Part two
Impulsive = 2
Poor behavioural controls= 2
Lacks goals= 1
Irresponsible= 2
Adolescent antisocial behavioural= 2
Adult antisocial behaviour= 2
Mr X 's score of 14 on the PCL-SV just exceeds the cut-off point for non-psychopathic presentations.

H8	**EARLY MALADJUSTMENT** *This item taps maladjustment at home, school or in the community before age 17. Generally, the item is definitely present if there is evidence of maladjustment in two of the following three areas: home, school and community.*	**Y**

There is a well-documented history of early maladjustment, with behavioural problems.

H9	**PERSONALITY DISORDER** *A diagnosis of personality disorder should conform to an official system such as the DSM-IV or the ICD-10. This item is rated on the basis of past history and is unaffected by whether the disorder is currently active or in remission.*	**Y**

Mr X's PAI clinical profile is marked by significant elevations across several scales, indicating a broad range of clinical features and suggesting that he experiences marked distress and severe impairment in functioning. The most notable feature of the profile is the history of substance abuse problems. Furthermore Mr X's profile suggests a number of problematic personality traits, leading to problems within interpersonal relationships. His responses also suggested that he has a history of antisocial behaviour, which may have manifested a conduct disorder during adolescence. He reported a personality style that involves a degree of adventurousness, risk-taking, and a tendency to be rather impulsive. In addition he reported high levels of anxiety and tension, including cognitive and affective signs of anxiety. With regard to his self-concept, his responses indicate that he experiences his level of social support as being somewhat lower than that of the average adult. He may have relatively few close relationships or be dissatisfied with the quality of these relationships. However, he reports relatively little stress arising from this or other major life areas. With regard to treatment motivation Mr X's responses suggest an acknowledgement of important problems and the perception of a need for help in dealing with these problems, although he may find it difficult to establish a trusting relationship within treatment.

H10	**PRIOR SUPERVISION FAILURE** *Failures during any institutional or community placement are relevant here. A supervision failure is considered to be serious if it resulted in the individual being (re-) apprehended or (re-) institutionalized by a correction or mental health agency. Less serious failures relate to a lack of conformity or a disregard for rules or legal obligations, such as returning late from leave, refusing to take medication, using alcohol or drugs when prohibited.*	**Y**

There is a significant history of supervision failure; mainly in the form of breaching his parole conditions and disengagement from probation and mental health services.

CLINICAL ITEMS		SCORE
C1	**LACK OF INSIGHT** *This item refers to the degree to which the individual fails to acknowledge and comprehend his or her mental illness, and it's effect on others.*	**?**
Mr X seems to have some insight into his mental illness and relapse triggers i.e. substance misuse. Having said that he consistently proves otherwise by using substance.		
C2	**NEGATIVE ATTITUDES** *This item refers to pro-criminal or anti-social attitudes that have some likelihood of eventuating in violence, such as lack of empathy, callousness, misogyny and attitudes that support violence.*	**Y**
Historically Mr X believed that achieving a gang type lifestyle would boost his sense of control and self efficacy. Mr X continues to move away from a belief that being involved in criminal activity is desirable, showing some insight into the negative aspects of this lifestyle and moving towards a more mainstream lifestyle. He is still minimising his offending behaviour and has a tendency to blame others for things going wrong.		
C3	**ACTIVE SYMPTOMS OF MAJOR MENTAL ILLNESS** *This item should consider both positive and negative symptoms. Definitions of psychotic symptoms should be taken from a recognised classification system such as the DSM-IV (APA, 1994) or ICD-10 (WHO, 1992).*	**N**
There is no evidence of active symptoms. Mr X is compliant with his treatment regime, and has been for number of years now.		
C4	**IMPULSIVITY** *Impulsivity is defined in the HCR-20 as "behavioural and affective instability related to how the individual will likely react to real or imagined slights, insults or disappointments" (pg 56).*	**Y**
Mr X has consistently displayed impulsive behaviour whilst in prison. He reacts to provocation from others. In the last year he has been slightly less impulsive and there have been no actual violent incidents on the wing.		
C5	**UNRESPONSIVE TO TREATMENT** *This item should include any treatment designed to ameliorate criminal, psychiatric, psychological, social or vocational problems.*	**Y**
Although Mr X does not experience any symptoms of the mental illness at the moment, and he is compliant with his medication, in the past once released from prison very quickly turned to drugs, which then contributed to relapse in his mental health and offending behaviour.		
RISK MANAGEMENT ITEMS		**SCORE**
R1	**PLANS LACK FEASIBILITY** *This item considers the likelihood that the individual's future plans will succeed. Individuals who are able to accept and make use of treatment or remedial programs are likely to be at reduced risk of future violence.*	**Y**
Mr X plans for the future lack feasibility in some respects. He stated that in the future he would like to become a counselor and work with people who abuse substances, as he has a good understanding about the problem of addiction, however he still have not addressed his own substance misuse problem, and has difficulties in staying away from substances when in the community. In the session he admitted himself that talking about the substances triggers his cravings, therefore this plan seemed to be lacking in feasibility. In addition Mr X stated that he would like to find a full time employment, however he has very poor history of employment and during his time in prison he did not engaged in any vocational courses aiding his future employment prospects. As such these plans are lacking in feasibility.		

