Personality Disorder

&

Serious Further

Offending

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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 personality disorder and serious further offending.

I hereby declare that:

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- I have fully acknowledged and referenced the ideas and work of others, whether published or unpublished, in my thesis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

Abstract

Offender characteristics are considered important in the prediction of future risk of re-offending and response to treatment. The psychiatric classification of offenders can therefore be an important variable influencing decision making. Although the relationship between personality disorder and offending is established in the literature, the relationship is complex.

Recidivism of any type, particularly serious further offending that is violent or sexual in nature, has far reaching implications on the victims, the perpetrator, the criminal justice system and wider society. The identification and management of individuals with personality disorder is a priority for both mental health professionals and the criminal justice system. The overall aim of this thesis is to examine the relationship between personality disorder and further offending in adult forensic populations (prison and probation).

Chapter one presents a general introduction to the topic. Chapter two presents a literature review following a systematic approach and poses the question: Is personality disorder associated with recidivism? The findings are generally supportive of the view that some personality disorders are associated with a greater likelihood of recidivism. The limited good quality research available indicates the need for further research.

Chapter three presents a critique of a screening tool for personality disorder, the Standardised Assessment of Personality: Abbreviated Scale (SAPAS). It highlights that despite some shortcomings, the SAPAS is a simple, brief and useful first-stage screening tool for personality disorder that possesses adequate psychometric properties. It is proposed that a combined screening approach, using the SAPAS and Offender Assessment System Personality Disorder (OASys PD) screen, is necessary to improve the detection of antisocial cases, particularly in forensic populations.

In Chapter four an exploratory cohort study examines personality disorder in a UK sample of offenders, that have committed a further serious sexual or violent offence, whilst under the active supervision of the London Probation Trust. The study investigated the prevalence and type of personality disorders using the SAPAS and

OASys PD screen. Comparisons were made between serious further offence (SFO) offenders with and without personality disorder, and within the SFO group by type of SFO (violent or sexual). The SAPAS and OASys PD screen were also explored in relation to their ability to predict group membership (SFO vs. non-SFO). The study identified that personality disorder prevalence was higher in SFO offenders, particularly antisocial traits, and that the OASys PD and OASys risk of harm (RoH) classification are significant variables for predicting group membership. The study has added to the knowledge base and understanding of SFO offenders and has implications for the practice of Offender Managers/Supervisors in UK prisons and probation units. The findings support the efficacy of the screening approach used in the Offender Personality Disorder Pathway (DOH/NOMS, 2012), London Pathways Project.

A single case study is presented in Chapter five which evaluates the utility of psychological therapy with a man on Licence, presenting with traits of antisocial personality disorder. The difficulties associated with working with this client group are considered. In Chapter six a discussion of the work presented concludes the thesis. Overall, the thesis identifies some interesting findings in relation to the prevalence of personality disorder in SFO offenders and the utility of some key tools used in the assessment of offenders in probation/prison, and how these could be used in relation to risk management.

Dedication

"All that I am, or hope to be, I owe to my angel mother"

Abraham Lincoln

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CHAPTER ONE

Introduction

Personality disorder is a recognised mental disorder (Diagnostic and Statistical Manual of Mental Disorders (DSM), 5th edition, American Psychiatric Association, 2013; International Classification of Diseases (ICD), 10th revision, World Health Organization, 1992). People with personality disorder can have difficulty dealing with other people and the demands of life. They may have a narrow and rigid view of the world and they may find it difficult to participate and engage in normal social activities. As a result their behaviour can deviate markedly from the expectations of their culture which can lead to problems for themselves and others. Consequently personality disorder can be an emotive and misunderstood disorder, among both professionals and the public.

The two main classification systems for personality disorder are the ICD-10 (World Health Organization, 1992) and the DSM-5 (American Psychiatric Association, 2013). Within these systems there are a range of different types of personality disorder. Broadly speaking, there are ten types, which can be grouped into three clusters. Aside from the formal classification systems, personality disorders are often understood in terms of three Ps, reflecting their persistent, problematic, and pervasive nature.

A number of personality disorders are prevalent in criminal justice settings, however, many people with personality disorder never come into contact with the criminal justice system. Although there is some disagreement within the research as to which personality disorders are more frequently found within forensic populations, the most common types are borderline (Blackburn et al., 2003), antisocial (Blackburn et al., 2003; Singleton et al., 1998), paranoid (Singleton et al., 1998), obsessive-compulsive and schizotypal (Maier et al., 1992), and narcissistic personality disorder (Coid et al., 2003).

It is estimated that the prevalence of personality disorder within tertiary psychiatric services and prisons is between 70-90% (Fazel & Danesh, 2002; Ranger, Methuen, & Rutter, 2004). Within the UK prison and probation population personality disorder prevalence is estimated around 60-70% (Ministry of Justice, 2011). Personality disorders are commonly co-morbid with other personality disorders (Zimmerman,

Rothschild & Chelminski, 2005) or with mental illnesses (Sirdifield et al., 2009), and with drug or alcohol abuse (Ruiz, Pincus & Schinka, 2008; Gibbon et al., 2010).

There is growing evidence to suggest personality disorder is associated with a greater likelihood of recidivism (Coid et al., 2006; Hernandez-Avila et al., 2000; Listwan, Piquero & Van-Voorhis, 2010). Some studies suggest offenders with personality disorder are at least two times more likely to recidivate comparative to offenders without personality disorder (Fridell et al., 2008; Hiscoke et al., 2003). There is also evidence to suggest different diagnoses of personality disorder are associated with different types of offending behaviour. For example, offenders with borderline personality disorder are more likely to recidivate generally against property (Hernandez-Avila et al., 2000), whereas antisocial personality disorder is associated with greater levels of violent recidivism (Craissati & Sindall, 2009; Fridell et al., 2008; Hiscoke et al., 2003; Wormwith et al., 2007). Factors such as substance misuse in combination with personality disorder are also said to increase the likelihood of recidivism (Fridell at al., 2008; Walter et al., 2011).

Despite the evidence to suggest a relationship between personality disorder and offending there are significant gaps in the methods used to identity personality disorder within criminal justice settings. A wealth of personality disorder assessment tools exist, each with differences in terms of their psychometric properties. Screening tools that enable the identification of likely personality disorder are often easily administered and cost effective. The evidence base in respect of the validity and reliability of using such measures with forensic populations is growing, however, more research needs to be conducted as understanding which disorders are more prevalent in a sample may not only aid developmental understanding of the disorders, but also risk factors associated with it.

Fortunately the assessment and treatment of personality disorder continues to evolve. It was only in 2003 that the guidance ‘Personality Disorder: No Longer a Diagnosis of Exclusion’ was published by the National Institute for Mental Health for England (NIMH(E)). Although the purpose of the guidance was to encourage the development of services for those with personality disorder, the focus was largely in relation to

general mental health services. Within forensic services, Trusts were asked to consider how they could develop expertise in the identification and assessment of offenders with personality disorder in order to provide effective liaison with multi-agency public protection panels (Snowden & Kane, 2003). It was also recommended that a small number of specialist personality disorder centre's were developed in England, within regional forensic services. For those offenders categorised as dangerous and severely personality disordered, assessment and treatment was provided by two high-security hospitals and two high-security prisons.

Between February-May 2011, the Department of Health and Ministry of Justice consulted on an implementation plan for a new approach to working with offenders who have severe personality disorders (DOH/NOMS, 2012). This initiative, known as the Offender Personality Disorder Pathway will target offenders that are likely to have a severe personality disorder, are assessed as presenting a high likelihood of violent or sexual offence repetition, and have a high or very high risk of serious harm to others (the criteria for women is slightly different). There must also be a clinically justifiable link between the personality disorder and the risk.

A key principle of the strategy is that the personality disordered offender population is a shared responsibility of the National Offender Management Service (NOMS) and the National Health Service (NHS). Planning and delivery is based on a whole systems pathway approach across the criminal justice system and the NHS, recognising the various stages of an offender's journey, from conviction, sentence, and community based supervision and resettlement. Offenders with personality disorder who present a high risk of serious harm to others are primarily managed through the criminal justice system, with the lead role held by Offender Managers (OMs). Their treatment and management is psychologically informed and led by psychologically trained staff. The pathway will be evaluated focusing on risk of serious re-offending, health improvement and economic benefit.

Improvements are clearly being made in respect of the personality disordered offender population. However, the projects in the community are still in the early stages of implementation and are yet to be evaluated. In London, those elements of the pathway (including resources for screening and early identification of personality

disorder and support in terms of specialist psychologist input for offender managers working with this population) were rolled out in the community (Probation) in summer 2013.

As the Offender Personality Disorder Pathway plans on developing and delivering psychologically informed treatment and management of personality disordered offenders, this research could make an important contribution to understanding the relationship between personality disorder and recidivism. The prevalence of personality disorder in offenders that commit serious further offences whilst under the active supervision of the London Probation Trust is, however, largely unknown. This gap in the literature, combined with the recent personality disorder strategy has provided the rationale for undertaking the work presented within this thesis.

The overall aim of this thesis is to investigate the relationship between personality disorder and further offending in adult forensic populations across prison and probation. It comprises a systematic literature review of the existing available literature, an empirical research study investigating differences on personality measures in a sample of probationers that committed a serious further offence, a critique of the Standardised Assessment of Personality – Abbreviated Scale (SAPAS) developed by Moran, Leese, Lee, Walters, Thornicroft, and Mann (2003), and a single case study looking at the psychological assessment, formulation and treatment of a young man on Licence from prison, in the community with emerging antisocial personality disorder.

Chapter two aims to contribute to the overall understanding of the relationship between personality disorder and recidivism by examining the current literature on the subject using a systematic approach. The review begins with an introduction to the concept of personality disorder and approaches to classification. The literature examining the relationship between personality disorder and offending is then presented. The review goes on to consider the extent to which personality disorder is associated with greater likelihood of recidivism, and if personality disordered offenders are more likely to recidivate generally and/or more seriously via the commission of violent or sexual further offences. It also considers if certain types or clusters of personality disorder are associated with recidivism, and if other factors

such as substance misuse increase the likelihood of recidivism. A critique of the SAPAS follows in Chapter three. The critique explores the general principles of psychometric measurement and screening. A critique of the tool is offered through a review of the empirical evidence for the reliability and validity of the SAPAS. Consideration is given to its strengths and limitations, and applicability to practice in clinical and forensic settings.

The empirical research study presented in Chapter four investigates the prevalence and type of personality disorder using the SAPAS and Offender Assessment System Personality Disorder (OASys PD) screen in a sample of probationers that committed a further serious violent or sexual offence whilst under the active supervision of probation. Prevalence rates of personality disorder are presented and comparisons made between offenders with and without personality disorder. The research also explores personality disorder type and complexity by type of offence (violent or sexual), and the ability of the screening tools and the risk of harm classification to predict group membership (SFO vs. non-SFO)

A single case study is presented in Chapter five which looks at the psychological assessment, formulation and treatment of a young man on Licence in the community under the supervision of the London Probation Trust with an emerging antisocial personality disorder. Reflections are made in respect of formulating an individual in terms of their personality disorder, the evidence base for the psychological treatment of individuals with antisocial personality disorder, and the therapeutic relationship.

The thesis concludes in Chapter six with a discussion of the work presented, drawing together the main findings and considering implications for future research and practice.

CHAPTER TWO

A Literature Review following a Systematic Approach: Is Personality Disorder Associated with Recidivism?

Abstract

Objective: This review examined the association between personality disorder and recidivism. The objectives were to explore if personality disorder is associated with greater likelihood of recidivism; if personality disordered offenders are more likely to recidivate generally and/or more seriously; if certain types or clusters of personality disorder are associated with recidivism; and if other factors such as substance misuse increase the likelihood of recidivism.

Method: Scoping methods were employed to assess the need for the current review. Systematic searches were completed using five online databases (EMBASE, PsycINFO, Medline, Cochrane, Campbell Collaboration). Those studies with an adult forensic population, diagnosed with personality disorder, that go on to commit a further offence were included in the review. Papers were quality assessed using pre-defined criteria. Data was extracted and synthesised from included studies using a qualitative approach.

Results: Initially 1,317 references were identified, of which 275 duplicates were removed and 959 were rejected based on title. At the second stage screening, 83 abstracts were evaluated and 50 references were rejected using strict inclusion and exclusion criteria. In total, 33 full references were assessed using pre-defined quality assessment and data extraction pro-forma. Eight studies were included in the review.

Conclusions: The studies supported the view that personality disorder is associated with a greater likelihood of recidivism. Personality disordered offenders were more likely to recidivate generally against property; antisocial personality disorder was the most common personality disorder associated with recidivism; and comorbid substance misuse increased the likelihood of recidivism. The review findings were considered in relation to study quality and methodological limitations. Recommendations for further research were presented.

KEYWORDS: Personality disorder, offending, recidivism, systematic review.

Nb. The systematic review was presented as a poster (see Appendix 1) at the London Probation Trust research conference in 2012.

Introduction

The concept of personality

The concept of personality has a long history and is derived from the Latin word 'persona'. Human personality has been studied by a number of philosophers and writers, for example Plato, Aristotle and Descartes. Over the years various definitions of personality have been proposed. However, establishing a definition for personality that reflects modern conceptualisations in such a way that there is high consensus is a difficult task and it is unlikely that one definition will satisfy all.

In 1937, Allport defined personality as "*the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to the environment*" (p. 48) and later as "*the dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thought*" (Allport, 1961, p.28). Modern definitions of personality have not changed significantly. The Oxford dictionary defines personality as "the combination of characteristics or qualities that form an individual's distinctive character" (Oxford University Press, 2014).

Various approaches to the study of personality exist, for example, psychoanalytic, biological/genetic, and behavioural. The trait approach to personality, based on the premise that differences among people can be reduced to a limited number of distinct behavioural styles or traits, has been influential and remains popular. In 1966, Cattell developed a personality inventory based on sixteen primary personality dimensions that encompassed 171 trait names. Some theorists believed that sixteen basic personality factors were too many, and by a process of factor analysis, they found evidence that there was overlap among some of Cattell's dimensions.

The trait system supported by the most evidence is known as the 'Big Five' model (Costa & McCrea, 1992; Goldberg, 1990, 1993). In this model, human personalities can be fully described in terms of five dimensions (extraversion, neuroticism, agreeableness, conscientiousness and openness to experience). An alternative to this model, and one of equal influence, is Eysenck and Eysenck's (1964) theory of personality. This evolved over many years and comprises only two main dimensions:

neuroticism versus emotional stability and extraversion versus introversion. This resulted in a two dimensional classification system of personality. A third dimension, psychoticism, was later introduced (Eysenck & Eysenck, 1976). It was conceptualized on a continuum in which psychopathy was defined as half way to psychosis.

How such theory relates to crime remains a controversial topic. Some have attempted to define a criminal personality (Eysenck & Eysenck, 1976; Eysenck, 1977; Eysenck & Gudjonsson, 1989). Other traditional criminological theories include the cognitive-developmental theory in which moral development is considered a critical factor. Integrated theories, for example the strain, control, and social learning theories integration proposed by Elliott, Huizinga and Ageton (1985, cited in Blackburn, 1993) take into account various components and as a result may be more successful in predicting criminality. Incorporating the individual difference variables suggested by Eysenck and Kohlberg, drawing on the findings from the Cambridge study, Farrington and West (1990) proposed that an antisocial tendency depends on a number of personality factors such as low arousal, impulsivity, low empathy and motivation for acquisition of material goods. The relationship between personality and offending is explored in more detail later on in the chapter.

There are clear differences in how various theories understand and conceptualise personality. The same can be said for the classification of offenders which, like any group of people, notwithstanding some similarities, are heterogeneous. While personality traits and personality disorders are two different constructs, personality disorders may be on a continuum with general personality functioning. As a result, the cut-off between normal and abnormal personality functioning is often unclear, hence why a considerable amount of personality disorder symptomology is seen within the general population (Livesley, 2003; Widiger & Sanderson, 1995). It is therefore important to consider what a personality disorder is and how personality disorders are formally classified.

Classification of personality disorders

The concept of personality disorder has a long history which pre-dates the Diagnostic and Statistical Manual (DSM) or the International Classification of Diseases (ICD).

Both the major classification systems, the International Classification of Diseases, 10th revision (ICD-10; World Health Organization, 1992) and the Diagnostic and Statistical Manual of Mental Disorders, 4th edition text revision (DSM-IV-TR; American Psychiatric Association, 2000) include various personality disorder categories. The latter, as the preferred diagnostic system for this research, includes the disorders under Axis II (developmental disorders and personality disorders).

Here personality traits are defined as "*an enduring pattern of inner experience and behaviour that deviates markedly from the expectations of the person's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment"* (APA, 2000, p. 686). In this way traits constitute personality disorder when they are inflexible, maladaptive and of an enduring nature. Personality disorder is therefore considered to be constructed from a complex pattern of ingrained psychological traits (Millon, 2004). This commonly results in social dysfunction and at times, subjective distress. Therefore personality disorder is said to be present when the structure of personality prevents the person from achieving adaptive solutions to universal life tasks (Livesley, 1998).

The DSM-IV-TR (APA, 2000) states that in order to receive a formal diagnosis of personality disorder the pattern must be manifested in at least two of the following areas: cognition (ways of thinking and perceiving about self and others), affect (range, intensity and appropriateness of emotional response), and behaviour (interpersonal functioning, occupational and social functioning and impulse control). The onset of personality disorder is usually in childhood or adolescence and thus is stable and of long duration.

The DSM-IV-TR (APA, 2000) categorises personality disorder into 10 types which are commonly grouped into three clusters. These are outlined in Table 1 below. Each disorder consists of a unique combination of attitudes, emotions and behaviours. Cluster A contains those disorders considered odd or eccentric; cluster B includes dramatic, emotional or erratic disorders and cluster C is defined by anxious or fearful disorders.

Table 1

DSM Personality Disorder Clusters and Summary Description

Cluster	Personality disorder	Summary description
A	Paranoid	Characterised by high levels of mistrust and suspiciousness. Easily provoked into feeling unfairly treated or attacked, developing grievances and 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 sexual activity with another person; enjoys few activities; few close friends or confidants; emotionally cold, detached or bland.
	Schizotypal	Characterised by difficulties in establishing and maintaining close relationships with others. Extreme discomfort with such relationships and less capacity for them. 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;

		behaviour/appearance that is odd, eccentric or peculiar; lack of close friends; excessive social anxiety.
B	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; deficient social conscience.
	Histrionic	Characterised by attention seeking behaviour and extreme emotionality. Strong desire to be the centre of attention. Common features include: discomfort 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.
	Borderline	Characterised by an unstable sense of self, moods and relationships. Frequent emotional crises, 'black and white' thinking, deliberate self harm, suicide attempts and impulsive risky behaviours. Commons 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.

	Antisocial	Characterised by childhood conduct disorder, and impulsivity, irresponsibility, remorselessness and frequent rule breaking in adulthood. Common features includes: failure to conform to social norms with respect to lawful behaviours; deceitfulness; 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 others; consistent irresponsibility.
C	Dependent	Characterised by a negative self concept associated with core feelings of helplessness and inadequacy and a corresponding need to be taken care of. Common features include: intense fear of being alone; actively attach themselves to others; highly suggestible; need for reassurance; pervasive feelings of anxiety; passive, under assertive and submissive.
	Obsessive-compulsive	Characterised by excessive self-control, a pre-occupation with order, rules, hierarchies and an unwavering conviction in their high moral, ethical and professional standards. 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.

A number of personality disorders have been removed from the DSM-IV, for example passive-aggressive, depressive, and sadistic. These can be reflected under the term 'personality disorder not otherwise specified' (PDNOS) which can be diagnosed under the criterion that the individual displays symptoms of two or more personality disorders with impaired social and interpersonal functioning. PDNOS also commonly reflects cases in which an individual has scored on several personality disorder criteria but does not meet the criteria for any one specific personality disorder.

The DSM-IV-TR and the ICD-10 are fairly similar to each other with the exception that the Schizotypal and the Narcissistic personality disorders are not classified in the ICD-10. Antisocial and dissocial personality disorder are also conceptualised differently. The latter focuses more on interpersonal deficits, for example, incapacity to experience guilt, and less on antisocial behaviour. Furthermore, symptoms of conduct disorder in childhood are not a prerequisite. The ICD-10 also distinguishes between two types of the Emotional Unstable personality disorder, by way of an impulsive type and a borderline type. The American Psychological Association (APA) proposed that a number of disorders and subordinate clusters would be removed with the publication of the DSM-5 (APA, 2013).

Categorical vs. dimensional classification

The international standard is to diagnose personality disorder using these classification systems (DSM and ICD), however, the DSM-IV definition of personality disorders has been widely criticized. Limitations include problems of overlap between the differing personality disorder diagnoses, heterogeneity among individuals with the same diagnosis and inadequate reflection of personality psychopathology (Clark, Livesley & Money, 1997; Clark, 2007; Tyrer et al., 2007; Westen & Arkowitz-Westen, 1998).

Some argue that the individual DSM-IV personality disorder diagnoses do not help practitioners to make treatment decisions (Livesley, 2007). Consequently, in deciding on which intervention and/or therapeutic approach to use, practitioners often have to focus on the specific components of personality disorder (such as avoidance, impulsivity or mood instability) rather than the overarching diagnosis. A further

criticism is the number of criteria required for diagnosing or eliminating personality disorder, which is resource intensive for practitioners (Cloninger, 2000).

The DSM-IV had been undergoing major revisions for some years, and in May 2013 the DSM-5 was published (APA, 2013). Prior to the DSM-5 there was growing evidence in favour of a dimensional rather than a categorical system for classifying personality disorders (Livesley, 2007). Widiger and Simonsen (2005) presented a summary of alternative dimensional models of personality disorder. They summarised eighteen models ranging from proposals to provide dimensional representation of existing constructs (for example, Westen & Shedler, 2000) to proposals integrating Axis II with dimensional models of general personality structure (for example, Zuckerman, 2002). A trait approach to personality disorder diagnosis was considered in the revision of the DSM-IV. Using a trait-specific method, clinicians could have determined if their patients had a personality disorder by looking at the traits suggested by their symptoms and ranking each trait by severity. This model was however considered too complex for clinical practice.

Although it relies mainly on a categorical diagnosis, a dimensional model of personality disorder is reflected in the fifth edition (DSM-5, APA, 2013). Dimensional classification presents a variable number of traits as a continuous scale in which each person has a particular position on the scales. Several dimensional systems to describe personality already exist. The most commonly used is the 'Big Five' model (Costa & McCrea, 1992). The dimensional approach is advantageous because it gives more information about the individual. A more realistic understanding of the individual can be applied in a variety of settings.

In comparison, the categorical approach defines the presence or absence of a disorder. It is therefore more suited to a medical approach as it offers a quick system of categorising things, which is easy to communicate and useful in clinical decision making i.e. who should enter into treatment. Unfortunately, it misses out a lot of information, such as the subtleties of personality, which is seen in the heterogeneity of the categories. Both the categorical and dimensional approaches are complementary as it is possible to 'translate' the dimensional system into a categorical approach.

The DSM-5

The new diagnostic system, the DSM-5 (APA, 2013), adopts a hybrid dimensional-categorical model in which personality disorders are aligned with particular personality traits and levels of impairment. This enables personality characteristics to be described for each individual rather than classification by one or more categories of disorder.

During the development process of the DSM-5, several proposed revisions were drafted that would have significantly changed the method by which individuals with personality disorders are diagnosed. Although the DSM-5 ultimately retained the DSM-IV categorical approach, with the same 10 personality disorders, an alternative hybrid dimensional-categorical model was included in a separate section of the manual (Section III).