R2	**EXPOSURE TO DESTABILISERS** *This item refers to situations in which the individual is exposed to hazardous conditions to which they are vulnerable, and which may trigger violent episodes.*	**Y**
• Acknowledges the need to stay away from future drug use. • The extent to which he will be able to stay away from negative/antisocial peers is unclear at this stage. • Ability to engage with professionals in the community unclear. • Problems with employment. • Contact with his daughter		
R3	**LACK OF PERSONAL SUPPORT** *This item is rated based on the presence of support (emotional, financial, or physical) from friends and family*.	**Y**
There is no significant social support available at present.		
R4	**NONCOMPLIANCE WITH REMEDIATION ATTEMPTS** *This item considers motivation to succeed and willingness to comply with medication and other therapeutic interventions.*	**?**
Mr X is currently complainant with his treatment regime. He stated that he will continue taking his medication in the community. Having said that, in the past Mr X upon his release from prison, on a number of occasions stopped his medication and disengaged from the CMHS.		
R5	**STRESS** *This item should consider the particular vulnerabilities of the individual and should be coded if the individual is likely to be exposed to serious stressors or, if the stressors are less serious if there is concern that the individual will cope poorly with them.*	**Y**
Mr X is easily stressed and responds badly to this. There is a high probability of stress in his case.		
SUMMARY AND CONCLUSIONS		
Currently, the assessment indicates that Mr X presents a high risk of violent behaviour. Although the historical factors, particularly the very extensive and significant past history of offending behaviour, are very important in this case, there are also clinical factors that are very relevant. They include the presence of a mental illness together with a very significant level of impulsivity. Mr X is very susceptible to stress so any situation that could increase the levels of stress could also lead to an increase on the level of risk of Mr X displaying aggressive behaviour. In Mr X's case, there is also a significant contributor to the level of risk: his history of illicit substances use. Although this has not been an issue recently because he is currently serving a prison sentence, there is a high probability of Mr X using illicit substances in the future, which would significantly increase the risk he poses to others and to himself.		

APPENDIX 4

Relapse prevention plan

MY REALPSE PREVENTION PLAN

This is an important document because:

1. It includes a list of things that make me vulnerable to getting unwell

2. I need to noticed when I am starting to get unwell so that it doesn't become so bad I lose control

3. It reminds me of what to do if I think I am getting unwell again and whom to approach to get help

Things that help me to keep well and enjoy my life:

- Finding employment /attending vocational training
- Being with my family and drug free friends
-

Things that could contribute to me experiencing difficulties:

- Taking Drugs
- Hanging around with the wrong crowd, (offenders)
- Not having enough money

The symptoms I experienced when I was unwell:

- Hearing voices
- Sometimes feeling angry and becoming aggressive

Early warning signs:

The way I may think when I start to get unwell:

- Becoming suspicious and paranoid (they after me, I will burn in hell)

If I start to get unwell I may start to feel:

- Stressed
- Angry

If I start to get unwell I may start to behave:

- Aggressive
- Unpredictable

Sometimes I may not notice if I am becoming unwell, but there may be signs that others can notice.

- Other people around me may tell that I am behaving strangely
- They may noticed that I am withdrawn and isolating myself

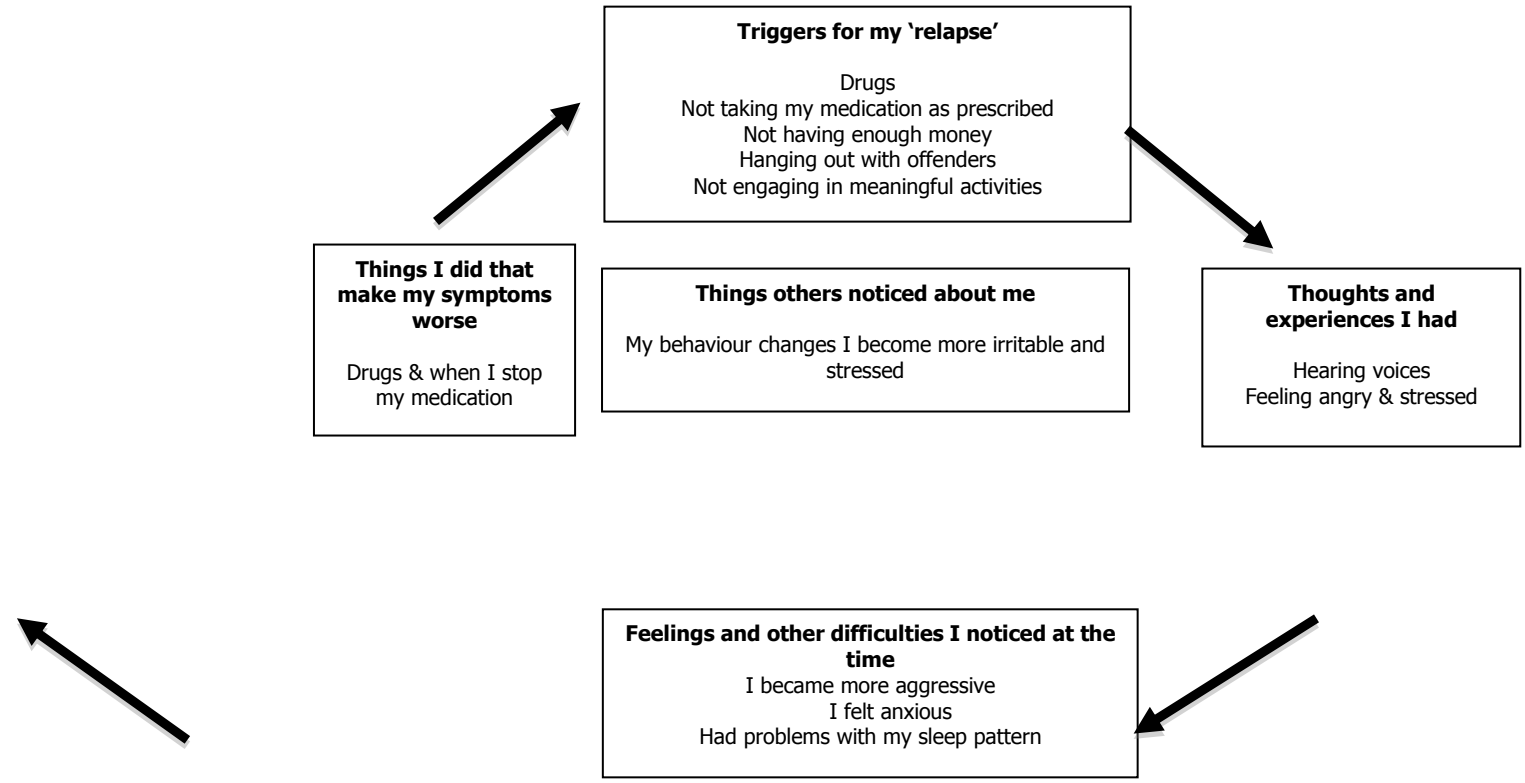
When it looks like I might be having these difficulties these are helpful things to do:

If I notice that I am experiencing early warning signs, there are certain things that I can do to reduce the chances of getting really unwell again. Some things I can do on my own, other things involve getting the support of others.

When it looks like I might be having these difficulties these are the things that I would need to do:

- Contact my care coordinator and ask for help
- Take my medications
- Tell my doctor, family, probation officer, my support network about my experiences