The hybrid model aims to address existing issues with the categorical approach to personality disorders. It retained six personality disorder types: borderline, obsessive-compulsive, avoidant, schizotypal, antisocial and narcissistic personality disorders. This approach also includes a diagnosis of personality disorder-trait specified (PD-TS) that could be made when a personality disorder is considered present, but the criteria for a specific personality disorder are not fully met. In such cases, the clinician would assess the severity of impairment in personality functioning and the problematic personality trait(s) (APA, 2013a).

Using this model as an alternative, clinicians would diagnose a personality disorder based on an individual's particular difficulties in personality functioning and on specific patterns of pathological traits (APA, 2013a). Consequently, this model has improved capacity to accommodate heterogeneity of both the level of personality functioning and pathological traits within types of personality disorder. It was also included to encourage further study on how this methodology could be used to assess personality, and diagnose personality disorders in clinical practice.

Personality disorder and the offending population

Although having a personality disorder does not determine criminal behaviour, high rates of personality disorder have been found in forensic populations. Epidemiological

studies suggest that the prevalence of personality disorder within tertiary psychiatric services and prisons is between 70-90% (Fazel & Danesh, 2002; Ranger, Methuen, & Rutter, 2004). Within the UK prison and probation population, personality disorder prevalence is estimated around 60-70% (Ministry of Justice, 2011).

In terms of types of personality disorders, in the UK prison population the prevalence of antisocial personality disorder (ASPD) has been identified as 63% in male remand prisoners, 49% in male sentenced prisoners and 31% in female prisoners (Singleton, Melzer & Gatward, 1998). Similarly, Hare (1983) found that 39% of prisoners from two Canadian prisons met the criteria for ASPD, a diagnosis also common amongst substance abusers (Ruiz, Pincus & Schinka, 2008; Gibbon et al., 2010), and Clark (2000) found that 15% of general offenders are thought to meet the criteria for psychopathy.

It was Henderson (1939) that laid the foundations for the modern definition of ASPD. He described individuals with 'psychopathic states' as those 'who conform to a certain intellectual standard but who throughout their lives exhibit disorders of conduct of an antisocial or a social nature'. Work in the USA by Cleckley (1941) and McCord and McCord (1956) further influenced the notion of an antisocial personality. They presented a psychopathic personality as a distinct clinical entity. The core criteria focused on antisocial behaviours, with an emphasis on aggressive acts.

While these views have been influential in shaping classifications of psychopathy, sociopathy and ASPD, the criteria for ASPD as specified in DSM-IV have been widely criticised. Some argue that there is a focus on antisocial behaviour rather than on the underlying personality structure (Widiger & Corbitt, 1993). This has led to the argument that ASPD may be over-diagnosed in certain settings, such as prison, and under-diagnosed in the community (Ogloff, 2006). As those with ASPD exhibit traits of impulsivity, high negative emotionality and low conscientiousness, the condition is associated with a wide range of interpersonal and societal disturbance (NICE, 2010). Consequently, criminal behaviour is central to the DSM-IV definition of ASPD, however, there is more to ASPD than criminal behaviour, otherwise all those convicted of a criminal offence would meet the criteria for the disorder.

Although prisoners from western countries typically have a ten-fold excess of ASPD in comparison to the general public (Fazel & Danesh, 2002), this is not the only personality disorder found within forensic populations. Borderline personality disorder (BPD, Sansone & Sansone, 2009), narcissistic personality disorder (McManus et al., 1984) and paranoid personality disorder (Coid, 1992, 1998) are also prevalent.

In contrast to prison samples, personality disorder prevalence in the general population is estimated at between 10-19% (Paris, 2008). Epidemiological studies in the community estimate that only 47% of people meeting criteria for ASPD had significant arrest records (Robins & Price, 1991). A history of aggression, unemployment, promiscuity and substance misuse were more common than serious crimes among people with ASPD.

The literature highlights the high prevalence of personality disorder within offender groups. Although the relation of crime to personality disorder has been established, the issue of causality remains. The nature of the relationship has been researched and findings indicate that the various clusters of personality disorder are each associated with different types of offences. For example, Borchard, Gnoth, and Schulz (2003) discovered that at least 72% of their sample (47 mentally ill sex offenders) met the criteria for at least one personality disorder, with the highest prevalence in cluster B disorders (firstly ASPD). Applying the Millon Clinical Multiaxial Inventory (MCMI, Millon, Millon, Davis & Grossman, 1997) to a sample of adult rapists, Chantry and Craig (1994) found that their sample either demonstrated an emotionally detached personality style with dependent personality features, or an independent personality style characterized by narcissism and antisocial features. In comparison, child sex offenders demonstrated a primarily detached personality style, with dependent personality traits, with or without passive-aggressive features.

A study by Gudjonsson and Sigurdsson (2000) found that sex offenders are significantly more introverted than violent offenders, who along with rapists were more commonly intoxicated during the commission of the offence. Given the issues with how the disorder is conceptualised, it is not surprising that ASPD is the most

clearly associated personality disorder with violence (Coid et al., 2006; Fountoulakis, Leucht, Kaprinis, 2008; Varley-Thornton, Graham-Kevan & Archer, 2010).

The picture, however, is complex. Factors such as substance misuse and comorbid Axis I disorders are confounding factors that are particularly prevalent in prison populations (Sirdifield et al., 2009). In addition, individuals with personality disorder typically present with more than one personality disorder (Zimmerman, Rothschild & Chelminski, 2005). The latter was illustrated by Coid et al., (2006) who found that traits of both ASPD and borderline personality disorder, together with paranoid and narcissistic/histrionic traits, produced a higher order antisocial factor associated with a history of violent and non-violent criminal offending. This was consistent with findings from a study by Johnson et al., (2000) which found that the presence of paranoid, narcissistic and passive-aggressive traits in adolescence increased the risk of committing violent acts and criminal behaviour during adolescence or early adulthood.

Coid (2003) presented a developmental framework to aid understanding of risk factors for high risk offenders with personality disorder (see Table 2). The model assumes that with progression through the four stages, comes increasing severity of personality disorder and antisocial behaviour. The impact of protective factors is recognised, along with the fact that the majority of individuals desist from crime during the earlier stages, and thus do not meet the final stage. However, the model illustrates that once the individual has the risk factors identified in the early stages, the likelihood of these developing and exposure to subsequent risk factors increases (Coid, 2003). This model will be referred to in the research chapter (Chapter 4) and the case study chapter (Chapter 5).

Although the relationship between crime and personality disorder is established in the literature, it is complex and will be explored further in Chapter 4. Despite extensive literature exploring the role of personality in criminal behaviour, weaker evidence exists examining personality disorder in the prediction of future reoffending. The empirical study (Chapter 4) aims to explore this in a sample of offenders on probation.

Table 2

Longitudinal (Developmental) Conceptual Framework for High Risk Offenders with Personality Disorder (Coid, 2003)

Stage	Age	Risk factors
A	*Childhood*	Genetic
	Temperament	Prenatal, perinatal
	Oppositional defiant disorder	Family environment
	Attention-deficit hyperactivity disorder	CNS integrity, IQ
	Conduct disorder	Poverty, housing
B	*Late childhood/adolescence*	Few protective factors
	Escalating delinquency	Physical/sexual abuse
	Peer-group problems	Family disruption/criminality
	Emerging borderline features	Neighbour/peer/school influences
	Psychosexual maladjustment	
C	*Early adulthood*	Pattern set by earlier factors, maintained by:
	Persisting criminality	- Criminal subculture
	Criminal lifestyle/versatility	- Imprisonment
	Substance misuse	- Social isolation
	Poor work record	- Anti-establishment attitudes
	Relationship difficulties	- Lack of alternatives/skills
	Sexual deviations	
	Hierarchical appearance of Axis I disorders	
D	*Mid-life*	
	Career criminality	
	Psychopathy (high PCL-R score)	
	Multiple axis I disorders	
	Repetitive, pervasive antisocial behaviour	
	Institutionalism in secure facilities	

Key: CNS, central nervous system; IQ - PCL-R, Psychopathy Checklist-Revised

The way in which recidivism is measured by researchers as the criterion outcome variable can vary significantly, and depends on the manner in which recidivism is operationalised i.e. on the basis of arrest, or charge or conviction. The source of data

itself can also vary. At present there does not appear to be a universally agreed method of operationalising recidivism.

Nonetheless, there is evidence to suggest that relative to mentally ill patients, reconviction rates are higher in those with personality disorder (Davies, Clarke, Hollin & Duggan, 2007). In contrast to the evidence base on the more general association between personality and crime, there does not appear to be either a systematic review or meta-analysis of the literature focusing specifically on personality disorder and recidivism.

Appraisal of previous reviews

Initial scoping identified two systematic reviews and one meta-analysis of partial relevance, in that they were based on the more general relationship between personality disorder and crime. In acknowledging the established association between personality disorder and offending, Davidson and Jancar (2012) sought to understand the nature of the relationship by reviewing the literature on personality disorder and offending. They found that the personality disorder clusters were each associated with different types of offences. They discovered high rates of personality disorder in serious offenders and that the role played by personality disorder may be greater in some offences than others. They concluded that frameworks integrating personality traits with other factors such as comorbid substance misuse and situational factors are helpful when considering risk assessment, risk management and treatment.

Another review by Woodward, Williams, Nursten and Badger (1999) focussed on the epidemiology of mentally disordered offending, based in the general population, examining criminality and psychiatric illness. They included international literature from 1990 onwards and only reported studies based on the general population. When they were unable to access studies they approached authors and publishers. They found two cross-sectional surveys and seven cohort studies that met their criteria, the most useful data coming from cohort studies in Scandinavia. The review identified prevalence rates of mentally disordered offenders and predictors for future mentally disordered offending. Violence was found to be a particular feature of mentally disordered offending. The review did not identify another systematic epidemiological study of mentally disordered offenders. It concluded that the included studies

generally made poor use of statistical methodology, and that further analysis was required to better evaluate the evidence.

A meta-analysis by Gong (2006) reviewed 33 studies on criminals' personality. The analysis concluded that criminals have significantly higher levels of psychoticism and neuroticism than non-criminals. However, no significant difference was found between criminals and non-criminals because of the heterogeneity of criminal types. Unfortunately this study was published in Chinese and it was not possible to get it translated.

Why it is important to do this review

Personality disorder is an important condition with high prevalence in forensic populations. Personality disordered offenders have a considerable impact on individuals, families, professionals and society, and the disorder has implications on treatment and management. ASPD in particular is associated with significant costs, arising from emotional and physical damage to victims, damage to property, use of police time and involvement of the criminal justice system and prison services (Gibbon et al., 2010). Although many have attempted to understand the relationship between personality disorder and crime, the evidence base examining personality disorder and recidivism is sparse and limited by poor methodology. To date there has not been any systematic attempt to establish whether personality disorder is associated with re-offending. Rather most studies focus on populations with severe and enduring illness, such as schizophrenia, and offending over a follow-up period with samples that often do not have a prior history of offending.

A clearer understanding of the association between personality disorder and re-offending has potentially important implications for various agencies. For example, the Parole Board when making parole decisions, Prison Governors when considering suitable release licence conditions, and Probation teams supervising offenders in the community (issues around case management, breach and recall back to prison).

Objectives

To date much of the literature has focussed generally on personality and offending/crime. This is potentially the first systematically informed review that will focus specifically on personality disorder and reoffending. Therefore, the present review aims to expand the current knowledge on the relationship between personality disorder and recidivism by way of presenting what may be the first systematic approach to identify and appraise the literature of this type.

The main objectives are:

1. To determine if personality disorder is associated with greater likelihood of recidivism
2. To determine if personality disordered offenders are more likely to recidivate generally and/or more seriously i.e. via the commission of violent or sexual re-offences
3. To determine if certain types or clusters of personality disorder are associated with recidivism
4. To determine if other factors such as substance misuse increase the likelihood of recidivism

Planning the review

Initial scoping was undertaken in January 2012. More detailed scoping was undertaken in July 2012 which identified over 1000 references. A preliminary search of the Cochrane Library and Campbell Library did not identify any existing reviews on the association between personality disorder and recidivism, rather the reviews focussed on pharmacological/psychological interventions for personality disorders.

Method

Following initial scoping, the search strategy outlined below was employed. Due to limited resources the author chose to limit the search to references published from 1980 onwards.

Inclusion/exclusion criteria

Specific inclusion and exclusion criteria were developed after the scoping search. The review question was defined according to the Population, Intervention, Comparator, Outcome (PICO) inclusion/exclusion criteria outlined in Table 3. All studies considered to be relevant were subject to these criteria.

Table 3

PICO Inclusion/Exclusion Criteria

	Inclusion	**Exclusion**
Population	Adult (18 years+) offenders who: Have at least one conviction (any type) for an offence (any type) committed in adulthood *And,* Have been diagnosed with Personality Disorder using an empirically based instrument i.e. IPDE, PAI, SCID, or SAP.	Adults with no previous convictions *And,* Offenders <18 years *And,* Adult offenders with a primary mental illness i.e. Schizophrenia *And,* Offences committed when primary mental illness was active *And,* Studies based solely on a female sample.
Exposure	Personality assessment using an empirically based assessment tool (based on DSM or ICD criteria).	Personality assessment using clinical judgement only.
Comparator	Adult offenders without a diagnosis of Personality Disorder. *Or,* Those that don't go on to recidivate.	Non criminal controls.
Outcomes	Recidivism (any further offence) at any	Recidivism solely based on a technical violation i.e. failure to

	point in time as measured by: Arrest *Or*, Charge *Or*, Legal conviction.	appear at Court or not signing onto a register within a designated time.
Study design	Any experimental study (RCTs, quasi-exp) with or without controls *And*, Any observational study (cohort, case control, cross-sectional, before and after, case series) with or without controls.	Case reports Expert opinion reports
Language	Studies reported in English	Non English

Using a short PICO checklist form all the studies were assessed for inclusion based on the pre-defined inclusion/exclusion criteria. Studies that fulfilled all the inclusion criteria were then quality assessed.

Sources of literature

Five bibliographic electronic databases (PsychINFO; MEDLINE; EMBASE; Cochrane Library and the Campbell Collaboration) were searched, initially in January 2012 and again in August 2012.

Authors were contacted where necessary. Reference lists of studies were hand searched. Other methods were also utilised to increase the likelihood of finding relevant articles and possible 'grey' literature. These included using the ethesis portals, a search of the University of York Centre for Reviews and Disseminations, and the internet search engine Google. Hand searching of the Probation Journal and consultation with experts in the field was also undertaken.

Search methods for identification of studies

The search terms used for PsychINFO, MEDLINE, EMBASE, Cochrane Library and the Campbell Collaboration are presented below.

Search terms

The following search terms were applied to all databases (title search only):

(Personality) OR (personality traits) OR (personality disorder)

AND

(Recidivism) OR (reoffending) OR (sexual reoffending) OR (violent reoffending) OR (criminality) OR (criminal behaviour) OR (crime)

Database search

The following shows how relevant publications were sought:

1. Electronic Bibliographic databases

   First search:

   OVID: MEDLINE (R) (1980 - August week 1 2012, completed on 11th August 2012)

   OVID: PsycINFO (1980 - August week 1 2012, completed on 11th August 2012)

   OVID: EMBASE (1980 - 2012 week 32, completed on 11th August 2012)

   Second search:

   ProQuest: ASSIA (1980 – current, completed on 12th August 2012)

   ProQuest: NCJRS (1980 – current, completed on 12th August 2012)

   ProQuest: Dissertation and These AI (1639 – current, completed on 12th August 2012)

2. Gateways

   Cochrane CENTRAL (1980 – 2012, completed on 21st January 2012)

   Campbell Collaboration (1980 – 2012, completed on 21st January 2012)

3. Key meta-analyses and reviews (Google search, Pubmed search and the University of York Centre for Reviews and Disseminations)

Only one existing meta-analysis (Gong, 2006) and two systematic reviews (Davidson & Jancar, 2012; Woodward, Williams, Nursten & Badger, 1999) of partial relevance were identified as a result of the electronic database search. No reviews specifically focussing on the association between personality disorder and recidivism were identified.

4. Hand searching of The Probation Journal: The Journal of Community and Criminal Justice.

5. Consultation with experts in the field.

All references identified online were exported directly into Microsoft Word and PDF files. References found via the hand search and consultation were entered manually. Search syntax for the first search can be found in Appendix 2, and for the second search in Appendix 3.

Data collection and analysis

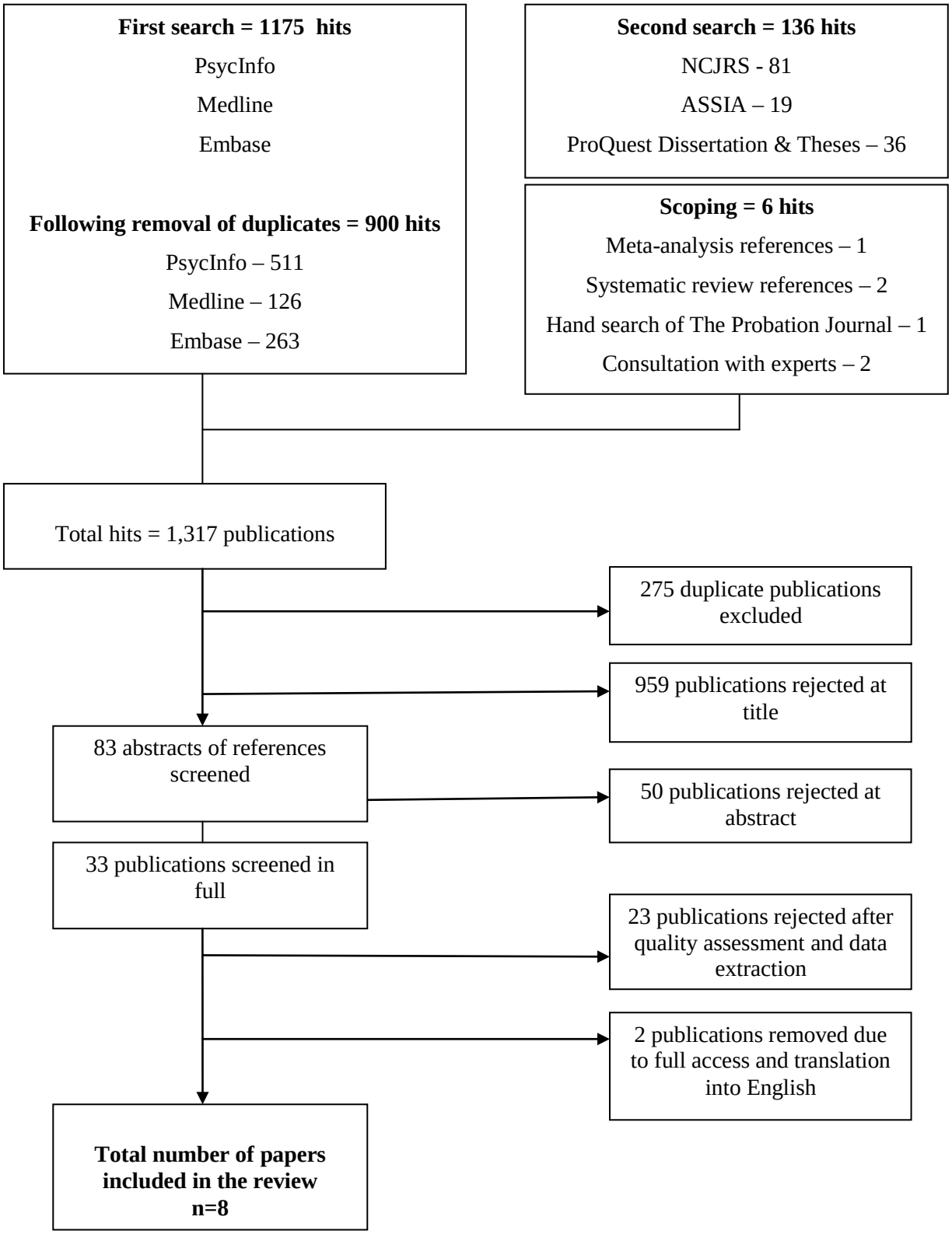
Sorting process

Two reviewers independently assessed each reference identified by the search to check its eligibility. The process of study selection is illustrated in Figure 1.

The full search produced 1,317 hits of which 6 were identified as a result of the scoping exercise. Two hundred and seventy five duplicates were removed, and a further 959 studies were rejected based on title. The remaining 83 study abstracts were reviewed. Applying the PICO criteria to these, a further 50 did not meet the inclusion criteria and were rejected. Reasons for exclusion were largely on the basis of the study recruiting females only (for example, Marks, 2011; Peols, 2007; Warren & South, 2009), offending populations but not recidivists and a focus on primary mental illness rather than personality disorder.

Figure 1

The Process of Study Selection and Search Results



The remaining 33 papers were screened using the Inclusion and Exclusion criteria, quality assessment and data extraction pro-forma. Twenty three publications were excluded due to poor study quality as they did not meet the minimum threshold criteria, and/or as a result of the study characteristics. The main reasons for exclusion at this stage included studies using adolescent samples (for example, Ge, Donnellan, Wenk & Crim, 2003; Van Horn, Eisenburg, Van Kuik & Van Kinderen, 2012; Van Dam, De Bruyn & Janssens, 2007), samples predominantly suffering from a primary diagnosis of severe and enduring mental illness, such as schizophrenia (for example, Eronen, Hakola & Tiihonen, 1996; Snowden, Gray, Taylor & MacCulloch, 2007; Gray, Taylor & Snowden, 2008), assessment of personality disorder using measures with little or no published information about their psychometric properties (for example, Craissati & Sindall, 2009; Puentes, 1999) and assessment of personality disorder using clinical judgement alone, following review of file based information (for example, Coid, Hickey, Kahtan, Zhang & Yang, 2007). The study by Coid et al., (2007) also included a large subgroup with no previous convictions.

Two other papers were excluded as they were non-English papers. The remaining eight papers were included in the review. Details of included studies are presented in Table 4.

Table 4

Demographics of Included Studies and Summary Conclusions

Authors, year, location of study	Participants	Control or comparison	Diagnostic approach	Average follow-up time	Outcome measures	Findings
Fridell, Hesse, Jaeger & Kuhlhorn 2008 Sweden	N=1045 Patients admitted to short term detox & rehab unit of a hospital for drug abuse Registered offenders 71.2% male 32.5% living with a partner 28.5% working or studying 54.3% on welfare support ASPD in 228 p's Substance use disorder for: Cannabis 23% Opiates 37% Stimulants 31% Other 9%	No control group but comparator used (ASPD vs. no ASPD)	SCID-II for 138's Triangulation process not including an empirically based assessment used with remainder	17.5 years	Recidivism measured by criminal behaviour data from the National Database of Criminal Justice. 3 types of re-offending of interest: Property crimes Violent crimes Drug related crimes	Participants' diagnosed with ASPD were 2.16 times more likely to be charged with theft and 2.44 times more likely to be charged with committing multiple types of crime during an observation year. ASPD, stimulant use, male gender and young age were found to be strong predictors of criminal behaviour.