MY RELAPSE PREVENTION PLAN



APPENDIX 5

Recorded search of electronic databases

Database	Search Strategy (limit to full text and English Language)
Cochrane Library, Mon Mar 18 11:24:00 2013	(Adult) in All Fields and (offender or probation or probationers) in All Fields and (prevalence or mental illness or mental health or mental disorder or schizophrenia or psychosis or learning disability or substance misuse or comorbidity or personality disorder) in All Fields.
Campbell Database of Systematic Reviews: searched on 18.03.2013 Publication year 2002-2013	(Adult) in All Fields and (offender or probation or probationers) in All Fields and (prevalence or mental illness or mental health or mental disorder or schizophrenia or psychosis or learning disability or substance misuse or comorbidity or personality disorder) in All Fields.
EMBASE (1993 – to Week 4, March 2013)	1. adult$.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 2. offender.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 3. probationer.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 4. 1 or 2 or 3 5. prevalence.mp. [mp=title, original title, abstract, ante of substance word, subject heading word] 6. 1 or 2 or 3 or 4 7. mental illness$.mp. [mp=title, original title, abstract, ante of substance word, subject heading word] 8. mental health.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 9. mental disorder.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 10. schizophren$.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 11. (psychosis or psychotic).mp. [mp=title, original title, abstract, name of substance word, subject heading word] 12. learning disability.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 13. substance misuse.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 14. comorbidity.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 15. personality disorder.mp. [mp=title, original title, abstract, name of substance word, subject heading word] 16. 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 17. 4 and 6 and 16 18. remove duplicates from 17 19. limit 18 to (full text and English language)
PsycINFO (including Journals @ OVID full text) (1993 – to Week 4, March 2013)	1-19 search terms from Embase search history were use in OVID search
CINAHL (March 1993 to March 2013)	1-19 search terms from Embase search history were use in CINHAL Plus search
MEDLINE	1-19 search terms from Embase search history were use in Medline search
INGENTA CONNECT	Articles published between "1993" and "2013" with title/keyword/abstract containing "((adult* and (offender* or probation* or probationers*) And (prevalence* or mental illness* or mental health* or mental disorder* or schizophrenia* or psychosis* or learning disability* or substance misuse* or comorbidity* or personality disorder*).
ASSIA: Applied Social Science Index and Abstract	((adult) AND (offender) or (probation) or (probationers) AND (prevalence) or (mental illness) or (mental health) or (mental disorder) or (schizophrenia) or (psychosis) or (learning disability) or (substance misuse) or (comorbidity) or (personality disorder))
ERIC (in the last ten years)	1-19 search key words from Embase search history were use in ERIC search

APPENDIX 6

Quality assessment criteria

QUESTION	Y	P	N	U	COMMENTS
INITIAL SCREENING					
Are the aims / hypotheses clearly stated?					
Is the study addressing the prevalence and nature of mental health problems in adult offenders on probation?					
STUDY DESIGN					
Has the study addressed the question being asked?					
Is a cross-sectional study appropriate way of answering the question under circumstances?					
SELECTION BIAS					
Were the participants representative of the defined population?					
Was a sufficient sample size used?					
Were the group similar at base line?					
Were the groups comparable in all important confounding variables?					
Is the description of participants' demographic/background information sufficient?					
Were potential confounding variables controlled for (by matching or through statistics?)					
MEASURMENT & DETECTION BIAS					
Has the mental health problems been clearly defined and measured?					
Have the assessments used been clearly defined, measured and standardised?					
Were self-report measures used?					
Were the assessments used comparable to instruments used in other studies?					
Was blinding incorporated where feasible?					

Were the measurements for outcome objective?					
Was the outcome measure validated?					
Was the outcome assessed in the same way across all participants?					
ATTRITION BIAS					
Were reasons explained for those refusing to participate in the study?					
Were attrition rates similar across groups?					
OUTCOME BIAS	**Y**	**P**	**N**	**U**	**COMMENTS**
Was outcome measured in a correct way?					
Were the measures valid and reliable for the defined population?					
STATISTICS					
Was the statistical analysis used correctly?					
Were there statistical attempts to deal with missing data?					
ARE THE RESULTS BELIEVABLE					
Are results unbiased?					
Are the results significant?					
Is the size of effect reasonable?					
Are methods and design reliable?					
Have results been clearly reported?					
Have limitation been discussed?					
APLICIABILITY OF FINDINGS					
Are the participants representative of UK/USA/Canada population?					
Can results be applied to population sample regardless of culture and size?					
Can the results be applied to the UK population?					
Do the results of this study fit with other available evidence?					

APPENDIX 7

Data Extraction Sheet

GENERAL INFORMATION			
Date of data extraction			
Identification of the reviewer			
Details of publication: Author Title Source Year			
Re-verification of study eligibility			
Population: Adult Offenders on Probation		Y N ?	
Variable of interests Assessment of mental health problems mental disorder, mental illness, learning disability, substance misuse, comorbidity, personality disorder		Y N ?	
Outcomes Mental health problems identified		Y N ?	
Specific information			
Study Design	Cross-Sectional		
CONTINUE?	YES	NO	
Population Target population (describe) Inclusion Criteria Exclusion Criteria Recruitment procedures used Characteristics of participants No of Participants Male: Female: No of Participants refused: Age: Ethnicity: Other Information			
Intervention	Notes		