Hiscoke, Langstrom, Ottosson & Grann 2003 Sweden	N=168 Adult offenders referred for forensic psychiatric evaluation Mean age: 35.74 years 93% Swedish citizens 94% male 57% diagnosed with PD	No control group but comparator used (ASPD vs. no ASPD)	DSM-IV and ICD-10 Personality Questionnaire (DIP-Q)	36 months	Recidivism measured by reconviction for any criminal offence according to the Swedish Penal Code. This excluded minor traffic offences.	4.8 times higher risk for any recidivism and a 3.7 times higher risk for violent recidivism among participants DIP-Q that suggested a categorical diagnosis of ASPD as compared to offenders without ASPD. The remaining nine DSM-IV PD diagnoses were not significantly related to recidivism. In dimensional analyses each additional symptom for ASPD and Schizoid PD increased the risk for violent offending.
Listwan, Piquero & Van voorhis 2010 Indiana, USA	N= 64 Male federal prison inmates White collar offenders Mean age: 39 years Ethnicity: Caucasian 69% African American 26% Hispanic or Asian 4% Relationship status: Married 59% Single13% Divorced 14%	No control group	Jesness Inventory	11.5 years	Recidivism measured by arrest data from the National Crime Information Centre and including arrests made during period of incarceration	Personality was important in predicting recidivism in their sample; the Jesness aggressive type and neurotic personality type were both considered to be important in increasing the probability of re-arrest.

Walter, Wiesbeck, Dittmann & Graff 2011 Switzerland	N=379 (defendants subject to forensic psychiatric evaluation) Four groups: PD + SUD (n=84) PD no SUD (n=86) SUD no PD (n=97) Controls (n=112) 18-86 years old 85% male	Control group described as "other psychiatric disorder"	Structured Clinical Interview for DSM IV Axis II disorders (SCID-II) and Psychopathy Checklist Screening version (PCL:SV)	8 years	Recidivism measured by criminal record data from the Swiss Bureau of Justice	Most criminals had one PD diagnosis; 43% in either group had two+ PD's; the overall recidivism rate was 41.4%; general recidivism was highest in the PD+SUD group (two fold higher risk); the groups differed significantly in the rate of violent recidivism; violent recidivism was highest in the PD only group.
Wormwith, Olver, Stevenson & Girard 2007 Canada	N=61 Male offender sample including federal inmates (n=20), provincial inmates (n=21) and probationers (n=20) Average age: 25.7 years Age range: 18-45 years Ethnicity: Caucasian 93.4% Aboriginal or other 3.3% Unknown 3.3% 50 met criteria for ASPD	No control group	DSM-III antisocial personality disorder using an interview protocol and file information to verify self report.	11.1 years	Recidivism measured by criminal record data from the Canadian Police Information Centre to include the number and nature of new charges, convictions, sentencing dates and sentence length.	ASPD predicted future violence, future re-incarceration and recidivism severity; ASPD criterion D (persistent antisocial behaviour without a significant intervening period over 5 years) accounted for most of the ASPD variables relationship to the outcome of recidivism.

Hernandez-Avila, Burleson, Poling, Tennen, Rounsaville & Kranzier 2000 Connecticut, USA	N=370 Male (44.1%) & female drug & alcohol dependent patients, 50% from an outpatient treatment programme, 50% from an inpatient setting. Self reported offending history. Average age: 32.6 years. Ethnicity: Europ. American 55.7% African American 34.6% Hispanic 9.7% Personality diagnoses reported: ASPD 27% Borderline 18.4% Paranoid 13.2% Histrionic 11.9% Narcissistic 9.5% Schizotypal 4.6% Schizoid 3.8%	No control group	SCID-II for substance use disorder (SUD) and personality disorders (PD's)	1 year	Recidivism measured by self reported criminal behaviour.	Patients with ASPD were more likely to report having committed a variety of crimes before the treatment period; those with borderline or schizoid PD reported a greater number of pre-treatment violent crimes; number of PD diagnoses correlated with the number of crimes against property; post-treatment a diagnosis of borderline PD predicted the commission of violent crimes; ASPD did not predict criminality during the follow-up period.
Glover, Nicholson, Hemmati, Bernfield & Quinsey 2002 Canada	N=106 Male federal (incarcerated for 2 years or more) offenders. Mean age: 29.69 years.	No control group	Anti-social personality disorder scored as a scale (ASPD-S) employing DSM-IV items scored from file information	714 days	Recidivism measured by arrest data from file information and the Correctional	No significant difference was found between recidivists and non-recidivists on the ASPD-S; other measures implemented (risk assessments) were

	Mean sentence length: 5.10 years. Mean no. violent convictions 2 Education length: average 9.62 years				Service Canada Offender management System. Technical violations of parole not included	significantly more highly correlated with violent recidivism than the ASPD-S.
Boccaccini, Murrie, Hawes, Simpler & Johnson 2010 Texas, USA	N=1412 Incarcerated male sex offenders. Average age: 42.84 years. No. prior arrests: range 1-55 Ethnicity: 51.9% white 26.7% Hispanic 20.8% black	No control group	Focus on four Personality Assessment Inventory (PAI) scales: Antisocial features Aggression Dominance Violence Potential Index	4.9 years	Recidivism measured by post release arrest data from the Texas Dept of Public Safety and Sex offender registry violations	The Aggression scale within PAI was the most consistent predictor of recidivism although not for sexually violent recidivism; the PAI may be of limited value in improving risk assessments.

Quality assessment

Quality assessment of included studies (n=8) was undertaken to gauge the overall quality of the evidence. Quality was assessed using pre-defined criteria in the form of a checklist adapted from the Critical Appraisals Skills Programme made explicit beforehand (see Appendix 4). Study quality was assessed in two steps:

1. The following screening questions were applied to each study:
   Did the study address a clearly focused issue?
   Did the authors use an appropriate method to answer their question?

2. Studies were then assessed on the basis of sampling and selection bias, performance bias, detection bias, attrition bias and statistical analysis. The studies were scored accordingly:

   N = criteria not met (0)
   P = criteria partially met (1)
   Y = criteria fully met (2)
   U = unclear/insufficient information (scored separately)

Any study that did not meet part 1 criterion was excluded as they did not meet the minimum quality threshold. Studies then received a score of two if they fully met the criteria, a score of one if they partially met the criteria, or a score of zero if they did not meet the criteria. If it was unclear that the criteria were met, the study would be scored one for each unclear item.

The author assessed all eight studies, and a secondary reviewer, assessed a third of the studies to ensure consistency in the assessment of quality. Any differences between the quality ratings were discussed and decided upon by consensus. The overall study quality score was determined by summing the scores for each item on the quality assessment form. The higher the total score the better quality the study was judged to be. The clarity of reporting was assessed by totaling the number of unclear items. The higher the score the less accurate the reporting was deemed to be. Table 5 provides details of the quality assessment for included studies.

Table 5

Quality Assessment of Included Studies

Study & sample size	Acceptable sampling & selection processes?	Drop-out rate & reasons reported?	Personality assessed using an empirically based instrument?	Was outcome measure better than self report?	Adequate follow-up length?	Quality assessment Scores (quality/ clarity)
Fridell et al., 2008 N=1045	No Recruitment based on those requiring inpatient detoxification. External coercion to participate recorded in 37.7% of sample. Exclusion criteria not reported.	No	Partially Use of SCID-II in approx 13% of sample, the remainder assessed via clinical judgement only.	Yes Recidivism measured by official criminal record data	Yes Average follow-up length 17.5 years	25/6 Ranked 3rd for quality and tied 2nd for clarity
Hiscoke et al., 2003 N=168	Partially All participants were defendants at pre-sentence stage and ordered by court to undertake a forensic psychiatric evaluation. Exclusion criteria reported and acceptable.	Yes/Yes	Partially Use of DSM-IV & ICD-10 DIP-Q self report screening instrument	Yes Recidivism measured by official reconviction data	Yes Average follow-up length 36 months	18/6 Ranked 6th for quality and tied 2nd for clarity

Listwan, Piquero & Van voorhis 2010 N= 64	Yes Selected on basis of newly admitted inmate between a defined time period. No incentives offered to participate. Exclusion criteria reported and acceptable.	No	Partially Use of the Jesness Inventory	Partially Recidivism measured by official arrest data BUT 14 USA states do not contribute to the database used	Yes Follow-up length between 10-12 years	19/8 Ranked joint 5th for quality and 4th for clarity
Walter et al., 2011 N= 379	Partially All participants were defendants at pre-sentence stage and ordered by court to undertake a forensic psychiatric evaluation. Exclusion criteria not reported.	No	Yes Use of SCID-II and PCL:SV	Yes Recidivism measured by official criminal record data	Yes Follow-up length 8 years	26/10 Ranked joint 2nd for quality and 5th for clarity
Wormwith et al., 2007 N=61	Yes Participants' drawn from case files of local probation office, invited to participate via correctional staff, voluntary consent sought Exclusion criteria reported and acceptable	No	Partially APD using DSM-III criteria and an interview protocol. File information used to verify self report	Yes Recidivism measured by official criminal records	Yes Average follow-up length 11.1 years	30/1 Ranked 1st for quality and joint 1st for clarity

Hernandez-Avila et al., 2010 N=370	Partially Possible coercion in participation as treatment mandated & participants were paid to take part Exclusion criteria reported and acceptable.	Yes/Yes	Yes Use of SCID-II	No Outcome based on self reported criminal behaviour	No Follow-up length 1 year	19/6 Ranked joint 5th for quality and tied 2nd for clarity
Glover et al., 2002 N=106	Partially Participants' initially recruited following referral from probation officer as deemed likely to recidivate Post 1995 specific criteria were introduced. Exclusion criteria not reported.	Yes/Yes	Partially Use of the ASPD-S employing DSM-IV item using file information	Yes Recidivism measured by official arrest data	Yes Average follow-up length 713.58 days	21/7 Ranked 4th for quality and 3rd for clarity
Boccaccini et al., 2010 N= 1412	Yes Inclusion of all prisoners admitted to the sex offenders treatment programme Exclusion criteria reported and acceptable	Yes/Partially	Yes Use of the PAI	Yes Recidivism measured by official post released arrest data	Yes Follow-up length between 2.25-7.5 years	26/1 Ranked tied 2nd for quality and joint 1st for clarity

Assessment of risk of bias

Two review authors independently assessed the risk of bias of the eligible studies. It is acknowledged that bias is likely in the current review as many of the included studies fell far from the desired Randomised Control Trial (RCT) methodology.

Data extraction

A pre-determined data extraction form (see Appendix 5) was used to extract data from the studies. Data extraction was carried out by two reviewers independently using pre-specified forms for the studies that met the quality assessment criteria. Data regarding population specific information including mean age (years), number of participants at start and follow-up (dropout rates also examined), methodological processes, variables measured at baseline and follow-up and the type of statistical tests used was extracted.

Where information was reported but details were sparse or unclear that information was recorded as "not known", "not reported" or "not stated" as unfortunately contact with the researchers of the study was not feasible within the time frame for this review. Similarly the author was unable to contact the researchers in respect of any missing data. Table 6 presents the statistical details of the included studies.

Table 6

Statistical Details of Included Studies

Authors	Sample personality disorder(s)	Statistical analyses	Results
Fridell et al., (2008)	ASPD	Mixed effects multi-nominal logistic regression	Predictors of specific types of crime in ASPD: Relative risk ratio (RRR) for fraud/theft = 2.23 ($p < 0.0001$) RRR for violence = 1.14 ($p < .05$) RRR for drugs = 1.19 ($p < .05$) RR for more than one category = 2.44 ($p < 0.001$) The Intra Class Correlation (ICC) for ASPD by crime was: Theft = $p < 0.001$ More than one type of crime = $p < 0.001$
Hiscoke et al., (2003)	All PD types as per DSM-IV and ICD-10	Multivariate logistic regression	A categorical diagnosis of ASPD increased the risk of any criminal recidivism (OR = 4.82, 95% CI = 1.97 – 11.78) and violent recidivism (OR = 4.48, 95% CI = 1.99 – 10.09) A categorical diagnosis of BPD increased the risk of any criminal recidivism (OR = 1.19, 95% CI = 1.01 – 3.62) and violent recidivism (OR = 2.24, 95% CI = 1.06 – 4.72) A categorical diagnosis of Schizoid PD was associated with violent recidivism (OR = 2.26, 95% CI = 1.03 – 6.56) but not general recidivism

			A categorical diagnosis of Schizotypal PD was associated with general recidivism (OR = 2.08, 95% CI = 1.08 – 3.98) but not violent recidivism Dimensional analyses revealed that the risk of any criminal recidivism increased significantly with each additional antisocial, borderline and histrionic PD criterion (data not shown in study)
Listwan, Piquero & Van voorhis (2010)	Aggressive type Neurotic type Dependent type Situational type	Multivariate logistic regression	The analysis indicated that personality was significantly related to the probability of failure (recidivism). The results by personality type were as follows (presented in order of the highest probability of failure to the least): Neurotic= (data not reported – variable omitted) Aggressive = OR .474, parameter estimate -.747 (p= < .05) Situational = OR .235, parameter estimate -1.448 (p = < 0.01) Dependent = OR .304, parameter estimate -1.917, (p = < 0.01)
Walter et al., (2011)	All DSM-IV PDs	Chi-square ANOVA Scheffe tests (post hoc) Kaplan-Meier product limit technique	Cluster A PDs were significantly higher in the PD only group (X^2 = 48.07, d.f. = 1, p= < 0.0001) The frequency of Cluster B and C PDs did not differ between groups (PD only and PD+SUD) Psychopathy scores were higher in the PD group (p = < 0.0001) than in the SUD group The groups differed significantly in time to recidivate (log-rank X^2 = 49.10, d.f. = 3, p = < 0.0001) The PD+SUD group were most likely to recidivate first (general recidivism)

			The groups differed significantly in the rate of violent recidivism (X^2 = 10.54, d.f. = 3, p = 0.014) The PD group were most likely to recidivate violently first
Wormwith et al., (2007)	APD as per the DSM-III definition	Predictive validity correlations ROC AUC Regression	No statistically significant differences were observed in the correlations for the measures used with any of the outcome criteria. The largest difference (between the PCL-R and DSM-III APD with respect to any new conviction) still feel short of statistical significance, t(58), = 1.87, ns. The DSM-III had relatively strong predictive accuracy for violent recidivism (r = .39, p = < .01, ROC .70) and reincarceration (r = 0.40, p = < .01, ROC, .73)
Hernandez-Avila et al., (2000)	DSM-III PDs	Logistic regression	The following Odds Ratios and Confidence Intervals were reported during the follow-up period by PD type/cluster: ASPD = OR 1.90, 95% CI = .92 – 3.94 (violations of parole/probation – non significant p = .08) BPD = OR 2.66, 95% CI = 1.65- 3.69 (violent crimes - significant) Cluster A = OR .62, 95% CI = .37 – 1.03 (any crime – non significant p = .06) and OR .31, 95% CI = .10 - .91 (crimes against property – non significant p = .06)

Glover et al., (2002)	ASPD	T-test Correlation	There was no significant difference between mean scores of the general recidivists (mean 9.19, SD 2.20) or violent recidivists (mean 8.85, SD 2.44) compared to the non-recidivists (mean 8.48, SD 2.59) on the ASPD measure. Correlations and Common language Effect Sizes (CLES) were as follows for violent recidivism (r= .030, 95% CI -.16 to .22) and any recidivism (r=.149, 95% CI -.04 to .33). CLES = .58. p= < .05, one tailed.
Boccaccini et al., (2010)	Personality Assessment Inventory (PAI) indexes: Antisocial features (ANT) Aggression (AGG) Dominance (DOM) Violence Potential Index (VPI)	ROC AUC Cohen's *d* Logistic regression	Aggression was the most consistent predictor of recidivism (apart from sexually violent recidivism): Violent recidivism (mean 52.51, SD, 11.22, *d* 0.50, AUC .63, p=<.01, SE 0.03) Violent or sexually violent (mean 50.66, SD, 11.17, *d* 0.30, AUC .58, p=<.01, SE 0.03) General recidivism (mean 50.64, SD, 11.23, *d* 0.34, AUC .58, p=<.01, SE 0.2) Sexually violent (mean 46.69, SD, 9.65, *d* -0.14, AUC .46, non sig, SE 0.05) Dominance was the only PAI index positively associated with sexually violent recidivism (AUC .56) Aggression scores demonstrated incremental validity over both age at release and the total number of pre-release arrests for predicting both types of recidivism: Violent recidivism = X^2 67.31, p = < .01 Sex offender registry violations = X^2 91.27, p = < .01

Results

Descriptive data synthesis

The average sample size for included studies was 450 (range = 61 to 1412). The methods employed by the included studies involved seven repeated cross-sectional designs with a mean sample size of 462 participants (range = 61 to 1412); and one before and after study with a sample size of 370 participants. Included studies were prospective and without controls.

Six studies supported the association between personality disorder recidivism, reporting higher recidivism rates for participants with personality disorder. The sample size for these studies ranged between 61 and 1045 participants with a mean number of 348 participants. Of these studies, five were of cross-sectional design (Fridell, Hesse, Jaeger & Kuhlhorn, 2008; Hiscoke, Langstrom, Ottosson & Grann, 2003; Listwan, Piquero & Van Voorhis, 2010; Walter, Wiesbeck, Dittmann & Graff, 2011; Wormwith, Olver, Stevenson & Girard, 2007) , and one was a before and after study (Hernandez-Avila, Burleson, Poling, Tennen, Rounsaville & Kranzier, 2000). One study provided evidence that did not support the association between personality disorder and recidivism (Glover, Nicholson, Hemmati, Bernfield & Quinsey, 2002). This was a prospective repeated cross sectional study with a sample size of 106 participants. Another study, with a repeated cross sectional design with 1412 participants, provided neutral findings in relation to the association between personality disorder and recidivism (Boccaccini, Murrie, Hawes, Simpler & Johnson, 2010).

Study participants came from a range of offending populations, to include prisons (4 studies), court (2 studies) and hospital (2 studies). Various methods were used to assess personality (PAI, SCID-II, DIP-Q, ASPD-S, Jesness Inventory and PCL:SV). Similarly, recidivism was operationalised differently across the studies. Quality assessment of the included studies is summarised in Tables 7 and 8 below. Table 7 provides a summary of the biases observed in the included studies and Table 8 presents a summary of the quality assessment ranks, by quality and clarity of reporting.

Table 7

Risk of Bias from Included Studies

Study	Summary of Limitations					
	Small sample size	Short Follow-up (average <12 months)	Drop-outs not reported	Potential selection bias	Researchers not blind to PD status	No info on how missing data dealt with
Fridell et al., (2008)			●	●	●	●
Hiscoke et al., (2003)					●	●
Listwan, Piquero & Van voorhis (2010)	●		●		●	●

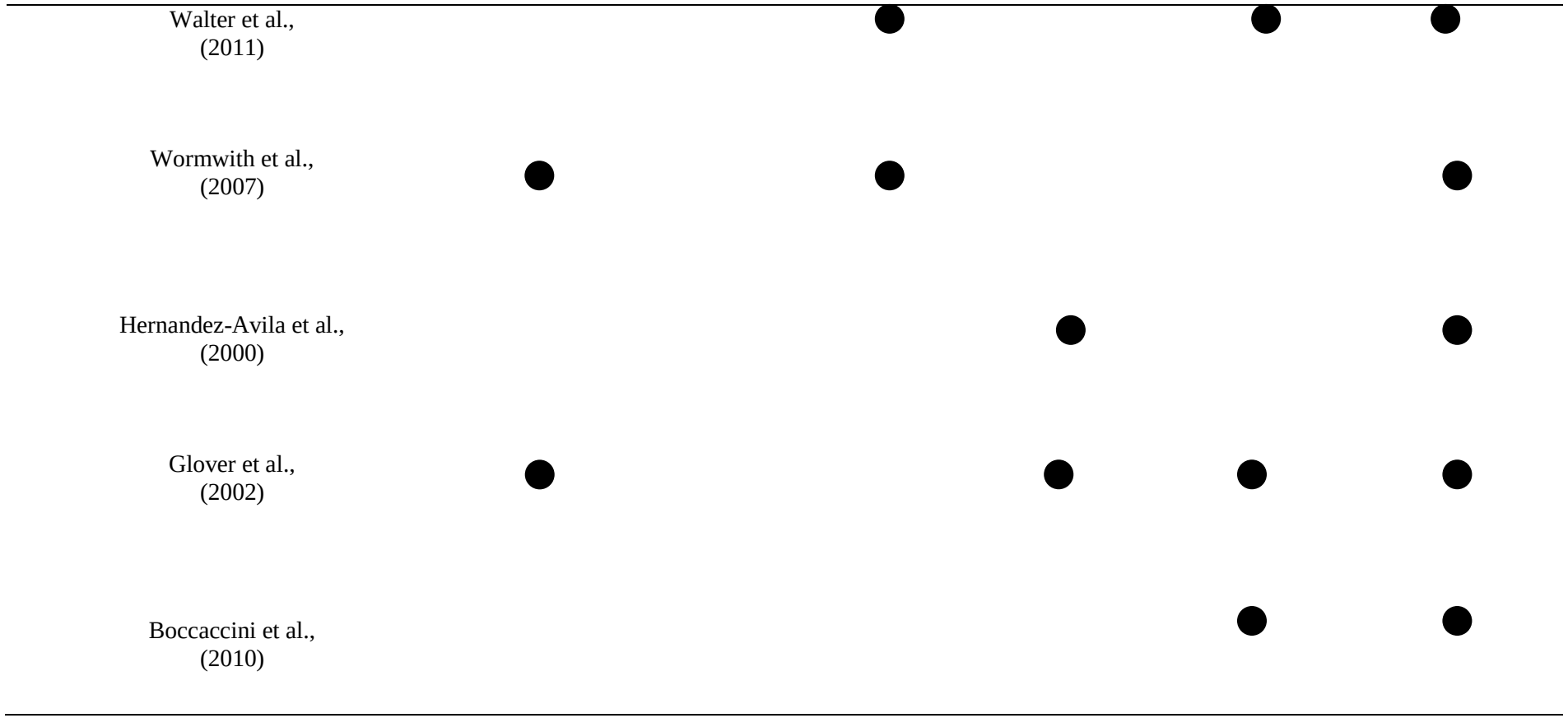

Walter et al., (2011)
Wormwith et al., (2007)
Hernandez-Avila et al., (2000)
Glover et al., (2002)
Boccaccini et al., (2010)

Table 8

Summary Quality Assessment Scores - Ranks by Study

Rank	Study quality	Study clarity
1st	Wormwith et al., (2007)	Wormwith et al., (2007) Boccaccini et al., (2010)
2nd	Boccaccini et al., (2010) Walter et al., (2011)	Fridell et al., (2008) Hiscoke et al., (2003) Hernandez-Avila et al., (2000)
3rd	Fridell et al., (2008)	Glover et al., (2002)
4th	Glover et al., (2002)	Listwan, Piquero & Van voorhis (2010)
5th	Listwan, Piquero & Van voorhis (2010) Hernandez-Avila et al., (2000)	Walter et al., (2011)
6th	Hiscoke et al., (2003)	--

Of the eight included studies, three examined the ability of various assessment tools, including personality measures, to predict recidivism (Boccaccini et al., 2010; Glover et al., 2002; Wormwith et al., 2007); three explored recidivism in offenders with

personality disorder and substance use disorder (Fridell et al., 2008; Hernandez-Avila et al., 2000; Walter et al., 2011); one focused on personality and recidivism in a sample of white collar offenders (Listwan, Piquero & Van voorhis, 2010) and one study looked at personality traits and disorders and risk of criminal recidivism in offenders at the pre-sentence stage (Hiscoke et al., 2003).

Cross-sectional studies

Of the cross-sectional studies, two examined the ability of various assessment tools to predict recidivism. The assessment of personality was included within each study, often in addition to other measures. The remaining four studies explored the personality of different types of offenders (those with comorbid personality disorder and substance misuse disorder, white collar offenders, and those sentenced to prison or psychiatric hospital) that went on to recidivate. For ease of reference the cross-sectional studies will be grouped in these two ways below.