Use of structured assessment? Which assessment tools were used? Was the assessment conducted in a suitable/confidential environment? Who administered			
Outcome What was measured? Most prevalent mental health problems found? Was blinding utilised where possible? How was the outcome measured? Was self-report utilised? If so, to what extent? Was there a follow up? If so, what was the follow up period? Drop out rates (proportion of those who refused to participate)? Reason for drop outs? Was study clearly reported? Limitations?			
Analysis Stats used? Does the stats adjust for confounding? Missing data dealt with? Were the statistics and results reported clearly? Additional Outcomes			
OVERAL STUDY QUALITY?	Good	Reasonable	Poor
Overall Comments Notes			

APPENDIX 8

Sample of excluded studies

Details of Excluded Studies	Reason for Exclusion
Silver, E., Felson, R, B., & Vanseltine, M. (2008). The relationship between mental health problems and violence among criminal offenders. Criminal Justice and Behaviour, 35(4), 405-426.	Population: offenders in prison
Stevens, P., Bail, K., & Chatfield, J. (2011). Resettlement of residents from approved premises: Result of a London Probation-NHS collaborative pilot project. The Journal of Community and Criminal Justice, 58(2), 155-166.	No information regarding psychiatric morbidity.
Fazel, S., & Seewald, K. (2012). Severe mental illness in 33588 prisoners worldwide: systematic review and meta-regression analysis. The British Journal of Psychiatry, 200, 364–373.	Population: Prisoners
Adams, J., Ellis, A., Brown, A., Owens, D., Halsey. R. (2009). Australian Psychiatry, 17(2), 90-96.	Population: Prisoners
Rennie, C., Senior, J., & Shaw, J. (2009). The future is offender health: evidencing mainstream health service throughout the offender pathway. Criminal Behaviour and Mental Health, 19, 1-18.	No information regarding psychiatric morbidity
Brooker, C., Syson-Nibbs, L., Barrett, P., Fox, C. (2009). Community managed offenders access to healthcare services: Report of a pilot study. The Journal of Community and Criminal Justice. 56(1), 45-59.	No information regarding psychiatric morbidity
Baillargeon J, Binswanger IA, Penn JV, Williams BA, Murray OJ. Psychiatric disorders and repeat incarcerations: the revolving prison door. Am J Psychiatry 2009; 166: 103–9.	Population: Prisoners
Dressing H, Kief C, Salize H-J. Prisoners with mental disorders in Europe. Br J Psychiatry 2009; 194: 88.	Population: Prisoners
Morgan RD, Fisher WH, Duan NH, Mandracchia JT, Murray D. Prevalence of criminal thinking among state prison inmates with serious mental illness. Law Human Behav 2010; 34: 324–36.	Population: Prisoners
Joukamaa M. Psychiatric morbity among Finnish prisoners with special reference to sociodemographic factors – results of the health survey of finnish prisoners (WATTU project). Forensic Sci Int 1995; 73: 85–91.	Population: Prisoners
Smith C, O'Neill H, Tobin J, Walshe D, Dooley E. Mental disorders detected in an Irish prison sample. Crim Behav Ment Health 1996; 6: 177–83.	Population: Prisoners
Assadi SM, Noroozian M, Pakravannejad M, Yahyazadeh O, Aghayan S, Shariat SV, et al. Psychiatric morbidity among sentenced prisoners: prevalence study in Iran. Br J Psychiatry 2006; 188: 159–64.	Population: Prisoners
Singleton N, Meltzer H & Gatward, R. 1998. Psychiatric morbidity among prisoners. London: Office for National Statistics.	Population: Prisoners
Steel J, Thornicroft G, Birmingham L, Brooker C, Mills A, Harty M *et al* 2007. Prison mental health inreach services. British Journal of Psychiatry 190: 373-4.	Population: Prisoners
Coid, J., Petruckevitch, A., Bebbington, P., Jenkins, R., Brugha, T., Lewis, G., et al., (2003). Psychiatric morbidity in prisoners and solitary cellular confinement, Disciplinary segregation. Journal of Forensic Psychiatry and Psychology, 14, 298–319.	Population: Prisoners
Lader, D., Singleton, N., & Meltzer, H. (2003). Psychiatric morbidity among young offenders in England and Wales. International Review of Psychiatry, 15, 144–147.	Population: young offenders
Sailas, E.S., Feodoroff, B., Virkkunen, M., & Wahlbeck, K. (2005). Mental disorders in prison populations aged 15–21: National register study of two cohorts in Finland. British Medical Journal, 330, 1364–1365.	Young offenders in prison

APPENDIX 9

Systematic Review - Poster

Mental Health of Offenders on Probation
A systematic review

Aleksandra K. Zaremba & Shihning Chou

The University of Nottingham

1. Introduction

The understanding of the prevalence of mental health problems has very important implications for both epidemiology and health service planning. To date the majority of the research on offender health has focused on prisoners (e.g. Singleton et al., 1998; Fazel et al., 2001; Hek et al., 2005; Plugge et al., 2006), and comparatively little research has examined the prevalence of mental health disorders amongst offenders in the community. The available literature on mental health needs of offenders on probation suggests that the health of this population is worse than that of the general population, but similar to that found in prisoners (Sirdifield, 2009). The aim of this review was to identify and review studies that looked at the prevalence rates and typology of mental health problems amongst offenders on probation using a systematic approach. The objectives were

1. To determine the prevalence rates of mental health problems amongst offenders on probation.
2. To report the typology of the most commonly identified mental health problems among probationers.

2. Method

Inclusion Criteria
Cohort or cross sectional studies that met the following criteria:
Population: Adult Probationers (Male & Female).
Outcome: Diagnoses of a specific mental health problem recorded by a psychiatrist or by staff from the forensic psychiatric service based on ICD-10 or DSM criteria and self-reported symptoms of mental health problems.

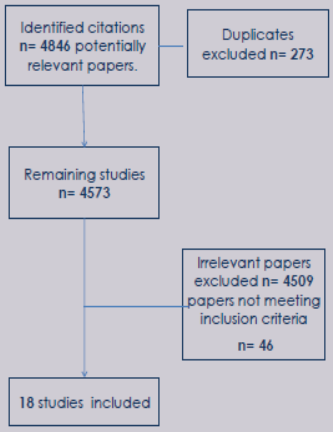
Exclusion Criteria
Narrative reviews, editorials, commentaries, studies looking only at juvenile offenders, women or men, non – English papers.

Literature Sources
Nine electronic databases / gateways were comprehensively searched: Cochrane Library, Campbell Library, EMBASE, PsycINFO, CINAHL, MEDLINE Ingenta Connect, ASSIA & ERIC.

Search Terms
Offender * and /or Probation*, probationers, combined with following key words – prevalence, mental, health* or mental disorder* or mental illness*, schizophrenia* or psychosis *or learning disability* or substance misuse* or comorbidity* or personality disorder*.

Quality Assessment
Included studies were quality assessed using a set of pre-defined criteria, which covered areas such as sampling, measurement and statistical bias.

3. Results



The current review consisted of twelve British papers, five studies from the United States and one from Canada.

The results has highlighted that there is a significant lack of research into the prevalence of mental health problems amongst offenders on probation.

UK - The most recent and comprehensive study by Brooker et al., (2012) reported findings on the prevalence of mental health disorders among 173 probationers in Lincolnshire. 38.7% of probationers were found to be positive for any of the DSM-IV Axis I criteria for psychiatric disorders measured by the MINI. The most prevalent current mental health disorder was probable personality disorder found in 47.4% of the sample.

USA - The most recent study of the prevalence of mental illness among offenders on probation by Cirlly et al., (2009), based on the data from the 2001 National Household Survey on Drug Abuse. Among all adults in the 2001 NHS-DA, 18% (n = 6141) reported mental disorder symptoms. In a sample of 6141 participants 65% reported symptoms of depression, 48.6% symptoms of PTSD, 47.9% symptoms of panic disorder, 46.4% symptoms of phobia, 37.1% symptoms of psychosis, 32.1% symptoms of general anxiety and 18.6% symptoms of mania.

Canada - Wormith et al., (1996) reported on the mental health survey of community correctional clients. Out of 2500 participants, 472 offenders (18.8%) met at least one DSM-III-mental disorder criteria.

4. Conclusion / Discussion

The little research that exits in this area demonstrates mixed findings and has a number of methodological limitations. As a result, it is difficult to reach a firm conclusion on what is the likely prevalence of mental health problems in a probation population. There is a variation in methodology and in the range of mental disorders among offenders in reviewed studies. Therefore, it is not surprising to find different results. This makes a simple conclusion about the extent of mental health problems among offenders on probation almost impossible. Overall, however it is possible to conclude that the prevalence of mental health problems in offenders on probation appears to be high, and there appear to be high rates of comorbidity. This emphasises the need for further high quality research in this area in order to inform evidence-based practice and commissioning of health services for this vulnerable group.