Outcome studies focusing on the ability of personality measures to predict recidivism

Of the three cross-sectional studies focusing on the ability of personality measures to predict recidivism one supported the association between personality and recidivism (Wormwith et al., 2007), one did not (Glover et al., 2002) and one was neutral (Boccaccini et al., 2010).

Wormwith et al., (2007) reported that antisocial personality disorder (ASPD) predicted future violence, future re-incarceration and recidivism severity and that DSM-III APD criterion D (persistent antisocial behaviour without a significant intervening period over 5 years) accounted for most of the ASPD variables relationship to the outcome of recidivism. As per Table 6, their findings however, were generally not statistically significant. Sample size was a likely limiting factor in this respect.

Glover et al., (2002) did not find a significant difference between recidivists and non-recidivists on the ASPD-S. Despite a difference in sample size between the studies, both studies used fairly similar instruments to assess personality disorder (although Glover et al. (2002) only used file information thus they did not undertake any type of contact assessment). Although both used a similar method for operationalising

recidivism their overall scores for quality and clarify were different (see Table 8 for a summary). Wormwith et al., (2007) achieved the highest quality and clarity scores across all the included studies. Glover et als. (2002) study ranked 4th in terms of quality and 3rd in terms of clarity. This was likely to do with the differences in terms of length of follow-up and clarity of reporting information regards to sample selection and exclusion criteria.

The study by Boccaccini et al., (2010), which reported neutral findings, found that the aggression scale within the PAI was the most consistent predictor of recidivism, with the exception of sexually violent recidivism, which was positively associated with the dominance index. They concluded that the PAI may be of limited value in improving risk assessments as many of their findings were modest. Despite the findings being classified as neutral this study had high quality assessment and clarity scores.

Recidivism outcome studies examining the personality of different types of offenders

Of the three cross-sectional studies examining the personality of different types of offenders that go onto recidivate, all supported the association between personality disorder and recidivism (Fridell et al., 2008; Hiscoke, et al., 2003; Listwan, Piquero & Van voorhis, 2010; Walter et al., 2011).

Using a sample of patients admitted to detoxification for substance misuse, Fridell et al., (2008) found that participants diagnosed with ASPD were 2.23 times more likely to be charged with theft and 2.44 times more likely to be charged with committing multiple types of crime during an observation year. These findings were statistically significant. Using logistic regression, they concluded that ASPD, stimulant use, male gender and young age were strong predictors of criminal behaviour. This study used an official outcome measure for recidivism and had a large sample size (n=1045).

Hiscoke et al., (2003) also found higher rates of recidivism in personality disorder offenders. Using multinominal logistic regression, Hiscoke et al., (2003) reported a 4.8 times higher risk for any recidivism and a 3.7 times higher risk for violent recidivism among participants whose DIP-Q suggested a categorical diagnosis of ASPD (compared to offenders without ASPD). They did not find a statistically significant relationship to recidivism in the remaining nine DSM-IV personality

disorder diagnoses. They reported that dimensional analyses revealed that the risk of any criminal recidivism increased significantly with each additional antisocial, borderline, and histrionic personality disorder criterion, however, they did not present the data to support this. Again this study used an official measure of recidivism and included a fair number of participants.

The general finding, that personality disorder is important in predicting recidivism was reported by Listwan et al., (2010). They commented on the type of traits (aggressive vs. neurotic) considered to be important in increasing the probability of re-arrest. The analysis indicated that an aggressive personality type was significantly related to the probability of failure (recidivism). Situational and dependent personality types were also significantly related to recidivism although to a lesser extent. Although Listwan et al., (2010) used a personality measure not commonly implemented in the UK (the Jesness Inventory), the evidence base for this measure suggests it has adequate psychometric properties (Jesness, 1983; Jesness, 1986; Jesness, 1988). Recidivism was measured by arrest data from a national crime database.

The final cross-sectional study supporting the association between personality disorder and recidivism reported an overall recidivism rate of 41.4% (Walter et al., 2011). They found that the groups differed significantly in their time to recidivate (the PD and substance use disorder (SUD) group was most likely to recidivate first). General recidivism was highest in the personality disorder and SUD group (two fold higher risk), whereas violent recidivism was highest in the personality disorder only group (Walter et al., 2011). Although this study reported using a control group it was considerably different to the other groups. Despite this it used an official measure of recidivism and implemented an empirically based measure of personality (SCID-II).

Before and after study

In this study Hernandez-Avila et al., (2010) partially supported the association between personality disorder and recidivism by exploring recidivism in a sample of offenders with personality disorder and SUDs. The researchers described their study as both retrospective and prospective with a 1 year follow-up post treatment for SUD. They defined their exclusion criteria which generally included those with a severe and

enduring illness (psychotic type) and active psychosis. They also excluded those that had undertaken less than two weeks of treatment and were unable to read English. Recruitment was described as sampling from a "consecutive series of patients" entering a treatment programme. Sampling included two settings. They acknowledged that some were court mandated to receive treatment for their SUD thus providing possible evidence of coercion to participate.

No controls were used in this study. They exposed the participants to two measures once their detoxification was complete. This included the SCID-I for SUD and the SCID-II for personality disorder. Interviews were conducted by 8 interviewers of varying levels of qualification. Interviews were taped (audio and video) for a blind and independent within and cross-site diagnostic review. The researchers reported a 24% drop out rate at the 1 year follow up. They reported that 17.1% of eligible participants declined to participate and that those of Hispanic ethnicity had the highest rate of withdrawal from the study.

Study findings showed that patients with ASPD were more likely to report having committed a variety of crimes before the treatment period, and that those with borderline or schizoid personality disorder reported a greater number of pre-treatment violent crimes. They proposed that the number of personality disorder diagnoses correlated with the number of crimes against property; post-treatment a diagnosis of borderline personality disorder (BPD) predicted the commission of violent crimes; although ASPD did not predict criminality during the follow-up period. The only statistically significant finding was in relation to BPD. The outcome criterion of recidivism was operationalised as self reported criminal behaviour. Self report was used in respect of both offending history and re-offending during the follow-up period. The researchers stated that corroborative crime data was unavailable and that they searched for evidence of minimisation or misinterpretation by participants in other areas of the assessment as an indicator of whether they were being honest in their reports of offending behaviour.

Methodological considerations

There was considerable variation in how the included studies were reported which is reflected in the evaluation of their clarity of reporting. The majority of the studies

utilised convenience samples of prisoners, probationers or patients entering into detoxification for substance misuse, applying various measures to assess personality. Whilst the majority of these measures were empirically based assessments of personality, others had less support in the literature, for example the Jesness Inventory. Most of the included studies did not specify who carried out the personality assessment, however, some did (Hernandez-Avila et al., 2000; Listwan, Piquero & Van-Voorhis, 2010; & Wormwith et al., 2007). Within these studies various professionals were involved, for example Forensic Psychiatrists, Forensic Psychologists, Consulting Psychologists and interviewers with bachelors degrees to doctorates.

The manner in which the outcome of recidivism was operationalised differed between studies ranging from official criminal record data, which included arrest information, charge information and conviction information, to self report alone. Some studies included information based on technical violations i.e. not signing onto the sex offender register (Boccaccini et al., 2010) and another on arrests made when participants were serving prisoners (Listwan, Piquero & Van-Voorhis, 2010). Follow-up length differed significantly between the studies with the shortest reporting 1 year follow up (Hernandez-Avila et al., 2000) and the longest reporting 30 years (Fridell et al., 2008). Consideration of possible confounding variables within this context often appeared limited. Consequently the majority of studies included in this review achieved relatively low quality assessment scores. Only one study (Wormwith et al., 2007) achieved a score of 30 and it was this study that also ranked highest in respect of clarity of reporting. However this study had the lowest number of participants (n=61).

Often the methodology by which participants were sampled was not made explicit, and only one study reported that voluntary consent had been obtained (Wormwith et al., 2007). Two studies alluded to possible coercion for participants to take part in their study and one reported paying participants for their time (Hernandez-Avila et al., 2000). Only 54% of studies reported exclusion criteria and in those studies where treatment for substance misuse was undertaken pre personality assessment allocation to various treatments were unclear (Fridell et al., 2008). A further potential source of bias was drop-out rate and reasons for drop out. This was frequently not clearly

reported. Boccaccini et al., (2010) reported a 2% drop-out rate on the basis of refusal of further evaluation, whereas Hiscoke et al., (2003) and Glover et al., (2002) outlined various reasons for drop-out, for example, death, deportation or escape. Hernandez-Avila et al., (2000) reported a drop out rate of approximately 24% and concluded that those that participated were not significantly different from those that didn't. This was despite reporting that those of Hispanic ethnicity withdrew the most, a trend apparent in more than one study.

Although blinding of participants was not necessary in the studies as a result of the designs employed, blinding of the personnel could have improved study quality by reducing another potential source of bias. Only one study (Hernandez-Avila et al., 2000) reported blinding of interviewers in addition to independent within and cross site review in order to determine reliability of scores. A further study reported that scoring was undertaken by a different researcher to the one that carried out the personality assessment (Wormwith et al., 2007) and Listwan, Piquero and Van-Voorhis (2010) reported using an external agency to score all assessments undertaken.

Overall, six of eight studies supported the association between personality disorder and recidivism. These studies demonstrated a marginally higher average score for quality than the neutral study and the study that did not support the association. Those supporting the association were also better in terms of reporting clarity.

Discussion

Personality disorder is an important condition with high prevalence in forensic populations. Personality disordered offenders have a considerable impact on individuals, families, professionals and society and implications on treatment and management. Many have attempted to understand the relationship between personality disorder and crime, and this to an extent is understood. The evidence base examining personality disorder and recidivism is, however, less developed and limited by poor methodology. Consequently one might expect that the robust examination of the association between personality disorder and recidivism would be a research priority, particularly as the nature of the relationship is complex and key questions remain unanswered.

In light of the dearth of high quality evidence in the form of a systematic review or meta-analysis, this review has drawn its conclusion from a small quantity of studies. All of the included studies were observational in design and in fact none of the studies used a true control, thus they were classified as observational studies without controls. The majority of studies were prospective (n=7) in that they sought to answer an etiological question by recruiting a cohort of individuals before the outcome had occurred and followed them over a period of time. The outcome of interest, recidivism, was operationalised differently across the studies. This was a factor affecting both comparability and quality.

Problems with confounding were evident in all studies, some of which made more robust attempts to than others to minimise its likelihood. As a result, exploration of the relationship between personality disorder and reoffending requires large cohort studies, where the cohort includes people with and without personality disorder. The repeated cross-sectional approach used is a valuable method of collecting information when examining etiological relationships.

Bearing these limitations in mind and thus interpreting the study findings with caution, taking each objective in turn, the included studies that supported the association between personality disorder and recidivism found the following.

To determine if personality disorder is associated with greater likelihood of recidivism

Seven of the eight included studies supported the assumption that personality disorder is associated with a greater likelihood of recidivism. In terms of how much more likely they were to recidivate comparative to those without personality disorder, one study estimated between 2.23 – 2.44 times more likely (Fridell et al., 2008), whereas Hiscoke et al., (2003) reported higher likelihoods, between 3.7 – 4.8 for those with a categorical diagnosis of personality disorder. Listwan, Piquero and Van Voorhis (2010), reported a more general finding of the presence of personality disorder as important in predicting recidivism in their sample. These findings are in line with the prevalence rates of personality disorder, found in both community forensic (probation) and prison populations (Fazel & Danesh, 2002; Ranger, Methuen, & Rutter, 2004; Ministry of Justice, 2011).

To determine if personality disordered offenders are more likely to recidivate generally and/or more seriously i.e. via the commission of violent or sexual re-offences

Studies reported differences in terms of the types of further offences. Hernandez-Avila et al., (2000) reported that the number of personality disorder diagnoses correlated with the number of crimes against property, and that a diagnosis of borderline personality disorder predicted the commission of future violent crimes. Whilst this study supported the overall assumption that personality disorder is associated with recidivism, the study was based on self reported offending behaviour thus the method of outcome measurement is questionable.

Boccaccini et al., (2010) found that individuals scoring higher on the dominance index of the PAI were moderately associated with sexually violent recidivism, whereas the aggression index was the most consistent indicator of violent and general recidivism. This partially fits with the literature on the personality of sex offenders, in respect of the high prevalence rates of cluster B disorders (Borchard, Gnoth, & Schulz, 2003). Due to the lack of statistical significance in the study by Boccaccini et al., (2010), the findings in respect of sexual recidivism are limited. Furthermore, none of the included studies specifically investigated the personality style of child sex offenders. It is therefore not possible to draw comparisons to the evidence base in this respect.

The findings from the included studies placed greater emphasis on general and violent recidivism. Fridell et al., (2008) found that participants' diagnosed with ASPD were more likely to be charged with committing multiple types of crime during the observation period. A limitation of this finding is that the structured method of personality assessment (SCID-II) was not implemented for all participants. However, comparative to other studies they operationalised recidivism in a formal and appropriate manner and had a large sample size (n=1045).

Violent recidivism was more likely in the sample of ASPD participants than those without ASPD in the studies by Hiscoke et al., (2003), Walter et al., (2011) and Wormwith et al., (2007). This finding fits with the evidence base for the association between ASPD and violence (Coid et al., 2006; Fountoulakis, Leucht, Kaprinis, 2008; Varley-Thornton, Graham-Kevan & Archer, 2010).

To determine if certain types or clusters of personality disorder are associated with recidivism

The included studies reported ASPD being associated with increased levels of recidivism (Fridell et al., 2008; Hiscoke et al., 2003; Wormwith et al., 2007). Hiscoke et al., (2003) reported that the remaining nine DSM-IV personality disorder diagnoses were not significantly related to recidivism, although each additional symptom for Schizoid personality disorder increased the risk for violent offending. This finding is at odds with the literature which supports the view that traits of both ASPD and borderline personality disorder, together with paranoid and narcissistic/histrionic traits, produce a higher-order antisocial type and in turn increase the likelihood violent and non-violent criminal offending (Coid et al., 2006; Johnson et al., (2000). Listwan, Piquero and Van Voorhis (2010), however, reported a similar pattern of traits and found that the Jesness aggressive type and neurotic personality type were important indicators increasing the likelihood of re-arrest.

To determine if other factors such as substance misuse increase the likelihood of recidivism

Substance misuse in combination with personality disorder was reported to increase risk of recidivism twofold (Walter et al., 2011). This group of offenders were also most likely to recidivate generally first when compared to personality disorder alone. Fridell at al., (2008) also found that ASPD and stimulant use were strong predictors of future criminal behaviour. These findings are not surprising as factors such as substance misuse and comorbid Axis I disorders have high prevalence rates in forensic populations (Sirdifield et al., 2009). Substance misuse is a risk factor for high risk offenders with personality disorder (Coid, 2003) and is often present during the commission of the offence (Gudjonsson & Sigurdsson, 2000). ASPD is often co-morbid with substance misuse (NICE, 2009), which can act as a disinhibitor and increase the likelihood of criminal behaviour.

The results of the included studies suggest that personality disorder is associated with greater likelihood of recidivism; personality disordered offenders are more likely to recidivate generally against property, i.e. criminal damage, and violently; ASPD is the most common personality disorder associated with recidivism; and that comorbid substance misuse increases the likelihood of recidivism. Taking into account the study

that did not support the association between personality disorder and recidivism (Glover et al., 2002), although no significant difference was found between recidivists and non-recidivists on the ASPD-S measure, other measures were significantly more highly correlated with violent recidivism. Therefore it could be assumed that the measure itself impinged on finding an association, rather than assuming that one did not exist. As this study employed a fairly low number of participants (n=106) and the application of the ASPD-S measure was somewhat flawed (scored on file information only) its findings should not be viewed as significant.

Similarly the neutral study by Boccaccini et al., (2010) found that whilst the aggression scale within PAI was the most consistent predictor of recidivism, this was not found in respect of sexually violent recidivism. Given the focus of the study and its conclusion, that the PAI may be of limited value in improving risk assessments, it seems sensible to not give the findings of this study too much weight in potentially undermining the findings of the studies that supported the associated between personality disorder and recidivism.

While it appears each of the review objectives have been addressed by the included study findings, it should be acknowledged that the evidence has come from a small number of studies of limited quality. Approximately half of the studies used small samples, and did not report any information about those that did not participate. A positive aspect of the included studies was the average length of follow-up. All but one study used follow-up periods longer than 1 year. Participants therefore had time to recidivate and equally, time to engage in treatment or activities that could mediate recidivism. Many of the findings from the included studies were not statistically significant. Hence it is not sensible to make generalisations from the findings; rather the focus should be on how to improve future studies.

Limitations of the review

Time limitations meant it was not possible to await author's responses in relation to missing data. This may have introduced some geographical bias to the studies included in this review and should be considered for future reviews. Furthermore, it was not possible to include studies not written in English.

Post data collection, and analysis of the included studies, it was highlighted by experts that the search term 'reconviction' would have been an appropriate addition and yielded a number of key papers. Those papers suggested by the experts for inclusion (Gray, Taylor & Snowden, 2008; Coid et al., 2007) were subsequently analysed and deemed not to meet the inclusion criteria for the current review. However, any future review of this type should include the term reconviction at the initial search stage. Consideration should also be given to the various terms used to describe further offending and the types of studies that each term might identify.

Measures and definitions

All included studies used validated tools to measure personality disorder, however, some are grounded in a stronger evidence base than others i.e. the SCID-II vs. the Jesness Inventory. Due to the range of tools used in each study (see Table 4) it was difficult to conclude which outcomes were most reliable on the basis of the personality measure. A standardised approach to assessing personality disorder would be useful to better understand the effects observed. This however, is not feasible as a range of measures exist for assessing personality disorder. Choice regarding which is implemented is influenced by a number of factors i.e. cost, time, resources, and service and/or researcher preference. These issues are considered in relation to the assessment of personality disorder in Chapter 3. Similar limitations were evident in relation to how recidivism was defined and operationalised across the studies.

Generalisability

The sample sizes of the included studies ranged from 61 to 1412 participants, with the mean age across studies of participants being 34.7 years. This review included three studies from the USA (Boccaccini et al., 2010; Hernandez-Avila et al., 2000; Listwan, Piquero & Van Voorhis, 2010), two from Canada (Glover et al., 2002; Wormwith et al., 2007) and three from the Netherlands (Fridell et al., 2008; Hiscoke et al., 2003; Walter et al., 2011). This reduces the generalisability of findings to UK samples, however the inclusion criteria used in each study appears to suggest that UK offenders meeting the criteria personality disorder would not differ greatly from the populations previously used. It is however worth considering the need to complete a study with a UK sample (see conclusion).

Conclusion

In conclusion, the results of the included studies demonstrated that personality disorder is associated with greater likelihood of recidivism; personality disordered offenders are more likely to recidivate generally and violently; ASPD is the most common personality disorder associated with recidivism; and that comorbid substance misuse increases the likelihood of recidivism. Caution is however drawn to these conclusions given the limitations of the methods employed, the risk of bias observed and the heterogeneity of the included studies.

It is accepted that uncontrolled studies are more susceptible to bias than studies with control groups. Therefore it is not possible to draw a definitive attribution of causality; however, the included studies did demonstrate some consistency in their findings which could be interpreted as evidence indicative of a relationship between personality disorder and recidivism. The next step would be to explore what the nature of this relationship is, as further high quality evidence could have significant implications for both research and practice.

In an ideal world, research studies would adopt a design at the top of the hierarchy of evidence (less susceptible to threats to internal validity). However this is often impractical and lacks feasibility as it can be time consuming and expensive. Moreover, some study designs would not lend themselves to the research/review question. The findings from this review demonstrate the need for high quality studies exploring the relationship between personality disorder and recidivism. Studies with positive findings supporting the association between personality disorder and recidivism could be replicated to confirm their findings. A number of amendments would be necessary in order to improve study quality. For example, a prospective cohort study following UK prisoners subject to probation supervision on release from custody. Several outcomes could be assessed in order to capture a comprehensive definition of recidivism. Measurement variables could incorporate various personality assessment tools with established empirical reliability and validity. Follow-up would need to be of an acceptable length and potential confounding factors carefully considered and accounted for. Individuals with the outcome in question could be compared to those without. A large sample size would be necessary and careful

attention paid to reporting information in order to provide clarity. Many of these factors have been considered in the design of the empirical study in Chapter 4. Chapter 5, a single case study, highlights some of difficulties associated with this type of research, specifically the limited resources available (assessment tools, availability of staff) when working with probationers.

This review has highlighted that a number of key questions relating to personality disorder and recidivism still remain. The overall picture of evidence to date is limited and thus future research efforts need to be directed carefully with consideration of suitable methodologies less susceptible to bias than those currently employed. Further research of improved quality could have implications on front-line practice, for example, how Probation Officers assess risk and manage personality disordered offenders or in parole decisions. It could also have implications on a wider policy level, such as The Offender Personality Disorder Strategy (Department of Health & Ministry of Justice, 2011), which has been fundamental in influencing the overall focus of the thesis and in the empirical study.

Rationale for Chapter 3

Chapter 2 has identified that personality disorder is found within offending populations and that the evidence base, although not without limitations, reports an association between personality disorder and further offending. As a result of methodological differences between studies, specifically how recidivism is operationalised and how personality disorder is assessed, comparison between studies is difficult. In light of these difficulties, focussing on methods of assessing personality disorder, and its associated limitations in both research (such as the psychometric properties of personality disorder assessment tools) and practice (such as time, cost, and staff training/resources), Chapter 3 addresses some of these issues by way of a critique of the Standardised Assessment of Personality – Abbreviated Scale (SAPAS).

CHAPTER THREE

Critique of a psychometric measure:
The Standardised Assessment of Personality
Abbreviated Scale

Introduction

This focus of this chapter is to critically evaluate the psychometric properties of the Standardised Assessment of Personality – Abbreviated Scale (SAPAS), a screening tool for personality disorder, developed by Moran, Leese, Lee, Walters, Thornicroft and Mann (2003). The chapter will begin by introducing the SAPAS and the general principles of psychometric measurement and screening. An introduction to diagnosing personality disorder will follow. The chapter will then critically examine the psychometric properties of the SAPAS, to include examination of various types of reliability and validity. Consideration will be given to the clinical and research utility of the SAPAS and conclusions drawn.

The Standardised Assessment of Personality – Abbreviated Scale

The SAPAS is a screening tool for personality disorder, based on a brief structured interview originating from the Standardised Assessment of Personality (SAP) (Mann, Jenkins & Cutting, 1981). The intended primary purpose of the SAPAS is to screen for the presence of personality disorder in order to identify those that may need further assessment. The tool was developed to provide a brief and simple screen for personality disorder which can be used as part of routine intake assessments by psychiatric teams (Tyrer & Simmonds, 2003). The aim of Moran et al., (2003) was to overcome the problems associated with lengthy standardised personality assessments i.e. poor concentration and tiredness, by quickly identifying those that are likely to have personality disorder and require further assessment.

The SAPAS is made up of eight dichotomously rated items (see Table 9) taken from the opening section of the SAP, an informant based interview which allows for an International Classification of Diseases (ICD-10) or Diagnostic and Statistical Manual 1V 4th edition text revision (DSM-1V-TR) diagnosis of personality disorder (World Health Organisation, 1992; American Psychiatric Association, 2000). The questions are descriptive statements about the person which can be answered by a yes or no. Each question is scored 0 or 1 and added together to produce a total score between 0 and 8. Before answering the questions participants are advised the following:

"I'd like to ask you some questions about yourself. Your answers will help me better understand what you are usually like. If the way you have been in recent weeks or months is different from the way you usually are, please look back to when you were your usual self"

Table 9

Standardised Assessment of Personality – Abbreviated Scale Questions

Question number	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 lose 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 takes on average 2-5 minutes to complete. It does not require training to administer or score. As a result of its simplicity there is no manual, rather brief instructions are provided on the tool itself and within the original validation study. The scoring is calculated by the interviewer after its completion and is based on the system of each positive item yielding a score of one (with the exception of question 3 which is reverse scored). 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 original validation study (Moran et al., 2003) reported the SAPAS to be a useful screen for personality disorder in routine clinical settings in which the prevalence of personality disorder is high. The findings, which will be discussed further below, were based on a non-random sample of stable and cooperative adult men and women

from either an in-patient unit, out-patient clinic or day unit within the South London and Maudsley (SLaM) National Health Service (NHS) Trust.

Diagnosing personality disorder

The international standard is to diagnose personality disorder using the framework provided within either one of the two main classification systems, the DSM-IV (APA, 2000) or the ICD-10 (WHO, 1992). According to the DSM-IV a diagnosis of personality disorder must meet the following general criteria:

A. Experience and behaviour that deviates markedly from the expectations of the individual's culture. This pattern is manifested in two (or more) of the following areas:

   1. Cognition
   2. Affect
   3. Interpersonal functioning
   4. Impulse control

B. The enduring pattern is inflexible and pervasive across a broad range of personal and social situations.

C. The enduring pattern is stable and of long duration, and its onset can be tracked back at least to adolescence or early childhood.

D. The enduring pattern is not better accounted for as manifestation or consequences of another mental disorder.

E. The enduring pattern is not due to the direct physiological effects of a substance or a general medical condition such as head injury.

For each of the ten types of personality disorder, specific criteria exist. Typically, the assessment of personality disorder is based upon clinical judgment. This involves interview and assessment of the presence of enduring and maladaptive traits according to guidelines such as the DSM-IV (APA, 2000). This approach tends to

have poor reliability. Those aspects seen to be responsible for this lack of reliability include: (i) variance in information, (ii) variance in observations and interpretation, and (iii) variance concerning criteria (Hodiamont, 1986; cited in Germans, et al., 2008).

The reliability of clinical judgement can be improved by the use of standardised assessments. There are two types of instruments available for diagnosing personality disorder, the semi-structured interview and the self-report questionnaire. The more commonly used, international semi-structured interviews are the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin,1997), the Standardized Assessment of Personality (SAP; Mann, Jenkins, Cutting, & Cowen, 1981), the International Personality Disorder Examination (IPDE; Loranger et al., 1994), the Diagnostic Interview for Personality Disorders (Zanarini, Frankenburg, Chauncey, & Guberson, 1987), and the Personality Assessment Schedule (PAS; Tyrer et al.,1984). These should be performed by trained professionals to reduce the observational and interpretational variance as much as possible.

Assessments involving semi-structured interview, particularly those using broad multidimensional personality assessments are lengthy and require training. Unfortunately, in daily clinical practice, there is often a lack of personnel and time for extensive diagnostic assessments. A solution could be to implement a two-phase procedure. Phase 1 would be the initial screening phase and phase 2 would be the administration of a semi-structured interview for those who screened positive. This would save time by not conducting unnecessary interviews.

Screening tools are often based on self report. The advantages of self-report are the information source (individuals will contemplate and respond to the items themselves) and the standardised scoring. There is no room for interpretation based on the clinician's impressions and often no third party influence. The non-standardised interview allows the clinician to use any available information, which can be a benefit; however, it does not restrict how the clinician might perceive or value the information during the diagnostic process (Germans et al., 2008).

A number of self report questionnaires exist for screening personality disorders. These include the International Personality Disorder Examination Screen (IPDE Screen) (Lenzenweger et al, 1997), the Structured Clinical Interview II Screen for DSM-1V (SCID II Screen) (Ekselius et al, 1994), and the Personality Diagnostic Questionnaire – Revised (Hyler et al., 1992). There are also a number of interviewer-administered screens for personality disorder. These include, the Iowa Personality Disorder Screen (IPDS) developed by Langbehn et al., (1999), and the Rapid Personality Assessment Schedule (RPAS) developed by Van-Horn, Manley, Leddy, Cicchetti and Tyrer (2000).

Psychometric measures and screening tools

Psychometric measures are used to assess a particular aspect or aspects of a person's functioning (i.e. cognition or personality) that may be relevant to evaluation and conceptualization of the presenting problem. As a result, psychometric measures have become a vital part of clinical assessment that emphasises evidence-based practice.

Antony and Barlow (2011) described a 'psychometrically strong measure' as requiring consistent empirical evidence of reliability, validity, and if possible clinical utility. The degree to which the measure provides an accurate picture of the targeted problem is therefore fundamental. The reliability of the tool, i.e. the consistency with which a psychometric assessment measures a construct accurately, consistently, and with minimal errors (Wasserman & Bracken, 2003), is also important.

Due to a growing number of limitations in clinical practice (i.e. financial consideration, staff resource and time constraints) it is vital that psychometric measures are cost effective, and practical. They must also demonstrate valid psychometric properties for the population and setting in which they are being used. Screening measures are a useful first step in the assessment process. They can be administered quickly and often do not require training to administer. As a result of their easy implementation they are becoming more popular. A screening measure however, is not intended to be diagnostic.

Fletcher and Fletcher (2005) describe a good screening test as having high sensitivity so that it does not miss the small number of cases in which the disease/variable of

interest is present. A good screening test should also have high specificity in order to reduce the number of people with false positive results. In screening terms, the 'gold-standard' for the presence of a disease/variable of interest is not only use of another test, but also a period of follow up, as this helps to differentiate between true and false-negative test results. Therefore, those aspects of screening that are important include: validity, reliability, yield, and cost (Sackett, Haynes, Guyatt, & Tugwell, 1991).

Research indicates that early diagnosis of personality disorder, can lead to improved treatment outcomes (Chanen, 2011; Chanen, Jovey, McCutcheon, Jackson & McGorry, 2008; Paris, 2005). Screening for personality disorder is therefore important in identifying those that may need further assessment.

Critical evaluation of the SAPAS

The following section will examine the psychometric properties of the SAPAS. This will include an assessment of its reliability, validity, ability to discriminate and appropriate norms. The chapter will then go on to examine the SAPAS applicability in general clinical settings, with a focus on forensic settings, and its research uses.

As the literature is developing only a handful of studies exist that have used the SAPAS. To date, the SAPAS has been validated for use in general psychiatric samples (Bukh, Bock, Vinberg, Gether, & Kessing, 2010; Germans, Van Heck, Moran & Hodiamont, 2008; Moran et al., 2003), among those with substance dependence (Hesse & Moran, 2010; Hesse, Rasmussen & Pedersen, 2008), and with those on probation (Pluck et al., 2011; Shaw, Minoudis & Craissati, 2012). These are presented below.

Psychometric properties of the SAPAS

Reliability

Reliability is an important component of a good psychological test. This is because the value of a test relies, in part, on its ability to produce consistent results. For example, if a test is designed to measure a personality trait such as extroversion, one

would expect the results to be approximately the same if the test were administered repeatedly. Although psychometric measures aim to reduce the level of error, within every psychometric measure there is some level of error (Groth-Marnat, 2000). Reliability can therefore act as an indicator of the amount of error in measurement. This is known as test-retest reliability. Other types of reliability include inter-rater reliability and internal consistency.

Reliability cannot be calculated precisely. A number of factors can influence the reliability of a measure. Firstly, that being measured must be fairly stable and consistent. If the variable in question is not stable and consistent, the results of the test will be inconsistent. Other factors such as administrative characteristics, environmental factors and the characteristics of the test takers themselves can also impact on reliability (Wasserman & Bracken, 2003).

Internal Consistency

In terms of psychological tests, internal consistency is a measure of reliability of different survey items intended to measure the same characteristic. Internal consistency is usually measured by Cronbach's Alpha coefficient. This ranges from 0 to 1, with higher values indicating greater internal consistency. Common guidelines (Nunnally, 1978) for interpreting Cronbach's Alpha are:

00. to .69 = poor
.70 to .79 = fair
.80 to .89 = good
.90 to 1.00 = excellent

Lance, Butts and Michels (2006) suggest that an alpha of at least 0.8 is an average benchmark for widely used measures, whereas Field (2000) suggested that alphas over 0.6 reflect a measure that is internally consistent. The Alpha Coefficient is therefore useful in assessing internal consistency.

The internal consistency of items on the SAPAS was examined in the preliminary validation study (Moran et al., 2003). This is presented in Table 10 (see Chapter 4 for the internal consistency of the SAPAS in the empirical study). A moderate degree of

overall internal consistency (0.68) was reported, with 'normally impulsive' and 'generally a perfectionist' the least consistent items.

Table 10

SAPAS Internal Consistency (Moran et al., 2003)

SAPAS item	Alpha Coefficient if item omitted
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

Hesse, Rasmussen and Pedersen (2008) also explored the internal consistency of items on the SAPAS using a sample of Danish substance misusers (see Table 11). They reported slightly lower internal consistency than in the original study ($\alpha = 0.62$) by Moran et al., (2003).

Hesse, Rasmussen and Pedersen (2008) also found that the impulsivity item reduced reliability slightly. They concluded that the SAPAS is a "*relatively reliable brief screening measure of personality disorder in patients with ongoing substance abuse undergoing methadone maintenance*" (Hesse, Rasmussen & Pedersen (2008, p. 1). Both studies indicated that the SAPAS has acceptable levels of internal consistency. Having said that, this is not necessarily a limitation of the SAPAS, as you would not expect people who score positively on one item to score positive on all others, as they reflect different personality disorders.

Table 11

SAPAS Internal Consistency (Hesse, Rasmussen and Pedersen, 2008)

SAPAS item	Alpha Coefficient if item omitted
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

Test-retest Reliability

Test-retest reliability refers to the reliability of a test to achieve similar results when the test has been administered on two or more separate occasions (where no intervention provided). This is used to assess the reliability of a test over time. If the same test is administered twice, the difference between scores on the first and second administration of the test should only be due to errors in measurement. The assumption is that there will be no change in the quality or construct being measured. The correlation coefficient between two sets of responses is the measure of the test-retest reliability.

As test-retest reliability is best used for things that are generally stable over time, it seems appropriate for the construct of personality disorder. Consequently, measures designed to assess personality disorder should demonstrate high test-retest reliability. They should also produce scores that are relatively stable over a short period of time.

A common method of assessing test-retest reliability is by calculating Cohen's Kappa. Kappa values account for the level of agreement expected by chance alone and range between 0 and 1, with 1 being a perfect correlation between the test and the retest.

Perfection however is impossible. Values in the range of 0.40 to 0.59 have been described as fair, 0.60 to 0.74 as good, and values above 0.75 are considered excellent (Ayearst & Bagby, 2011; cited in Anthony & Barlow, 2011). Reliability is considered poor if values for kappa are below 0.40.

Moran et al., (2003) estimated the test-retest reliability for each item of the SAPAS by calculating the kappa coefficient. The test, retest period was three weeks. The results are presented in Table 12.

Table 12

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

Test-retest reliability was reported as reasonable and individual kappa values as acceptable for 6 of 8 items. The results suggest that the majority of items on SAPAS had very good test-retest reliability. Although the values for 'normally impulsive' and 'normally a worrier' were lower, they are still considered good. Taking into account internal consistency and test-retest reliability, the reliability analyses suggest that 'normally impulsive' was the least satisfactory item.

Further examination of the test-retest reliability of the SAPAS comes from the study by Hesse, Rasmussen and Pedersen (2008). The reliability analyses of the SAPAS in substance misusers, undertaken over a four month period, are presented in Table 13.

Table 13

SAPAS Kappa Coefficient (Hesse, Rasmussen and Pedersen, 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

In this study, the test-retest reliability of individual items ranged from 0.26 to 0.58, and the mean SAPAS score increased from baseline to follow-up, an increase found to be marginally significant. In comparison to the original validation study (Moran et al., 2003), the kappa coefficient across the items in the substance misuser population are lower. Those items reflecting 'normally loses temper easily', 'normally a worrier' and 'depends on others a lot' are poor. The remaining items demonstrated fair test-retest reliability.

Although in reality, you would not expect test-retest scores to be identical, these results suggest that the test-retest reliability of the SAPAS with Danish substance misusers was questionable. This could be explained, for example, by the 'practice effect' where respondents learn to answer the same questions in the first test which affects their responses in the next test.

Inter-rater Reliability

Inter-rater reliability refers to consistency of judgments or ratings across multiple judges or raters. It is assessed by having two or more independent judges score the test. The scores are then compared to determine the consistency of the raters'

estimates. As the SAPAS is a self-report measure you cannot have inter-rater reliability.

Validity

The validity of a psychological test refers to the extent to which a test measures what it claims to measure. It is imperative for a test to be valid in order for the results to be accurately applied and interpreted. Validity is arguably the most important criterion for the quality of a test. There are several ways to estimate the validity of a test. The types of validity that will be discussed in relation to the SAPAS include construct, content, concurrent, convergent, and predictive validity.

In order to evaluate the validity of a screening measure, it is necessary to establish various statistical features of the screen (Anthony & Barlow, 2011). Test accuracy is defined by sensitivity and specificity. For a reliable measure these should be near 1.0. The positive predictive power of a test also needs consideration. This is the calculation of the probability that a test score accurately indicates the presence of a characteristic or diagnosis based on some other measure such as a clinical rating (Groth-Marnat, 2005).

In the case of the SAPAS, the diagnostic test used to determine validity was the SCID-II (First et al., 1997). The SCID-II was chosen as the 'gold standard' because it is an established assessment for DSM-IV personality disorder (Zimmerman, 1994; Moran et al., 2003).

Content and construct validity

When a test has content validity, the items on the test represent the entire range of possible items the test should cover. As individual test questions may be drawn from a large pool of items that cover a broad range of topics, the content validity of a questionnaire designed to measure a particular construct may only be valid for screening purposes (Haynes, Richard & Kubany, 1995). Therefore, it may not be valid for diagnostic purposes or treatment planning (Haynes et al., 1995). Hence why the SAPAS is not, and cannot be used as a diagnostic tool.

A clear understanding of the construct in question, what should be included and excluded from its content, is therefore critical and needs to be thoroughly considered (John & Soto, 2007). Establishing content validation is particularly challenging when the construct has poorly defined boundaries or inconsistent definitions (Haynes et al., 1995). As a consequence, it is common 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 (Haynes et al., 1995). The assessment of personality disorder is not without its problems in this respect (Clark, Livesley & Morey, 1997; Ayearst & Bagby, 2011; cited in Anthony & Barlow, 2011).

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 et al., 1995). A test therefore has construct validity if it demonstrates an association between the test scores and the prediction of a theoretical trait. A screening tool designed to measure traits of personality disorders should therefore co-vary with the degree that the measure contains items that reflect facets of personality disorder (Ayearst & Bagby, 2011; cited in Anthony & Barlow, 2011).

Moran et al., (2003) examined the sensitivity and specificity of the SAPAS for various cut-off scores. Approximately equal sensitivity and specificity (0.8) was found for a probability cut-off of 0.65 for a positive SCID diagnosis which is equivalent to a SAPAS score between 3-4. Therefore a cut-off score of 3- 4 on the SAPAS correctly classified 80% of patients, however the cut-off score of 3 offered arguably the best balance of sensitivity (0.94) and specificity (0.85) which reduced to 0.58 and 1.0 respectively when the cut-off score increased to 5 (equates to 77% correctly classified).

The sensitivity and specificity of the SAPAS was later examined by Germans, Van Heck, Moran and Hodiamont (2008), using a random sample of 195 Dutch psychiatric outpatients. According to the SCID-II, 50% of patients had personality disorder. The SAPAS correctly identified 81% of participants. Sensitivity (0.83) and specificity (0.80) were slightly lower compared to the original study (Moran et al., 2003). It was

hypothesised that this was due to the lower prevalence and severity of personality disorders in the study population (Germans et al., 2008). According to Germans et al., (2008), some of the items on the SAPAS demonstrated a lack of interrelatedness. This indicates that the content of the SAPAS is multi-faceted and likely reflects the heterogeneous content of the concept of 'personality disorder'.

In comparison to the SAPAS, the Iowa Personality Disorder Screen (IPDS) developed by Langbehn et al., (1999) is reported to have excellent sensitivity (92%) and good specificity (79%). The IPDS is a mini-structured interview that can be completed in five minutes. It consists of eleven questions that address both general and specific personality disorder criteria and has been validated against the Structured Interview for DSM-IV Personality Disorders (SIDP-IV). The Rapid Personality Assessment Schedule (RPAS) developed by Van-Horn, Manley, Leddy, Cicchetti and Tyrer (2000), also performs moderately well as a screen for personality disorder (sensitivity 64%, specificity 82%). The RPAS, however, is a structured patient interview for personality disorder which requires staff training to complete.

Concurrent validity

Another method for investigating the validity of a test is concurrent validity. Concurrent validity is a statistical method using correlation. It assesses the extent to which the measure correlates with previously validated measures of similar constructs. The stronger the correlation, the greater the concurrent validity.

The SAPAS, is based on a brief structured interview originating from the SAP (Mann, Jenkins & Cutting, 1981). An exploratory analysis of the SAP ratings of a sample of 303 primary care patients, showed that the total score on the eight probe items satisfactorily predicted the final SAP diagnosis of personality disorder, obtained after further questioning of the informant (area under the curve (AUC) = 0.79, 95% CI 0.74–0.84) (Moran et al., 2001; Rendu et al., 2002).

The concurrent validity of the SAPAS was examined by Moran et al., (2003) using the SCID-II (First et al, 1997). They found that a score of 3 or more correctly identified the presence of personality disorder in 90% of participants. A total of 33 out of 66 patients received a SCID-II diagnosis of personality disorder, giving an

overall prevalence of 55% (95% CI 42-68). The performance of the SAPAS at various other cut-off scores is presented in Table 14.

Table 14

Performance of the SAPAS at Different Cut-off Scores (Moran et al., 2003)

Cut-off score	Sensitivity	Specificity	+ve predictive value	-ve 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

Using a community forensic sample, specifically probation, Pluck et al., (2011) also examined the concurrent validity of the SAPAS using the SCID-II. The study was undertaken as part of a larger cross-sectional survey of psychiatric morbidity in the UK probation population (Pluck et al., 2011). A stratified random sample of 173 participants was selected, and assessed for the presence of depression, psychosis and other mental illness. Forty participants were also assessed for personality disorder. The data presented focuses on the sub-sample of 40 participants. The performance of the SAPAS at various cut-off scores is presented in Table 15.

Table 15

Performance of the SAPAS at Different Cut-off Scores (Pluck et al., 2011)

Cut-off score	Sensitivity	Specificity	+ve 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, 75% of the sample met DSM-IV criteria for at least one personality disorder, the most common diagnosis being antisocial. Using a cut-off score of 3, the prevalence of likely personality disorder was 78%. The kappa coefficient for the level of agreement between SAPAS scores and the SCID–II was 0.51, which indicated good agreement between the two assessment measures (Pluck et al., 2011).

In accordance with the original finding by Moran et al., (2003), Pluck et al., (2011) found that a cut-off score of three was appropriate for use in probation samples. Here, a score of 3 or more had an accuracy of 78%, with good sensitivity (0.73) and specificity (0.9). The observed positive predictive value (PPV) indicated that when an individual scores 3 or more on the SAPAS, 96 of 100 probationers will likely have a personality disorder. As a result, Pluck et al., (2011) concluded that the SAPAS is a valid screening tool for personality disorder among those on probation and is of potential value to those working in the Criminal Justice System (CJS).

Pluck et al., (2011) went on to suggest that in cases where there was greater emphasis on not missing true cases of personality disorder, a case can be made for using a cut-off of score of two. The argument is that a cut-off score of two has a sensitivity of 0.9 and would therefore adequately fulfil this function. However, this is offset with a reduction in both specificity (0.6) and positive predictive value (0.87). Although an alternative cut-off score of two may be appropriate in some contexts, (as screening tools should optimally have a sensitivity of > 0.8 and a specificity of > 0.5 (Ayearst & Bagby, 2011; cited in Anthony & Barlow, 2011; Pluck et al., 2011)), the impact of this on the specificity and PPV should be taken into account.

Further examination of the SAPAS in a forensic sample was undertaken by Shaw, Minoudis and Craissati (2012). They compared the SAPAS to the Offender Assessment System (OASys) Personality Disorder (PD) screen, a 12 item checklist scored as present/absent. Similarly to Moran and Hesse (2010), Shaw et al., (2012) found that the SAPAS correlated less well with cluster B disorders, particularly antisocial personality disorder (ASPD). As a result, they suggested that the SAPAS is used in combination with the OASys PD screen to improve sensitivity to antisocial cases.

Hesse and Moran (2010) also supported the idea of combined screening. As levels of ASPD are particularly high in offender populations (Singleton et al., 1998) use of the SAPAS alone could potentially be problematic. As per the study by Pluck et al., (2011), a potential way to overcome this would be to lower the cut-off score on the SAPAS from 3 to 2. Pluck et al. (2011) found that this method still maintained adequate psychometric properties within a probation sample and although it could increase the number of antisocial cases being identified, it would also be likely to increase the number of false positive predictions.

Convergent validity

Using a sample of 54 participants, Hesse and Moran (2010) examined the convergent validity of the SAPAS with other measures of personality disorder. They also explored how well the SAPAS measures the full range of personality pathology, and conducted a series of secondary analyses of data from a randomized controlled trial of personality disorder psychoeducation for substance use disorders. This included Spearman rank 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 (one for each cluster, and one for the total number of personality disorder criteria).

The results showed that in a clinical sample of substance abusers, the most commonly detected personality disorders, using the Psychiatric Research Interview for Substance and Mental Disorders (PRISM, Torrens, 2004) and Alcohol Use Disorder and Associated Disabilities interview Schedule-IV (AUDADIS-IV, Ruan et al., 2008) were antisocial (52%, PRISM), paranoid (44%, AUDADIS), borderline (41%, PRISM), and histrionic (37%, AUDADIS) personality disorder. It was also reported that 65% of the total sample scored 3 or more on the SAPAS. The results of the correlations, between the SAPAS and the criteria count for each personality disorder and by cluster, varied considerably. These are summarised in Table 16.

Various findings were reported in the regression analyses. After controlling for gender, age and symptoms of anxiety and depression (as measured by the Kessler 6 interview) (Kessler et al., 2003), and hyperactivity and attention deficit disorder on

the ADHD Self-Report Scale (Adler et al., 2006), the SAPAS remained significantly associated with the total number of personality disorder criteria (p = 0.03), and 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 & Moran, 2010). The findings from the multivariate analyses were 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).

Table 16

Rank Order Correlations between Personality Disorder Criteria Counts and the SAPAS (Hesse & Moran, 2010)

	Rho	**Probability**
Cluster A criteria	0.58	0.00
Paranoid	0.53	0.00
Schizoid	0.40	0.00
Cluster B criteria	0.39	0.00
Antisocial	0.004	0.78
Histrionic	0.26	0.06
Borderline	0.47	0.00
Cluster C criteria	0.59	0.00
Avoidant	0.55	0.00
Dependent	0.48	0.00
Obsessive-compulsive	0.25	0.06
Total no. personality disorder criteria	0.61	0.00

The evidence presented by Hesse and Moran (2010) suggests that the SAPAS, as a dimensional measure of the construct of personality disorder, possesses several good psychometric properties. It correlates highly with the number of interview-based criteria for personality disorder, and this correlation remains significant after

controlling for gender, age, symptoms of anxiety, depression, attention deficit disorder symptoms and substance use (Moran & Hesse, 2010). Although the associations between the SAPAS and both cluster A, and C disorders were robust across all confounders tested, the same however, was not found in relation to some cluster B disorders. In particular, it did not correlate highly with antisocial, histrionic and obsessive-compulsive personality disorder, and with trait narcissism. This finding is problematic and highlights a potential limitation of the SAPAS, particularly in relation to its use with samples displaying dramatic/impulsive personality disturbance. The study by Moran and Hesse (2010), however, was based on a small sample of substance abusers seeking outpatient treatment. Thus interpretation of the findings must bear this in mind.