References *(included in review)*

Brooker, C., Sirdifield, C., Blizard, R., Denney, D., & Pluck, G. (2012). Probation and mental illness. *The Journal of Forensic Psychiatry & Psychology, 24*(4), 522-537.
Brooker, C., Syson-Niblo, L., Barrett, P., & Fox, C. (2009). Community managed offenders' access to healthcare services: Report of a pilot study. *Probation Journal, 56*(1), 45–59.
Cohen, A., Bishop, N., & Hegarty, M. (1999). Working in partnership with probation: The first two years of a mental health worker scheme in a probation service in Wandsworth. *Psychiatric Bulletin, 23*(7), 405–408.
Collins, P., Bali, N., & Costello, A. (1992). The psychiatric probation clinic. *Psychiatric Bulletin, 17*(2), 145–146.
Cirlly, J. F., Caine, E. D., Lamberti, S., Brown, T., & Friedman, S. (2009). Mental health services use and symptom prevalence in a cohort of adults on probation. *Psychiatric Services, 60*(4), 542–544.
Geelan, S., Griffin, N., & Briscoe, J. (1998). A profile of residents at Elliot House, the first approved bail and probation hostel specifically for mentally disordered offenders. *Health Trends, 30*(4), 103–105.
Hatfield, B., Ryan, T., Pickering, L., Burroughs, H., & Crofts, R. (2004). The mental health of residents of approved premises in the Greater Manchester probation area: A cohort study. *Probation Journal, 51*(2), 101–115.
Keene, J., Janacek, J., & Howell, D. (2002). Mental health patients in criminal justice populations: Needs, treatment and criminal behaviour. *Criminal Behaviour and Mental Health, 13*(3), 168–178.
Lutgio, A. J., Cho, Y. I., Swartz, J.A., Johnson, T.P., Graf, I., & Pickup, L. (2003). Standardized assessment of substance-related, other psychiatric, and comorbid disorders among probationers. *International Journal of Offender Therapy and Comparative Criminology, 47*, 630–652.
Naskarni, K., Chipchase, B., & Fraser, K. (2000). Partnership with probation hostels: A step forward in community psychiatry. *Psychiatric Bulletin, 24*, 222–224.
Richardson, T., McInnes, R., Davis, S. (2003). Probation with Conditions of Psychiatric Treatment: A descriptive study. *Medicine Science and the Law, 43*(1), 80-84.
Roskes, E., & Feldman, R. (1999). A collaborative community-based treatment program for offenders with mental illness. *Psychiatric Services, 50*(12), 1616–1619.
Solomon, P., Draine, J., & Marcus, S. (2002). Predicting incarceration of clients of a psychiatric probation and parole service. *Psychiatric Services, 53*(1), 50–56.
Vaughan, P. J., Pullen, N., & Kelly, M. (2000). Service for mentally disordered offenders in community psychiatry teams. *The Journal of Forensic Psychiatry, 11*(3), 571–586.
Wormith, J. S., & McKeague, F. (1996). A mental health survey of community correctional clients in Canada. *Criminal Behaviour and Mental Health, 6*(1), 69–72.

Contact Details
Aleks Zaremba
Criminal Justice Mental Health Service
108a Landor Rd, Stockwell
London SW9 9NT
T. 0 2032286542
E. lwxak12@nottingham.ac.uk

APPENDIX 10

Ethical Approvals

APPROVED– LPT RESEARCH

Title: The prevalence of mental health problems and health needs assessment of offenders on probation.
Protocol Number: 13010

Dear Aleksandra Kornalewska Zaremba,

Further to your application to undertake research in LPT, London Probation Trust is pleased to grant approval in principle for your research. Please keep Harriet Fearn informed about the progress of your project.

Before the research can commence you must agree formally by email to your LPT research contact confirming that you will comply with the terms and conditions included with this document.

Please note that the decision to grant access to the offenders and practitioners within these ultimately lies with the senior staff of the establishment concerned. If establishments are to be approached as part of the research, a copy of this letter must be attached to the request to prove that LPT has approved the study in principle. The decision to grant access to existing data lies with the Information Asset Owners (IAOs) for each data source and the researchers should abide by the data sharing conditions stipulated by each IAO.