Predictive validity

Predictive validity is similar to concurrent validity and refers to how well a test predicts future performance. Bukh et al. (2010) examined the SAPAS among patients in Denmark with first episode of depression. To date, this is the largest study on the performance of the SAPAS as a screen for personality disorder, and the first to examine the ability of the SAPAS to predict comorbid personality disorders among patients with a clinical diagnosis of depression. The sample was defined as 'all outpatients and inpatients with a diagnosis of a single depressive episode according to ICD-10' (WHO, 1992) (Bukh et al., 2010). In total, 394 participants were recruited for the study. Participants completed the SAPAS and were further assessed for the presence of personality disorder using the SCID-II. The severity of depressive symptoms at the time of the interview was assessed using the 17-item Hamilton Depression Rating Scale (Ham-D 17, Hamilton, 1976).

Of the total sample, 33% of participants fulfilled the criteria for one or more personality disorder according to the SCID-II. Of those, 3.8% of participants met the criteria for a cluster A disorder, 3.8 % for a cluster B disorder, and 17.8 % a cluster C disorder. The reliability coefficient, based on the agreement between the interviewers, in respect of a diagnosis of a personality disorder of any kind, was 0.76 (Bukh et al., 2010).

The performance of the SAPAS was assessed in terms of its sensitivity, specificity, predictive values, and power to predict a diagnosis of personality disorder. The findings are presented in Table 17. Logistic regression was performed to assess the association between the SAPAS score and the prevalence of personality disorder, which was adjusted for the effect of residual depressive symptoms using the Ham-D 17 score (Bukh et al., 2010).

Table 17

Performance of the SAPAS at Different Cut-off Scores (Bukh et al., 2010)

Cut-off score	% N	Sensitivity	Specificity	+ve predictive value	-ve 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

The cut-off scores of 3 and 4 correctly classified approximately three quarters of the participants, however, a cut-off of 3 appears to offer the best balance of sensitivity (0.80) and specificity (0.70). Nearly half of participants (46.7%) obtained a SAPAS score greater than or equal to three. The prevalence of personality disorder in this group was 56%, which was highest in the cluster C disorders.

Bukh et al. (2010) also examined whether residual symptoms of depression influenced the association between the SAPAS score and the prevalence of comorbid personality disorder. As mentioned, this was determined by adjusting for the effect of residual depressive symptoms (by using the Ham-D 17 score in the regression analysis). Bukh et al. (2010) reported that the association between the SAPAS score and a diagnosis of personality disorder was not dependent on the severity of depressive symptoms at the time of the assessment.

Although the findings by Bukh et al (2010) were significant, they were of a lower magnitude than those found in the original study by Moran et al., (2003). The findings therefore provide adequate evidence that the SAPAS is clinically useful as a screening tool for comorbid personality disorder, in a population of patients from a hospital setting, with a primary diagnosis of depression.

Original study norms

The SAPAS has been validated for use in European psychiatric samples (Bukh et al., 2010; Moran et al., 2003), with a sample of Danish substance misusers (Hesse, Rasmussen & Pederson, 2008; Hesse & Moran, 2010) and among those on probation (Pluck et al., 2011; Shaw, Minoudis & Craissati, 2012). In respect of the original validation study, Moran et al. (2003) acknowledged that the scientific properties of the SAPAS relied on data from a small non-random sample of stable and cooperative patients (34 women, 26 men, mean age 43 years), with high prevalence of personality disorder. No control group was reported in the original validation study which limits the strength of the findings and undermines the predictive power of the tool. As a result the authors advised that application of the SAPAS is limited to settings in which personality disorder prevalence is high and therefore not suitable for general community or primary care settings in which personality disorder prevalence is lower. Having said that, the findings from the additional studies provide sufficient evidence for its usefulness as a first stage screening tool for personality disorder, in both clinical and forensic settings.

To date, the SAPAS has largely been validated on clinical samples, where the prevalence of personality disorder is high, particularly in comparison to the general population. Moran et al. (2003) stated that if the SAPAS were applied to a population with lower prevalence of personality disorder, its predictive power would diminish. As a result, the SAPAS is not suitable for use in the general community or primary care settings. It is however, likely to have greater predictive power in samples where personality disorder prevalence is high, such as forensic settings and tertiary services. The SAPAS therefore requires further application in larger and more diverse samples.

<u>Application of the SAPAS in forensic settings</u>

As discussed there is growing evidence to suggest that the SAPAS is suitable for use in clinical settings. Whilst this is largely guided by the original study, further studies exist examining the SAPAS applicability in other settings. The focus hereafter will be on the application of the SAPAS in forensic settings. Comments will also be made about the general pros and cons of the SAPAS.

An advantage of the SAPAS is that it does not require formal training to administer. It would therefore be feasible for various professionals within the CJS to use it, for example, probation officers. While this could overcome the problem of limited resources (i.e. the time/costs associated with training staff and availability of competent staff and supervisors) it could also have a number of associated problems. Irrespective of setting, appropriate use of any psychometric scale is important. The SAPAS lacks a manual and the guidance for its application is brief. Unless the professional implementing the SAPAS is familiar with the use of self-report measures that are not intended to be diagnostic, their expectations may be unrealistic. This too could be said in relation to the expectations of the individual completing the SAPAS.

It is not uncommon for professionals in the CJS or offenders to seek concrete diagnostic information. The SAPAS could therefore be used inappropriately as a means of labelling offenders rather than a screening tool to ascertain if further assessment is necessary. This could have significant implications on other areas of assessment, for example risk assessments and/or information incorporated into parole reports.

As with any information gathered following application of a psychometric measure, where the results are reported is particularly important, especially if they are being reported incorrectly. Therefore, the SAPAS should not be used if the individual is expecting a diagnosis, if the professional has an incorrect understanding of the purpose of the tool, and if incorrect assumptions may be made about the meaning of the outcome, i.e. personality disorder equates to dangerousness.

The lack of accompanying guidance and/or contextualisation for the SAPAS could be problematic in other ways. Professionals applying the SAPAS who are unfamiliar with psychometric measures may attempt to assist the offender by interpreting or

explaining the questions. If those applying the SAPAS fail to stick to the questions the results would be unreliable. Similarly, in light of the high levels of borderline-mild learning disability in the CJS (Loucks, 2006) the opening guidance for completion of the SAPAS could result in conceptual issues for the offender. Whilst some may find this helpful, others may find the concept of 'usual self' abstract and confusing.

A further issue to consider when using the SAPAS in a forensic setting is what resources are available for further personality assessment if it is identified as necessary. If no such resource exists, which is likely (only two psychologists are currently employed by the London Probation Trust), one could question the ethics of administering a screening tool. Having said that, a competent professional could utilise the SAPAS to better understand the offender and by incorporating the findings of the screening into their formulation.

Unfortunately, the nature of a screening tool means it is too limited to include any measures to assess truthfulness or response bias i.e. a lie scale, miscellaneous or re-calibration questions. In addition the scoring of the SAPAS is rather transparent. Impression management is therefore likely, particularly within a forensic setting in which the individual may hold beliefs about the implications of their responses i.e. licence conditions or parole outcomes. It may also be the case that antisocial types are less likely to honestly respond or agree to complete the tool, thus reducing detection of antisocial cases.

Given the limitations inherent in any screening tool, the SAPAS possesses a variety of uses in terms of both clinical practice and research. The SAPAS could be used as a very quick and simple method of beginning to conceptualise an offender in terms of their personality. This is an aspect often overlooked by professionals in the CJS such as prison officers or probation staff, as they often focus heavily on risk. Information gathered from the SAPAS could be helpful in understanding an offender's typical ways of being, and how they perceive themselves. The information gathered from the SAPAS is potentially simple enough to inform various professionals who may have had little or no psychological training. The findings could therefore be easily disseminated within multi-disciplinary teams.

The implementation of routine personality screening in forensic settings could provide a rationale for pursuing a more detailed assessment of personality and thus have implications on treatment provision. Such treatment could involve integrative working with the NHS via the provision of specialist personality disorder services. This would support the current Offender Personality Disorder Programme (DoH/NOMS, 2012), which amongst other things, aims to improve access to specialist comprehensive psychotherapy interventions which have demonstrated efficacy with some personality disorders (Stoffers et al., 2012).

Research uses of the SAPAS

The SAPAS was originally validated (Moran et al., 2003) on populations that are not similar to forensic populations i.e. a majority of women, mean age 43 years, compliant and stable with low levels of drug/alcohol dependency. Further research used the SAPAS with general psychiatric samples (Bukh et al., 2010; Germans, Van Heck, Moran & Hodiamont, 2008), and among those with substance dependence (Hesse & Moran, 2010; Hesse, Rasmussen and Pedersen, 2008). Two recent studies using forensic samples, namely probation, also exist (Pluck et al., 2011; Shaw, Minoudis & Craissati, 2012).

In light of the limited research to date, the findings from the original validation study (Moran et al., 2003) should be replicated on larger samples, in different settings with more diverse populations. In conjunction with other assessment tools, it would be interesting to further explore the utility of the SAPAS in a forensic context, as offender characteristics are considered important in the prediction of future risk of re-offending and response to treatment. The inclusion of an alternative item reflecting antisocial traits could be explored to evaluate its accuracy in identifying antisocial cases.

The shortcoming of the SAPAS in identifying antisocial cases could be overcome by a combined screening approach, advocated by Shaw, Minoudis and Craissati (2012). This approach has been implemented in the empirical study (Chapter 4). Here, both the SAPAS and OASys PD screening tools have been applied to a sample of offenders that went on to commit a serious further sexual or violent offence. It is hoped that this approach will overcome some of the limitations discussed.

In light of 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. The dimensional approach considers personality disorder traits as variants of basic personality traits that fall along a continuum, where indistinct boundaries exist between normal and abnormal personality (Widiger & Simonsen, 2005). This approach enables rating both the presence and severity of the symptoms, such as 'very severe' to 'mild'. Future research using the SAPAS as a dimensional approach to personality disorder could therefore be advantageous.

Conclusion

The purpose of this chapter was to examine the psychometric properties of the Structured Assessment of Personality - Abbreviated Scale (SAPAS; Moran et al., 2003), to consider its clinical utility and future research uses. The available evidence suggests that the SAPAS possesses good psychometric properties. It is a reliable and valid screening tool of DSM-IV (APA, 2000) personality disorder, as assessed by the SCID–II (First et al., 1997), in a number of clinical populations.

Clinically, the SAPAS posses a number of positive qualities. Research has shown that the SAPAS can rapidly identify individuals at high risk of personality disorder. As a result of its length and ease of application, the SAPAS can be used in routine screening assessments as it is short, simple to use, and does not require training. It is user-friendly and unlikely to result in fatigue or distress. It therefore fulfils many of the criteria for a desirable screening measure.

It is important to note that the SAPAS is merely a screening tool and should not be used to provide a definitive diagnosis of personality disorder. It can, however, be used to indicate the likelihood of a diagnosis and is therefore useful as the first step of a two-stage assessment for case identification.

In conclusion, there is evidence to support the clinical utility of the SAPAS and the evidence base in respect of forensic populations is growing. The evidence presented within this chapter supports the assertion that the SAPAS posses adequate psychometric properties. Issues with the SAPAS sensitivity to antisocial cases has been highlighted and identified as an area for further research. As the new DSM has

the option of considering personality disorder using a dimensional framework, the SAPAS as a continuous measure is advantageous compared to categorical measures of personality disorder. For this reason the SAPAS may be in a better position to contribute to the evidence base for dimensional classification. As a result of the positive characteristics of the SAPAS, ease of administration and scoring, and the developing evidence base supporting its validity and reliability with forensic populations, the SAPAS is the measure of choice in the empirical study (Chapter 4).

Rationale for Chapter 4

Chapter 3 has highlighted the difficulties associated with undertaking lengthy personality assessments in clinical practice. Screening, as the first step in identifying likely cases of personality disorder, is advantageous as screening tools can be implemented rapidly and are cost effective. The psychometric properties of any screening tool are important. In screening for personality disorder, the SAPAS demonstrates adequate psychometric properties, although its sensitivity to antisocial cases has been identified as problematic. A combined approach to screening has therefore been recommended in forensic populations. Chapter 4 sets out to explore the relationship between personality disorder and serious further offending in probationers using the Standardised Assessment of Personality Abbreviated Scale and the Offender Assessment System Personality Disorder Screen.

CHAPTER FOUR

Personality Disorder in Serious Further Offenders: A study of differences between SFOs and non-SFOs on personality measures

Abstract

Background: Little research exists examining personality disorder in probation samples. Research examining personality disorder in offenders that commit serious further high harm offences whilst under the active supervision of probation services is even sparser. This study therefore aims to investigate the prevalence and type of personality disorders using the Standardised Assessment of Personality Abbreviated Scale (SAPAS) and Offender Assessment System Personality Disorder (OASys PD) screen in a sample of serious further offence (SFO) offenders from the London Probation Trust. Within this cohort, comparisons will be made between SFO offenders with and without personality disorder. The research also aims to explore personality disorder type and complexity by type of offence (violent or sexual). The SAPAS and OASys PD screen will also be explored in relation to their ability to predict serious further offending.

Methodology: The study sample (n=51) was drawn from a cohort of 181 adult offenders that had been convicted of a SFO, as defined by the London Probation Trust, between 1st January 2010 to 31st December 2012. The control group (n=51) was randomly selected from a pool of non-SFO offenders (n=385) that participated in a study by Shaw, Minoudis and Craissati (2012). The total sample (n=102) therefore consisted of equal numbers of SFO offenders and non-SFO offenders representative of a generic probation caseload. Participants completed the SAPAS to screen for the presence of personality disorder. The OASys PD screen was completed using file based information.

Analyses included Mann-Whitney U-tests, t-tests, chi-square, logistic regression and area under the receiver operating characteristic (ROC) curve (AUC) methods. The purpose of the analyses was to explore differences between SFO offenders with and without personality disorder on the SAPAS and OASys PD screen in respect of RoH and age; to explore RoH classification between violent and sexual SFO offenders with personality disorder on the SAPAS and OASys PD screen; to explore differences between groups (SFO vs. non-SFO) on total SAPAS and OASys PD screen scores; to explore responses on the individual SAPAS items between violent and sexual SFO offenders; to identify which factors might discriminate between those that committed

a SFO and those that did not; and to determine the accuracy of the significant predictor(s) in correctly classifying those that committed a SFO and those that did not. All analyses were carried out in SPSS.

Results: The prevalence of personality disorder was higher in SFO offenders than non-SFO offenders (53%/39.2% on the SAPAS and 47%/15.7% on the OASys PD screen). The difference between SFO offenders and non-SFO offenders was only significant in relation to the OASys PD screen (higher scores were observed in the SFO group). Violent SFO offenders and sexual SFO offenders were equally likely to have a personality disorder. The items most likely to receive a positive score on the SAPAS across SFO offenders were questions 3 (in general do you trust other people), 5 (are you normally an impulsive sort of person), and 6 (are you normally a worrier), which are indicative of paranoid, borderline and obsessive-compulsive personality disorders. Those least likely to be scored positively were questions 4 (do you normally lose your temper easily), and 2 (would you normally describe yourself as a loner), which are indicative of antisocial and avoidant personality disorders. Regression analyses found the OASys PD screen and risk of harm (RoH) to significantly predict group membership (SFO vs. non-SFO). Two items on the SAPAS (questions 1 and 7) were also significant, although they did not retain their significance in the fully adjusted model. The OASys PD screen and RoH classification had good predictive validity for discriminating group membership (AUC=.78 and .74 respectively).

Conclusions: Overall the findings demonstrated that the prevalence of personality disorders in SFO offenders is high, particularly in relation to antisocial traits on the OASys PD screen, and that the OASys PD and OASys RoH classification are significant variables for predicting group membership (SFO vs. non-SFO). The study findings have implications for the practices of Offender Managers/Supervisors in terms of the assessment of personality disorder, the formulation of risk, and subsequent level of risk management. The study findings support the approach used by the London Pathways Project which forms part of the wider Offender Personality Disorder Strategy (DoH/NOMS, 2012). The limitations of this study and future directions for research are discussed.

Introduction

Severe personality disorder

The term 'personality disorder' refers to psychological problems arising from personal dispositions which encompass deviations from the norms of interpersonal behaviour. The are two main classification systems, the International Classification of Diseases, 10th revision (ICD-10; World Health Organization, 1992) and the Diagnostic and Statistical Manual of Mental Disorders, 4th edition text revision (DSM-IV-TR; American Psychiatric Association, 2000) which was recently updated to a fifth edition (DSM-5, APA, 2013a). The international standard is to diagnose personality disorder based on either of these systems.

As per Chapter 2, the DSM-5 categorises personality disorder into 10 types, which are often grouped into three clusters. In order to receive a formal diagnosis of personality disorder there must be evidence of enduring dysfunction in the individual's cognition, affect and/or behaviour with onset in childhood or adolescence. As the DSM-5 adopts a hybrid dimensional-categorical model, in which personality disorders are aligned with particular personality traits and levels of impairment, there is the option to assess the severity of impairment in personality functioning and the problematic personality trait(s). This approach would be advantageous in respect diagnosing personality disorder, as most people with a personality disorder (identified by current categorical classification systems) have more than one (Zimmerman, Rothschild & Chelminski, 2005). It could also overcome some of the limitations in how ASPD is assessed i.e. over-diagnosis on the basis of criminal behaviour, rather than focussing on the underlying personality structure. Furthermore, as the problems get more severe, so do the number of personality disorders (Coid et al., 1999). The reliability of the categories are also poor and few reach the desirable minimum standards of agreement (Zimmerman, 1994). The cluster approach could therefore help in increasing the level of agreement.

Tyrer and Johnson (1996) proposed a dimensional system of classifying personality disorder by level of severity. Using this approach, the spectrum of personality disorder (using both categorical and dimensional approaches) is split into four major groups. Table 18 describes this system.

Table 18

Dimensional System of Classifying Personality Disorders (Tyrer and Johnson, 1996)

Level of severity	Description	Definition by categorical approach
0	No personality disorder	Does not satisfy actual or sub-threshold criteria for any personality disorder
1	Personality difficulty	Meets sub-threshold criteria for one or more personality disorders
2	Simple personality disorder	Meets actual criteria for one or more personality disorders within same cluster
3	Complex (diffuse) personality disorder	Meets actual criteria for one or more personality disorders within more than one cluster
4	Severe personality disorder (also psychopathy)	Meets criteria for creation of severe disruption both to individual and to many in society

Psychopathy is also considered to be a serious personality disorder, although it is not a personality disorder diagnosed within the DSM. Psychopathy is often associated with ASPD (Hart, Forth, & Hare, 1991), although the two are not the same (rather psychopathy is an extreme variant of ASPD). This is because ASPD, and also dissocial personality disorder (ICD-10, World Health Organisation, 1992), are the closest clinical constructs to psychopathy in the two major diagnostic systems.

Cleckley (1941) outlined the syndrome of psychopathy and described its abnormalities in interpersonal, affective and behavioural symptoms. For example, grandiose and manipulative (interpersonal), lack of guilt and shallow emotions (affective), and impulsive and prone to breaking rules (behavioural). Using these diagnostic features, Hare developed a standardised tool, the Psychopathy Checklist (PCL) which was later revised (PCL-R) (Hare, 1991), for identifying psychopathy. The PCL-R is based on 20 features of psychopathy and can be completed using either file based information with or without interview. Each item is rated on a three-point scale (0, 1 or 2), resulting in a maximum possible score of 40. Although the PCL-R was not originally designed to assess risk, Hare has published a data to show that those with a PCL-R score greater than 30 had significantly higher rates of recidivism (Hare et al., 2000). Adverse treatment outcomes have also been demonstrated with this group (Rice, Harris & Cormier, 1992)

In 2000, the Ministry of Justice and the Department of Health set up the Dangerous and Severe Personality Disorder (DSPD) Programme. This was in response to at least one very high profile case of a psychopath attacking members of the public, and awareness of an increased need to provide treatment for this group of offenders in order to reduce reoffending. The term DSPD is administrative rather than medical. It sets out criteria for severe personality disorder based on the following:

- PCL-R score of 30 or above

  Or,

- PCL-R score of 25-29 plus at least one DSM-IV personality disorder

  Or,

- Two or more DSM-IV personality disorder diagnoses

The DSPD Programme consists of specialist services in prisons (such as HMP Whitemoor and HMP Frankland), secure hospitals (such as Rampton and Broadmoor), and the community (Psychologically Informed Planned Environments in

approved premises and the London Pathways Project in probation). The DSPD Programme aimed to provide specialist treatment and resettlement services to offenders whose offending is linked to severe forms of personality disorder as these individuals present complex and difficult challenges across criminal justice and health settings. Specifically the DSPD approach had several guiding principles:

1. To address offending through the reduction of risk, by targeting criminogenic factors and meeting mental health needs

2. To be based on treatment models, grounded in evidence, susceptible to rigorous validation and external evaluation

3. To provide individualised treatment plans that were tailored and flexible, with regular progress reviews

4. To involve prisoners/patients in their treatment plans, gaining ownership of treatment outcomes and having transparency of process

The effectiveness of the programme is still under evaluation as reoffending outcomes can take over a decade. Furthermore, treatment of this group is expected to take 3-5 years.

Personality disorder and offending

Offender characteristics are clearly considered important in the prediction of future risk of re-offending. As a result, the psychiatric classification of offenders can be an important variable influencing decision making. The relationship between personality disorder and offending is established, albeit complex.

Chapter 2 outlines the evidence on the prevalence of personality disorders in forensic populations which is high (Fazel & Danesh, 2002; Ranger, Methuen, & Rutter, 2004; Ministry of Justice, 2011). Specifically examining the probation population, Brooker et al. (2011; 2012) explored the prevalence of current and lifetime mental illness in individuals under probation supervision in Lincolnshire, England. They estimated that 39% of individuals in this population were suffering from a mental illness, typically

anxiety disorders and substance misuse, and that 48% of the sample were likely to have a personality disorder.

The types of personality disorder commonly found in forensic populations typically tend to be ASPD and BPD (Singleton, Melzer & Gatward, 1998; Fazel & Danesh, 2002; Sansone & Sansone, 2009). Issues in relation to the diagnostic criteria for ASPD and how this impacts on prevalence rates are discussed in Chapter 2. As factors such as unemployment, promiscuity and substance misuse are common among individuals with ASPD (Robins & Price, 1991), the disorder is often comorbid with the latter (Ruiz, Pincus & Schinka, 2008; Gibbon et al., 2010). In turn, substance misuse disorder is associated with increased rates of recidivism (Coid et al., 2006; Walter et al., 2011), hence why the relationship between ASPD and offending is influenced by various factors.

The link between the severity of the personality disorder and its association with antisocial behaviour was presented by Coid (2003) in terms of a developmental framework of risk factors for high risk offenders with personality disorder (see Table 2 in Chapter 2). A UK study using a male prison cohort (Coid et al., 2007) identified that 15% of the sample fulfilled the criteria for DSPD. This study represented individuals with severe personality pathology. Coid et al. (2007) found that DSPD offenders were significantly more likely to be reconvicted after release for violent or acquisitive offences than those with milder personality pathology. Further support for this view comes from the study by Hernandez-Avila et al. (2000) who reported that the number of personality disorder diagnoses correlated with the number of crimes against property. As a consequence, this group of offenders are more likely to qualify for extended and indeterminate sentences. The severity of personality disturbance therefore has implications on management.