Yours sincerely

London Probation Trust

Part of the research infrastructure for Wales funded by the National Institute for Social Care and Health Research, Welsh Government.
Yn rhan o seilwaith ymchwil Cymru a ariannir gan y Sefydliad Cenedlaethol ar gyfer Ymchwil Gofal Cymdeithasol ac Iechyd, Llywodraeth Cymru

NISCHR
Gwasanaeth Moeseg Ymchwil | RES | Research Ethics Service

Research Ethics Committee for Wales
Sixth Floor, Churchill House
17 Churchill Way
Cardiff CF10 2TW

Telephone : 029 2037 6829
Fax : 029 2037 6824
E-mail : corinne.scott@wales.nhs.uk
Website : www.nres.nhs.uk

08 August 2013

Dr Simon Duff
University of Nottingham
B15 Yang Fujia Building
Jubilee Campus
Wollaton Road
Nottingham NG8 1BB

Dear Dr Duff

Study title:	**The prevalence of mental health problems and unmet needs assessment of offenders on probation.**
REC reference:	**13/WA/0046**
Protocol number:	**13010**
IRAS project ID:	**122253**

Thank you for Aleksandra Kornalewska-Zaremba's email of 08 August 2013. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 15 April 2013

Documents received
The documents received were as follows:

Document	*Version*	*Date*
Participant Information Sheet: via Probation	Final version 1.1	24 March 2013

Approved documents

The final list of approved documentation for the study is therefore as follows:

Document	*Version*	*Date*
Covering Letter	signed by Aleksandra K Zaremba, Trainee Forensic Psychologist, University of Nottingham	04 February 2013
REC application	Signed by Simon Duff & signed by Paul Cartledge, Sponsor's Representative	06 February 2013
Investigator CV	Dr Simon Duff (Chief Investigator)	
Other: Student CV	Aleksandra K Zaremba	
Evidence of insurance or indemnity	from Henderson Insurance Brokers	25 July 2012

APPENDIX 11

Consent Form

The University of Nottingham
UNITED KINGDOM · CHINA · MALAYSIA

Consent Form - Final Version 1.0, 8 March 2013

The prevalence of mental health problems and unmet needs assessment of offenders on probation

REC Ref: 13/WA/0046

Name of participant:

Name of research workers: Ms Aleksandra Kornalewska-Zaremba, Dr Andrew Forrester, Dr Simon Duff, Dr Chiara Samele

Please initial the box if you agree

The information sheet has been explained to me	☐
I was asked whether I had any questions	☐
I understood the answers to my questions	☐
I understand that I can say "NO" to the research	☐
I understand that I can change my mind at any time and say "NO" and I don't have to say why	☐
I understand that if I say "NO", this will not change my work with The Probation Service	☐
I understand that relevant sections of my probation file may be looked at by authorised individuals. I give permission for these individuals to have access to these records.	☐
I understand that the research workers will keep my information Private, safe and confidential	☐
I understand that the research workers will write a summary, but no names or addresses will be used	☐

I say "YES" to taking part in the research

My Name _____

Date _____

Signature _____

Research worker name _____

Date _____

Signature _____

2 copies: 1 for participant, 1 for the research workers

APPENDIX 12

Demographic information schedule

Probation Prevalence Study – Demographic information

Date Completed_____
Initials of person completing the form_____
Participant ID _____
Gender **M** **F**
Age (years)_____

Ethnicity (tick one)

White-British _____
White-Other _____
Asian/Asian British _____
Black Caribbean _____
Black-African _____
Black Other _____
Mixed/Other _____
Unknown (describe) _____

Marital Status (tick one)

Single _____
Married/Cohabiting _____
Divorced or Separated _____
Widowed _____
Other _____

Educational attainment (tick all that apply)

GCSE (O Levels) _____
A Levels _____
Degree _____
Higher degree _____

Employment status (tick one)

Unemployed _____
Employed (part time) _____
Employed (full time) _____
Student (full time/part time) _____

Previous contact with mental health service (tick)

Any previous contact with mental health service YES NO

If so, year of first contact: _____

Previous psychiatric admissions YES NO

Number of previous admissions _____

Previous contact with community mental health service YES NO

Taking any medications YES NO

If so, specify _____

Any physical health conditions YES NO

If so, specify _____

Reason why on Probation (tick all that apply)

Violence against person _____

Offences against property _____

Theft, Fraud and kindred off _____

Burglary _____

Drug related offences _____

Public order offences _____

Arson _____

Murder/Manslaughter _____

Other misc offences _____ specify _____

Not Known _____

Sexual offence (rape) _____

Harassment _____

Carrying offensive weapon _____

Previous convictions (tick)

1-5 _____

6-10_____

11-15_____

20+_____