As previously mentioned, there is no measure of severity of personality disorder in the ICD-10 or DSM-IV classification systems. Rather, the new DSM gives the option to assess personality in this way; however, a categorical approach prevails. The method presented in Table 18 by Tyrer and Johnson (1996) rates the severity of personality disorder on four levels. Tyrer and Johnson (1996) found that those with more severe

personality disorder do not have stronger manifestations of one single disorder. Instead their personality disturbance spreads across all domains of personality.

The study by Tyrer and Johnson (1996) was a longitudinal study in which the personality of 163 patients with anxiety and depressive disorders was assessed and followed up over 2 years. They found that patients with no personality disorder had the lowest initial symptom scores and the best outcomes, whereas those with diffuse personality disorder had the highest initial levels of symptoms and improved least over the 2 years. Use of a measure of severity enables use of the cluster system to assess which domains the personality disturbance extends. This is relevant as there is evidence to suggest that there is a different response to treatment in this group, those with the most severe personality disorders, in high secure settings (Tyrer et al., 2006).

Few studies exist examining personality disorder and offending in probation samples. One such study by Minoudis, Shaw, Bannerman and Craissati (2012) identified two distinct types of high risk 'personality disturbed' offenders. The first was a severe antisocial type in which offending behaviour was prolific, community failure common, with traits indicative of antisocial personality disorder. The second type was less prolific although with high harm offending, less antisocial traits, a more diverse personality profile (including borderline, paranoid and narcissistic features) and early childhood disturbance. The study concluded that current methods of identifying personality disturbance in London Probation are more likely to detect the first type of offender. They stressed the importance of the identification of offenders with personality disturbance in order to prioritise cases that are more likely to commit a high harm re-offence. The notion that personality disorder is associated with a greater likelihood of recidivism is supported in the wider literature (Fridell et al., 2008; Hiscoke et al., 2003; Listwan, Piquero & Van-Voorhis, 2010) and is the focus of the systemic review in Chapter 2 of this thesis.

Probation and serious further offences

As levels of personality disorder in forensic populations are high, a clear understanding of the relationship between personality disorder and re-offending has important implications for agencies such as Probation who supervise offenders in the community. The London Probation Trust (LPT) is the largest of the 35 probation

trusts across England and Wales. LPT works with offenders aged 18 years and over who have been sentenced by the courts to a community order or suspended sentence order or released on licence from prison to serve the rest of their sentence in the community. At any one time they supervise 40,000 offenders across 620 square miles of the capital's 32 boroughs covering a population of 8.2 million people. Nationally, the Probation Service and the Prison Service form the National Offender Management Service (NOMS), which is the executive agency of the Ministry of Justice (MoJ). The aims of the LPT are:

- To reduce reoffending and to protect the public
- To enforce community sentences which punish and rehabilitate offenders
- To keep victims informed
- To provide innovative services including professional assessments to court
- To manage risk and influence positive change in offenders behaviour

For 12 years the LPT has used a system called the Serious Further Offence (SFO) notification and review procedure for reporting serious further offences (SFOs) committed by those subject to probation supervision. The procedure has been revised over time and since 2008 certain types of offences and certain categories of offender are no longer automatically subject to review. The review procedure is intended to ensure rigorous scrutiny of cases meeting SFO criteria and contribute to continuous improvement in how offenders are managed. SFOs are defined by the following criteria:

When an offender who is: (1) under any current form of supervision by the Probation Service (excluding offenders where a court or recall warrant had been issued 3 months or more prior to the date of the SFO) *OR* (2) who were under any form of supervision by the Probation Service which terminated less than 28 days prior to the SFO *AND* (3) who are under supervision and charged with an equivalent eligible

offence in another jurisdiction commits a violent or sexual offence and is charged and convicted for this offence.

Over 70 types of offences are classified as SFOs, for example, murder, false imprisonment, rape and incest (see Appendix 6 for a full list). As SFO procedures are implemented immediately at Court following charges being laid, not all recorded SFO cases actually reach conviction. In fact around half of all cases are either discontinued at Court, and/or subject to reduced charges or acquittal (London Probation Trust, 2011). Wherever charges are laid these must be notified to the LPT's Inspections and Standards Unit. Not all of these are subject to review, however, a case is reviewable and submitted to the National Offender Management Public Protection Unit if:

- The charge is murder, manslaughter, any other offence causing death, rape, assault by penetration or a sexual offence against a victim under 13 years of age (including attempted offences)

  Or,

- The offender was classified as high or very high risk of harm during their current sentence or did not have a risk designation on the Offender Assessment System dated during the current supervision period

  Or,

- The case is deemed high profile and of national media interest

The total number of SFOs identified and submitted to the Inspections and Standard Unit within the LPT for 2010-2011 was 153 (London Probation Trust, 2011). Rape constituted the largest category of SFOs (25 alleged cases). This was followed by aggravated burglary (23), kidnap (19), possession of a firearm with intent (19) and murder (18). The following year (2011-2012) there were 140 SFOs identified and submitted to the Inspections and Standard Unit for review (London Probation Trust, 2012). Again rape constituted the largest category of SFOs (33 alleged cases) which

equated to nearly a quarter (24%) of all cases that year. This was followed by murder (25), possession of a firearm with intent (19) and aggravated burglary (12). There were 10 cases of alleged kidnapping and 6 cases of the related offence false imprisonment.

Although SFOs constitute only a small proportion of the total LPT caseload, they are categorised as serious due to the high level of harm (psychological and physical) they inflict on others. They have considerable implications for the victim(s) and their family, society and the offender. The impact of SFOs within the Probation Service has been evident when SFOs are reported in the media. This also has significant implications on the service and its employees, affecting both staff morale and public confidence. Consequently, the LPT continues to keep a close focus on SFOs, to review and analyse each case in order to ensure they learn from the findings.

Characteristics of serious further offences and serious further offence offenders

Few studies have been published examining the characteristics of SFO offenders. Ansbro (2006) examined 90 SFOs in the LPT between January 2002 and July 2003. She discovered that the typical characteristics of SFO offenders were aged between 21-25 years old, on a licence from prison at the time of committing the SFO, and of black ethnicity. The latter finding, she concluded, was likely to be skewed as there was no ethnic monitoring data for a large number of SFO offenders. In respect of the type of SFO, rape allegations were highest, followed by murder. Nearly half of all SFO offenders were classified as medium risk at the time of the SFO.

Although the frequency of previous convictions varied within the sample, violent SFO offenders were more than twice as likely to have previous convictions for violent offences compared to sexual SFO offenders. Other factors such as substance misuse and domestic violence were prevalent. Only 9% of the sample had an identified mental disorder, although no information was provided about the nature of the disorder. This finding was similar to the work undertaken by Her Majesty's Inspectorate of Probation (2005) which was based upon inspections of various probation areas, Youth Offending Teams and three independent reviews of SFOs.

A more recent study by Craissati and Sindall (2009) explored risk and typologies of 94 SFO offenders over a fourteen month period. They found that the average age of the SFO offenders in their sample was 28 years old. Similarly to Ansbro (2006), the majority of SFO offenders fell into the medium risk category. Factors such as childhood adversity and a history of substance misuse were prevalent. The majority of the sample were on a Community Order (CO) at the time of the SFO. Most victims of the SFO were adult strangers and the majority of SFOs were violent in nature. A high proportion of SFOs, nearly three quarters, involved the use of a weapon. Twenty percent of the sample had contact with mental health services with only 3% having a formal diagnosis of personality disorder on file. Almost half of the sample scored positive on the Offender Assessment System (OASys) Personality Disorder screen (OASys PD screen) (see method section for details on these two measures). As the items on the OASys PD screen reflect traits indicative of ASPD, for example, reckless/risk taking behaviour and childhood behavioural problems, Craissati and Sindall (2009) identified a group of particularly antisocial offenders within their SFO sample.

Craissati and Sindall (2009) concluded that there appears to be a lack of common identifying features for SFO offenders. Aside from some key situational indicators associated with serious harm to others, for example access to weapons, SFO offenders are seemingly a heterogeneous group. They recommended that greater attention is given to personality disorder as it has neither been exclusively or systematically assessed and is likely to be underreported.

Personality disorder assessment in probation

A number of measures exist for the assessment of personality disorder e.g. the Millon Clinical Multiaxial Inventory (MCMI-III) (Millon, Millon, Davis & Grossman, 1997), the Minnesota Multiphasic Personality Inventory-Second Edition (MMPI-II) (Butcher et al., 2001), the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II; First et al., 1997), and the Personality Assessment Inventory (PAI) (Morey, 1991). However, none are routinely applied in probation. This is largely because of the financial implications of doing so. These measures require specialist training and are resource intensive to administer and score.

In Chapter 3 of this thesis, the general principles of psychometric measurement and screening are outlined. Although it seems obvious that a basic requirement of an assessment is that it should be accurate, both in terms of reliability and validity, the 'gold standard' is very hard to find in personality research (Cicchetti & Tyrer, 1988). It is therefore advisable that personality is assessed by a combination of self-report questionnaires, check-lists and interviews, of which the structured interview is currently considered the most robust.

The study by Craissati and Sindall (2009) used what has now become the method of screening for personality disorder in probation, the OASys PD screen. Scoring of the screen is based on the judgment of the Offender Manager/Offender Supervisor (OM/OS) and the items only reflect traits indicative of ASPD. The OASys PD screen is therefore not intended to identify other personality disorders such as borderline, narcissistic and paranoid. A score of 1 or 2 on all or most of the items should trigger further assessment; however resources are scarce and further assessment of personality is unlikely.

Until the recent introduction of the London Pathways Project (LPP) for personality disordered offenders (an element of the DSPD Programme called the Offender Personality Disorder Programme which comes from a joint strategy by the Department of Health (DoH) and NOMS (DoH/NOMS, 2012), the routine screening of probation cases did not exist. The LPP has however introduced screening using the OASys PD screen. This was prompted by research, such as the study by Minoudis, Shaw, Bannerman and Craissati (2012) who examined various methods of identifying personality disturbance in a London Probation sample. Included within this was the OASys PD screen and referrals from OMs. The study concluded that despite high prevalence of personality problems in probation caseloads, particularly for offenders assessed as a high risk of re-offending, there were gaps in the methods by which personality disorder data was collected by the NOMS.

As a result, under the LPP, specialist psychologists and OMs undertake screening of probation cases (both those in prison due for release on Licence and those in the community) in order to improve the identification of personality disordered offenders.

As the programme is still at the implementation stage, little is known about its efficacy or whether it will target SFO offenders.

As per Chapter 3, alternative methods of screening for personality disorder, such as the Standardised Assessment of Personality – Abbreviated Scale (SAPAS) (Moran et al., 2003) have been evaluated with forensic populations and received favourable opinion in relation to its psychometric properties (Moran et al., 2003; Van Horn et al., 2000). Not only that, the ease of administering the SAPAS in addition to its brief nature means it is an effective way of quickly screening for the presence of all types of personality disorder as opposed to antisocial alone. The advantages of a combined screening approach have been demonstrated in the literature; hence this study will use both the OASys PD screen and the SAPAS in the examination of SFO offenders.

This study

Despite the literature identifying high levels of personality disturbance within offender populations and the political emphasis to develop specialist knowledge of this group, there is no current standardised provision for identifying personality disorder with the LPT or nationally across Probation Trusts. The Pathways Project focuses on offenders categorised as high risk of harm to others, and only screens for the presence of ASPD. The Offender Personality Disorder strategy therefore overlooks the potential personality pathology in SFO offenders, who are typically classified as medium risk of harm to others at the time of the SFO (Ansbro, 2006; Craissati & Sindall, 2009). Research on SFO offenders is sparse, and there has been no systematic examination of personality disorder in SFO offenders. Consequently, very little is known about the personality of this group of high harm re-offenders.

Study aims

Following appraisal of the literature it is evident that there are significant gaps in the knowledge and understanding of SFO offenders. This is particularly true in relation to how SFO offenders are understood in terms of their personality, and whether there are any relationships between this and their offending behaviour. This has implications for clinical practice.

At present, criminal justice staff lack a reliable set of factors to assist in the identification of offenders that may go on to commit a serious further offence. They do not have an appreciation of the prevalence of personality disorder within this population or whether personality disorder influences the likelihood of committing a SFO.

As a result of the issues identified in Chapter 3 (in relation to the performance of the SAPAS and its limitations in detecting antisocial cases), this study aims to explore the ability of the SAPAS and OASys PD screen in predicting group membership (SFO vs. non-SFO). Using a comparative sample of 51 non-SFO offenders selected at random from a study by Shaw, Minoudis and Craissati (2012), differences on SAPAS and OASys PD screen total scores will be explored between the SFO offender and non-SFO offender groups.

Group membership will be further explored in relation to which SAPAS items best predict group membership/discriminate between those that committed a SFO vs. those that did not. The overall performance of the SAPAS and OASys PD screening tools will be explored in relation to these outcomes. Risk of harm (RoH) to others, as measured by the Offender Assessment System will also be explored in relation to its ability to predict group membership.

In light of the literature supporting a link between personality disorder and offending, the paucity of scientific research into SFO offenders, and the nature of their offending (high harm/significant consequences), the current research aims to investigate this area. The primary purpose of this research is to extend the existing scientific knowledge base about SFO offenders by examining the prevalence, and type of personality disorders in SFO offenders using the SAPAS and OASys PD screen. The ability of these measures to predict group membership (SFO vs. non-SFO) will also be explored. Comparisons will be made between SFO offenders with and without personality disorder, and between violent and sexual SFO offenders. The variables under investigation in this study include the type of SFO i.e. violent or sexual, the individual SAPAS items, the SAPAS and OASys PD screen total scores, risk of harm (RoH), and group membership i.e. SFO or non-SFO.

Hypotheses

The specific hypotheses to be tested are:

1. That SFO offenders will have significantly higher total scores on the SAPAS and OASys PD screen, compared to the control group (non-SFO)

2. The SFO group will have higher prevalence rates of personality disorder, as measured by the SAPAS and OASys PD screen, compared to the non-SFO group

3. The prevalence of personality disorder on the SAPAS and OASys PD screen will not differ significantly between violent SFO offenders and sexual SFO offenders

4. That scores on the SAPAS items of violent SFO offenders will be significantly different to sexual SFO offenders

Exploratory analyses include:

5. Identification of which variables best predict group membership (SFO or non-SFO), to include the SAPAS, OASys PD screen and RoH

6. How accurate the significant predictor(s) are in correctly classifying those that committed a SFO and those that did not

Method

Sample

The sample came from data held by the Inspection and Standards Unit within the LPT. The dataset included all identified alleged SFOs in London for the period 1st January 2010 to 31st December 2012. The total number of SFOs recorded for this period was 414. Study inclusion/exclusion criteria are outlined in Table 19.

Table 19

Empirical Study Inclusion/Exclusion Criteria

Inclusion criteria	Exclusion criteria
Adult offenders 18 years + when SFO committed	Offenders <18 years old when SFO committed
Offenders meeting the Probation SFO definition and criteria that have been charged AND convicted of an SFO	Those charged but not convicted of an SFO
Offenders supervised under the London Probation Trust when the SFO was committed	SFO offenders that are no longer subject to a sentence and therefore no longer under the supervision/management of HM Prison Service or LPT
SFOs committed in the community	SFOs committed in prison or hospital
SFOs committed between 2010-2012	SFOs committed outside of the period 2010-2012
SFO offenders currently being supervised/managed by LPT in the community (to include those in a probation hostel)	Offenders currently undergoing SFO review
SFO offenders currently in Prison	SFO offenders currently in hospital AND SFO offenders with current active mental illness
SFO offenders able to provide informed consent	SFO offenders unable to provide informed consent

After applying the inclusion/exclusion criteria the target sample reduced to 181. This was predominantly due to large numbers being charged with a SFO (the Inspection and Standards Unit were notified of the alleged SFO) but not convicted for the SFO. Of the 181 SFO offenders only three were female. Whilst a small number (n=9) of the sample were convicted in 2013, all SFOs were committed between 1st January 2010 to 31st December 2012.

The control group (non-SFOs) derived from data collated by Shaw, Minoudis and Craissati (2012). This study investigated the utility of the SAPAS and OASys PD screen in a sample of 385 probationers being supervised in the community. The sample came from four London boroughs and data was gathered by interview conducted by offender managers, and self report via induction and a probation offender survey. The main characteristics of the sample (n=385) used in the study by Shaw, Minoudis and Craissati (2012) were as follows:

- Age range between 18-67 years old (M=32)
- 90.4% male, 9.6% female
- 40.8% White British, 28.4% Black, 15.3% Asian, 6.3% mixed race
- The OASys general re-offending predictor rates were 46.1% low risk, 31.2% medium risk, and 13% high or very high risk (risk data was missing for 9.6% of cases)
- A SAPAS score of 3 or more classified 40.3% as having a personality disorder
- The mean SAPAS score for the entire sample was 2.47
- 15.1% of the sample reached the cut-off of seven or more items endorsed on the OASys PD screen
- The mean OASys PD screen score for the entire sample was 4.16

From the original sample of 385 participants, the selection of controls included every fourth case from the data set. As the a priori power analyses used equal numbers in each group, the method for selecting controls ceased at the point of 51 cases.

Measures

SAPAS

The SAPAS was developed by Moran et al. (2003) as a screening tool for personality disorder based on a brief structured interview deriving from the Standardised Assessment of Personality (SAP) (Mann et al., 1981). The SAPAS is made up of eight dichotomously rated items.

The questions (see Table 9, Chapter 3) are self rated descriptive statements about one self which can be answered by a yes or no. Each question is scored 0 or 1 and added together to produce a total score between 0 and 8. A score of 3 or more on the SAPAS correctly identifies the presence of DSM-IV-TR personality disorder in 90% of participants' (Moran et al., 2003).

The SAPAS takes on average 2-5 minutes to complete. The scoring is calculated by the interviewer after its completion and is based on the system of each positive item (with the exception of question 3 which is reverse keyed) yielding a score of one.

The available evidence suggests that the SAPAS possesses adequate reliability as a screening tool for personality disorder in some clinical and forensic settings (Hesse, Rasmussen, & Pedersen, 2008; Moran et al., 2003; Pluck et al., 2011). For a description of the psychometric properties of the SAPAS refer to the critique in Chapter 3.

OASys Risk of Harm

For participants included in the study, risk data was taken from OASys. This is a standard probation computerised risk assessment, developed jointly by probation and prisons. It comprises 73 items (scored between 0 and 2) across 12 sections, for example, offending information, drug misuse, relationships, attitudes and emotional well-being. OASys enables the probation officer conducting the assessment to understand the offender's likelihood of reconviction, the risk of harm he or she represents, and the criminogenic factors that must be addressed.

OASys contains a comprehensive risk of serious harm analysis and assessment. The risk of serious harm assessment is drawn from information from earlier sections of

OASys, in a systematic way, so that the assessor can make a judgement about the risk the offender poses in relation to the public, known adults, staff, prisoners, children, the individual and other risks. The levels of risk of harm (RoH) used in OASys are classified as follows:

Low – no significant current indicators of risk of serious harm

Medium – identifiable indicators of risk of serious harm. Potential to cause harm but unlikely to do so unless there is a change in circumstances

High – identifiable indicators of risk of serious harm. Potential event could happen at any time and impact would be serious

Very high – imminent risk of serious harm. Potential event is more than likely not to happen imminently. The impact would be serious

In the current study, RoH data was extracted from OASys for all participants. For SFO offenders, RoH data was gathered in relation to the OASys assessment prior to the SFO being committed (updated RoH data post SFO was also available and collated but will not feature in the study). As RoH is classified by the level of RoH, as opposed to a continuous numerical value, this was retained in the study i.e. low = 1, and medium = 2.

OASys PD screen

Embedded in OASys are ten items that resemble diagnostic features of psychopathy, and are currently used to screen for severe antisocial personality features. See Table 20 for a list of these items.

The OASys PD screen has demonstrated a modest, significant, positive correlation with total scores on the PCL-R among a sample of UK prisoners in DSPD or Therapeutic Community treatment settings (personal correspondence from Jenny Tew, cited in Shaw, Minoudis & Craissati, 2012). It is recommended that a cut-off of two-thirds of positively endorsed items (seven or more) indicates possible antisocial personality disorder. This is based on OASys manual guidance which suggests that

careful consideration is given to risk management for cases scoring above the cut-off. This approach was also used in the study by Craissati and Sindall (2009).

Table 20

OASys PD Screen Items

Item number	Item
1	1 or more conviction aged under 18 years?
2	Any of the offences include violence/threat of violence coercion?
3	Any of the offences include excessive violence/sadism?
4	Does the offender fail to recognise the impact of their offending on the victim/community/wider society?
5	Over reliance on friends/family/others for financial support?
6	Has a manipulative/predatory lifestyle?
7	Evidence of reckless/risk taking behaviour?
8	Evidence of childhood behavioural problems?
9	Any impulsivity?
10	Any aggressive/controlling behaviour?

It should be noted that some versions of the OASys PD screen use 12 items. Those additional items include, any breaches and three or more convictions for different categories of offence as an adult i.e. murder, manslaughter, burglary, theft, arson, drug offences, sexual offences or fraud. In cases where the 12 item version is being used, a cut-off of eight or more is recommended. For the purposes of this research, the ten item version was used with a cut-off score of seven. OASys PD screen scores were recorded as a categorical value using the recommended cut-off score.

Procedure

Once the target sample had been identified (n=181), the next step was to ascertain the location of the SFO offender (either prison or probation/community). The location of all SFO offenders meeting the study inclusion criteria was established by searching the Probation electronic database, Delius. The name of their Offender Manager (OM) for community-based SFO offenders or their Offender Supervisor (OS) for prison-based SFO offenders was also elicited in this way.

Whilst some information was recorded accurately in Delius, much of the prison status information was not. This was because Delius is primarily used as a Probation database, hence up to date prison information was not recorded unless the OM had recently liaised with the prison and updated it. As a result, the location of some SFO offenders was ascertained by contacting various prisons and requesting that they undertake a prisoner number search.

Due to the various locations of participants (from London, to Durham, to the South West) it was not feasible for the researcher to conduct the research on a face-to-face basis. Furthermore, the SAPAS is a self report measure that does not necessitate interview. The study was therefore carried out remotely from a research centre, Wandsworth Probation.

As the study setting was dependant on the location of the SFO offender, all contact with participants was carried out via their OM/OS. It was hoped that by involving a professional with prior knowledge of the SFO offender likelihood of participation would increase. The assistance of the OM/OS was also important in addressing potential barriers to participation such as literacy difficulties. Whilst other methods of data collection such as postal questionnaire were considered, they were deemed inappropriate, as prison postal systems are notoriously lengthy. In addition the study required the presence of a professional to witness the participant giving informed consent.

Each OM/OS was initially contacted by telephone and followed up by email. The primary contact was to explain the study, to obtain their agreement to facilitate the process and to establish whether the SFO offender was in a position to give informed consent. Once the OM/OS had agreed in principal an email was sent to them with the

study documents attached. This included the participant information sheet (see Appendix 7), the consent form (see Appendix 8), the SAPAS questionnaire (see Appendix 9), and study debrief (see Appendix 10). An instruction guide (see Appendix 11) was included for the OM/OS to follow along with a copy of the Ethics Committee approval letter (see Appendix 12). The study steps were outlined in the guidance and the OM/OS was advised to seek approval from their line manager before proceeding. For those prisons detaining five or more SFO offenders (HMP Swaleside, HMP Whitemoor and HMP Bure) and for maximum security prisons (HMP Frankland, HMP Belmarsh and HMP Whitemoor), the researcher made the request directly to the prison Offender Management Unit (OMU) senior and/or the Governor.

The steps carried out by the OM/OS were as follows:

1. The SFO offender was asked if they would be interested in taking part in a research study looking at the personality of people that have committed a SFO.

    - If they were interested the OM/OS would move onto step 2

    - If they were not interested this signified the end of their involvement in the study. The OM/OS was asked to email a brief reason why to the researcher.

2. The SFO offender was provided with the participant information sheet. They were given time to read this themselves or with the assistance of their OM/OS during supervision. Time was allowed for reflection and questions.

    - If after reading the participant information sheet they wished to take part in the study the OM/OS moved onto step 3

    - If they did not wish to take part this signified the end of their involvement in the study. The OM/OS was asked to email a brief reason why to the researcher

3. The participant was provided with the consent form. They were given time to read this themselves or with the assistance of their OM/OS during supervision. In order to provide full written consent they had to initial each box, print their name, sign and date it. The OM/OS had to do the same.

    - If they provided written consent the OM/OS moved onto step 4

    - If they did not provide written consent this signified the end of their involvement in the study. The OM/OS was asked to email a brief reason why to the researcher

4. The SAPAS was then completed by the participant. As per the SAPAS instruction, before proceeding to the questions the OM/OS was asked to give the following explanation:

    'I'd like to ask you some questions about yourself. If the way you have been in recent weeks or months is different from the way you usually are, please look back to when you were your usual self.'

    Participants were advised not to think too long about the questions. Once the SAPAS was complete the OM/OS moved onto step 5.

5. The participant was debriefed using the debrief form. They read this immediately after they completed the SAPAS and were advised to take it away with them as it provided sources of support.

The OM/OS was advised to return the completed consent form and questionnaire back to the research centre via fax or post. The researcher contacted all OMs/OSs on a weekly basis to check progress and discuss any queries.

The researcher then gathered information about the participant from Delius, and OASys. Information gathered from these sources included participant age, gender, ethnicity, index offence, RoH at the time of committing the SFO and currently (as measured by OASys), OASys PD screen total score, and Offender Group Reconviction Scale (OGRS) data.

Data for the control group was obtained from the study by Shaw, Minoudis and Craissati (2012). Fifty one cases were selected at random (every 4th case). Data included age, sex, total score on the OASys PD screen, total score on the SAPAS and individual items, and RoH.

Treatment of data

Data were collated, coded and anonymised. For each participant, SAPAS responses were coded as both continuous numerical values and categorical scores, as per the cut-off guidance. Therefore, responses on each individual item on the SAPAS were coded. Only categorical data (total score) was available for the control group in respect of the OASys PD screen. Consequently this variable was coded across groups according to whether the participant met the recommended cut-off score for the presence of personality disorder. Participants were also categorised into groups according to whether they met the cut-off for presence of personality disorder on the SAPAS and by type of SFO (violent or sexual).

The distribution of data was initially examined by applying the bell-shaped curve to each variables frequency distribution and 'eye-balling' the data. The distribution of observations were then converted into Z-scores to check if the distribution of scores was normal. Where appropriate, parametric tests were used.

The first stage of analysis involved basic descriptive data analysis exploring frequencies. A series of Mann-Whitney U tests were conducted to explore the differences between SFO offenders with and without personality disorder on the SAPAS and OASys PD screen in respect of RoH and age. RoH was also explored between violent and sexual SFO offenders with personality disorder on the SAPAS and OASys PD screen. Effect size was calculated as an approximation of *r*, using the following equation suggested by Rosenthal (1991, p.19) $r = z$ / square root of N, where N = total number of cases. This approximation of *r* was applied throughout the study for the Mann-Whitney analyses.

Independent samples T-tests were run to determine if there were differences between groups (SFO vs. non-SFO) on total SAPAS and OASys PD screen scores. The associations between the categorical variables expressed in hypotheses 3 and 4 were

examined using Pearson's chi-squared test. Where the expected counts were less than five, Fisher's exact test was reported.

In the second stage of analysis, a number of simple logistic regressions were performed (using the forced entry method) to identify which factors might discriminate between those that committed a SFO and those that did not. Variables found to be significantly associated formed the predictive model as independent variables. Group membership (SFO/non-SFO) was the dependent variable. The model was adjusted for demographic variables and remaining predictors. Receiver Operating Characteristic (ROC) curve analysis was implemented to determine the accuracy (measured by the area under the ROC curve, AUC) of the significant predictor(s) in correctly classifying those that committed a SFO and those that did not.

All statistical analyses were conducted using SPSS, version 21. A priori power analysis using the G* Power 3.1.7. Program (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that the sample size needed in order to obtain a medium effect size (0.5) (Cohen, 1988) for a Mann-Whitney test (two-tailed) was 134 or 106 for a one-tailed test. Similar sample sizes were required for T-tests (128 and 102 respectively) (see Appendix 13 for G* Power output). Post-hoc power analyses were also conducted using this programme and are reported in the results section.

Ethical considerations

The study was initiated once all study documents had received approval from the University of Nottingham Research Ethics Committee (REC), and the National Research Committee (NRC) for the National Offender Management Service (NOMS) and Ministry of Justice (MoJ) (study sponsor reference number 12127, IRAS reference number 269-12). The research project was conducted in accordance with REC and NRC policy and in line with professional codes of conduct as directed by both the British Psychological Society (2009) and Health and Care Professions Council (2012).

Participants expectations of taking part in the study were managed by the information provided in the participant information sheet and debrief. Participants were advised

not to disclose any sensitive or personal information during participation in the study. In the event that they did they were provided with a 1 page handout of sources of support i.e. the prison listeners scheme or chaplaincy or the Samaritans telephone number. In addition to this OMs/OSs were advised to follow standard prison/probation procedure should the following information be disclosed: behaviour that is against prison/probation rules and can be adjudicated against, illegal acts and behaviour that is potentially harmful to the participant e.g. intention to self-harm or to harm others.

The participant information sheet was explicit in stating that participation in the study was entirely voluntary. The OM/OS was advised to inform the SFO offender that they could withdraw consent to participate at any time without penalty or affecting the quality or quantity of their future prison or probation care, or loss of benefits to which the participant would otherwise be entitled. All participants were advised to direct any requests for information, complaints and queries through their prison establishment/probation trust.

The process for obtaining participant informed consent was in accordance with the Research Ethics Committee guidance. The OM/OS and the participant both signed and dated the consent form before the person participated in the study. The participant received a copy of the signed and dated forms and the original was retained in the study records. As per the direction of the Research and Commissioning Manager within the LPT, participation in the study was not recorded on the electronic database Delius, rather the researcher kept a confidential record of all study contacts.

Each participant was assigned a study identity code number, for use on study forms (SFs), and other study documents. SFs were treated as confidential documents and held securely in a locked cabinet. The researcher made a separate confidential record of the participant's name, date of birth and participant study number to permit identification of all participants enrolled in the study, in case additional follow-up was required. SFs were classified as restricted access, accessible to those personnel approved only by the chief or local researcher. The researcher handled data and stored it in accordance with data protection procedures. The researcher only collected the

minimum required information for the purposes of the study. Computer held data including the study database was held securely and password protected.

Results

Within the results section, frequencies and descriptives will be presented first, followed by the findings for each of the research questions in turn.

Sample

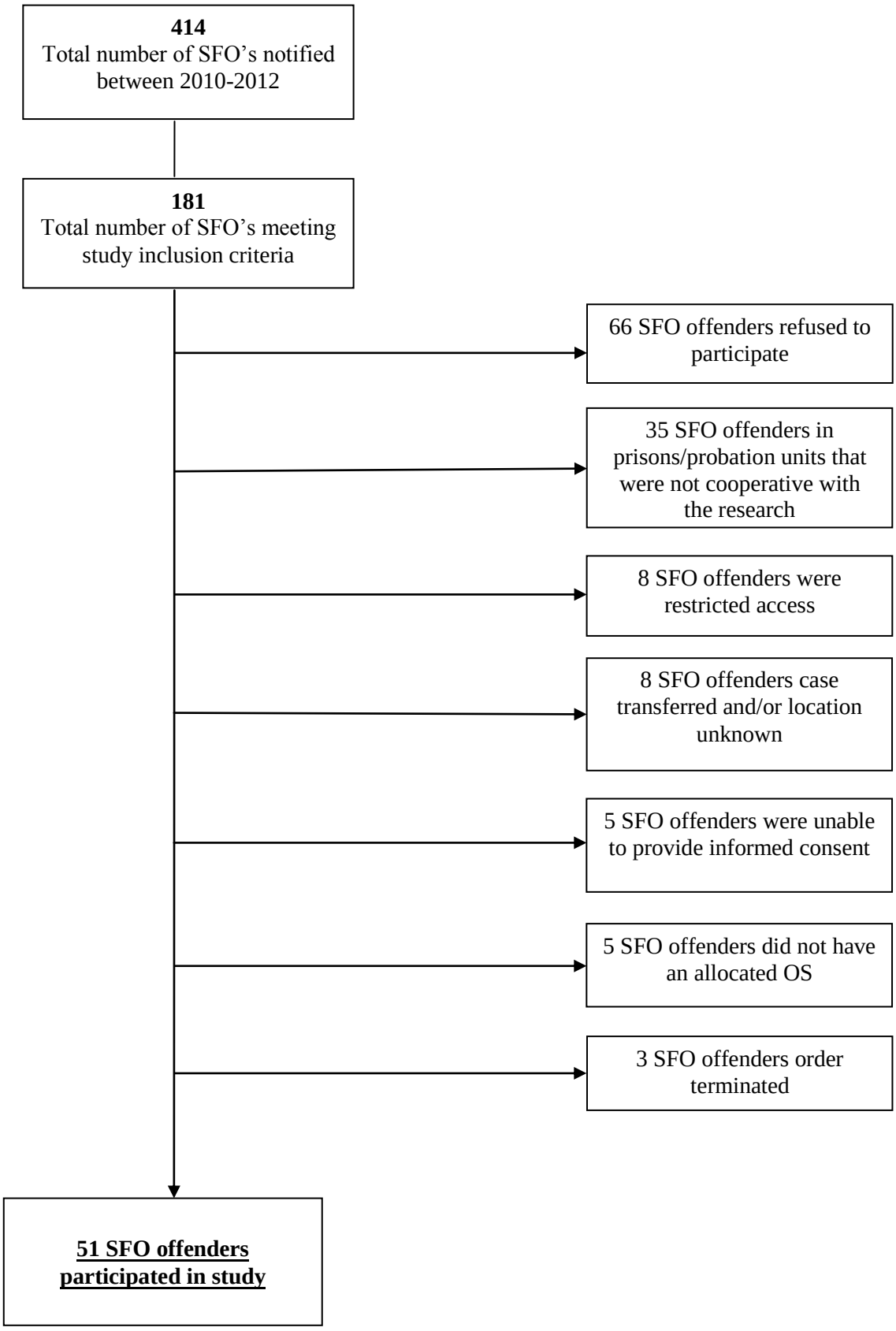
SFO offenders

Participants came from 21 prisons in England and 5 Probation Units in London (see Appendix 14 for a list of establishments). From a total possible sample of 181 SFO offenders, 51 took part in the study (28% response rate). The proportion of SFO offenders that refused to participate that had been charged with a violent SFO was 72% (n=94). The remainder, 28% (n=36) were sexual SFO offenders.

Reasons for non-participation are outlined in Figure 2 below. A large proportion of SFO offenders (n=66, 36%) declined to participate in the research. Reasons included concern that their responses would affect parole decisions and a general disinterest in taking part in research that did not have any direct benefits for them. The second most common reason for non-participation was lack of cooperation by either the prison detaining the offender or the OM/OS managing the offender. This affected 35 potential participants (19%). One prison establishment refused to facilitate the research by granting access to the SFO offender as they were on high security alert, and another prison did not provide any feedback as to why they refused to cooperate. Whilst the majority of prisons stated that the prison governor would consider the request, they did not provide a response in a timely fashion (in excess of 2 months). Similarly a number of OMs/OSs agreed to facilitate the research in principal but did not follow through with the request or respond to any follow up attempts.

Figure 2

Sample Size and Non-Respondents



Of the total potential sample, a number of participants (n=8) were classified as restricted access. This meant that the researcher was unable to access their data on Delius in order to find their location. It is likely that this was a result of recent media interest, hence only a small number of senior probation staff would have had access to their details.

Other reasons for non-participation included the SFO offender being transferred within the prison system, thus their location was unknown (n=8) and the SFO offender not yet having been allocated an OS in the prison (n=5). Consequently there was no way of getting the study documentation to them or for a named professional to confirm that they could provide informed consent. Following discussion with the OM/OS a small number (n=5) of the sample were identified as unable to provide informed consent on the grounds of active mental illness, current segregation and learning disability. During the process of data collection 3 SFO offenders orders terminated and they were not longer subject to the supervision of the Probation Service.

Sample description

Demographics

Table 21 presents the sample demographics. Of the total SFO sample (n=51), the majority were male. The average age of SFO offenders was 24 years old (SD = 5.7, median 22, range 18 - 43). Nearly a third of the sample (n=16, 31%) had some form of childhood adversity reported on file, including physical, emotional and sexual abuse and neglect. Only two participants (4%) had a formal diagnosis of personality disorder on file, whereas a history of substance misuse was recorded much more frequently (n=21, 41%). Similarly, the majority of the control sample (n=51) were male. The mean age of the control sample was 36 years old (SD = 13.5, range 18 - 66).

Table 21

Demographics of the Sample

	SFO group N (%)	Control group N (%)
Sex		
Male	50 (98%)	45 (87%)
Female	1 (2%)	6 (13%)
Age		
18-21 years old	21 (41%)	5 (10%)
25-29 years old	15 (29%)	5 (10%)
26-30 years old	9 (18%)	9 (18%)
31-35 years old	2 (4%)	12 (24%)
36 years +	4 (8%)	20 (39%)
Ethnicity		
White British	19 (37%)	20 (39%)
White Irish	2 (4%)	-
Black or Black British Caribbean	6 (12%)	15 (30%)
Black or Black British African	7 (14%)	-
Mixed white/black Caribbean or African	9 (18%)	5 (10%)
Asian	5 (10%)	6 (11%)
Refused to state ethnicity/no ethnicity recorded	3 (6%)	5 (10%)

Personality disorder

Personality disorder (indicated by a score of 3+ on the SAPAS) was identified in 53% of the SFO sample (n=27) and 39.2% of the control sample (n=20). The mean SAPAS score in the SFO group was 2.8 (SD = 1.9) and 2.3 (SD = 1.6) in the control group.

In respect of the OASys PD screen, the mean score for the SFO group was 5.8 (SD = 2) and 3.1 (SD = 2.7) in the control group. 47.1% of the SFO sample reached the cut-off score of seven or more on the OASys PD screen (n= 24), whereas only 15.7% (n=8) of non-SFO offenders reached the cut-off of seven or more endorsed items. This was 31.4% lower than the SFO group. The mean OASys PD screen score for the control group was also lower than that observed in the SFO group (a difference of 2.7). Scores on the SAPAS and OASys PD screens across groups are summarised in Table 22 below.

Table 22

Summary of SAPAS and OASys PD Screen Scores Across Groups and Mean Difference in Scores

	SFO	Non-SFO	Mean Difference (t value)
Average SAPAS score	2.8	2.3	1.423
% PD on SAPAS	53% (n=27)	39.2% (n=20)	--
Average OASys PD score	5.8	3.1	5.558*
% PD on OASys	47.1% (n=24)	15.7% (n=8)	--

Note * Significant at p<. 001

Total scores on the SAPAS (across the entire possible range of total scores) in both the SFO and non-SFO groups are presented in Table 23.

Table 23

Total Scores on the SAPAS by Group

Total SAPAS score	SFO group N (%)	Control group N (%)
0	4 (7.8%)	5 (9.8%)
1	12 (23.5%)	16 (31.4 %)
2	8 (15.6%)	12 (23.5%)
3	8 (15.6%)	8 (15.6%)
4	9 (17.6%)	3 (5.8%)
5	6 (11.7%)	9 (17.6%)
6	3 (5.8%)	-
7	-	-
8	1 (1.96%)	-

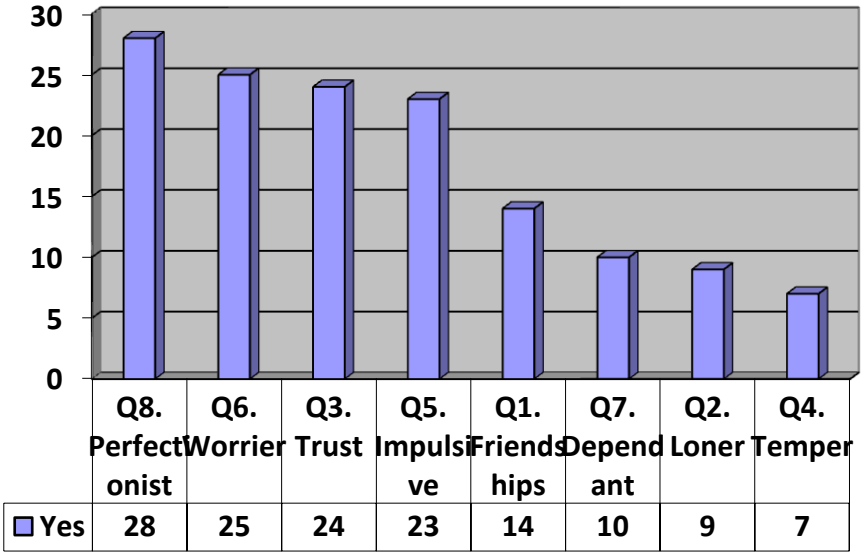
Positive responses on each SAPAS item by SFO offenders are presented in Graph 1. This shows that SFO offenders positively responded to question 8 (in general are you a perfectionist) the most (n=28, 55%). Question 6 (are you normally a worrier) followed with 50% (n=25). The next highest positive response was for question 3 (in general do you trust other people) in which 24 participants (47%) responded 'no' (reverse scored).

Those questions most likely to receive a negative response (a response of 'no' resulting in a score of zero) included question 4 (do you normally lose your temper easily) 86% (n=44), question 2 (would you normally describe yourself as a loner) 82% (n=42), question 7 (in general do you depend on others a lot) 80% (n=41), and question 1 (in general do you have difficulty making and keeping friends) 73% (n=37). Although SAPAS question 6 was responded to equally by SFO offenders (49% yes, 51% no), this was closely followed by SAPAS question 5 (are you

normally an impulsive sort of person), in which 45% (n=23) of participants responded 'yes' and 56% (n=28) responded 'no'.

Graph 1

Positive Responses on the SAPAS – SFO Offenders



Index offence

The majority (n=16, 31%) of SFO offenders committed a violent index offence (the offence prior to the SFO). The next most common category was 'other' insofar that it was neither violent nor sexual in nature (n=14, 27%). Acquisitive index offences followed (n=12, 24%), after which came driving related offences (n=6, 12%) and sexual offences (n=3, 6%). In the control group, index offences were categorised into three groups: violent 13.7% (n=7), sexual 11.8% (n=6), and other 74.5% (n=38).

Serious further offences

Those offences committed while on probation, i.e. the serious further offence, were violent (72.5%, n=37). Violent SFOs included possession of firearms with intent (27%, n=14), murder (24%, n=12), attempted murder (10%, n=5), aggravated burglary (8%, n=4), arson (2%, n=1) and kidnap (2%, n=1). Those with a sexual SFO (27.5%, n=14) included rape (20%, n=10), attempted rape (4%, n=2), causing or inciting a child to engage in sexual activity (2%, n=1) and sexual assault on a female (2%, n=1).

The proportion of violent vs. sexual SFO offenders eligible for inclusion in the study (n=181) was very similar. In this sample, 72% (n=131) committed a violent SFO and 28% (n=50) committed a sexual SFO. Of those included in the study, five SFO offenders (10%) were in the community on Licence, the remainder (90%, n=46) were in prison.

Personality disorder by SFO type

SFO offenders with personality disorder on the SAPAS (n=27) were further classified by SFO offence type (either violent or sexual). There were twice the number of violent SFO offenders with personality disorder (n=18, 67%) than there were sexual SFO offenders with personality disorder (n=9, 33%). These figures are fairly similar to the original proportions of violent vs. sexual SFO offenders (72.5% vs. 27.5%) in the total SFO sample (n=51).

In respect of SFO offenders with personality disorder on the OASys PD screen, very similar frequencies were found by offence type. Of those that were classified with personality disorder on this measure (n=24), 75% (n=18) were violent SFO offenders and 25% (n=6) were sexual SFO offenders. Personality disorder on the SAPAS and OASys PD screen by type of SFO is summarised in Table 24.

Table 24

Personality Disorder by SFO Type

Type of SFO	SFOs with PD on SAPAS	SFOs with PD on OASys PD screen
Violent SFO	67% (n=18)	75% (n=18)
Sexual SFO	33% (n=9)	25% (n=6)
Total	100% (n=27)	100% (n=24)

Differences between responses on each SAPAS item by type of SFO were also explored. No significant differences were found. These are presented in Table 25.

Table 25

Mean Difference between Violent and Sexual SFO Offenders by SAPAS Item

SAPAS Question	Mean/SD		Mean difference (t value)
	Violent	Sexual	
Q1. In general do you have difficulty making and keeping friends?	M=1.76 SD=.43	M=1.64 SD=.50	.755
Q2. Would you normally describe yourself as a loner?	M=1.81 SD=.40	M=1.85 SD=.36	-.396
Q3. In general do you trust other people?	M=1.46 SD=.51	M=1.50 SD=.52	-.251
Q4. Do you normally lose your temper easily?	M=1.86 SD=.35	M=1.86 SD=.36	.069
Q5. Are you normally an impulsive sort of person?	M=1.54 SD=.50	M=1.57 SD=.51	-.193
Q6. Are you normally a worrier?	M=1.51 SD=.51	M=1.50 SD=.52	.804
Q7. In general do you depend on others a lot?	M=1.79 SD=.42	M=1.86 SD=.36	-.617
Q8. In general are you a perfectionist?	M=1.49 SD=.51	M=1.36 SD=.50	.825

Risk

Risk of harm (RoH) was examined by looking at OASys risk classifications and OGRS scores. As OGRS scores were missing for 60% of the SFO sample, the focus in on OASys data.

RoH data is presented in Table 26 in respect of the risk classification at the time of the SFO and the RoH classification for the control group. This table shows that the majority of SFO offenders (n=30, 59%) were classified as a medium risk of harm at the time of the SFO. In comparison, only 38.5% (n=20) of the non-SFO group were classified as medium risk of harm. However, a significant proportion (42%, n=22) of the control group did not have a risk of harm assessment on OASys.

Table 26

OASys Risk of Harm Classification

	RoH at time of SFO	**RoH (controls)**
No OAsys	3.9% (n=2)	42% (n=22)
Low	2% (n=1)	3.8% (n=2)
Medium	58.8% (n=30)	38.5% (n=20)
High	35.3% (n=18)	13.5% (n=7)
Very high	--	--

Six percent of SFO offenders were classified as either low risk or did not have a risk assessment classification at the time of the SFO. Just over a third (n=18, 35%) were classified as high risk of harm to others and none were classified as very high risk. Similarly, only 3.8% (n=2) of the control group were classified as low risk of harm

and none were classified as very high risk of harm. 13.5% (n=7) of non-SFO offenders were classified as high risk of harm, a difference of 22%.

Post SFO, the RoH classification increased to high risk of harm for the vast majority (n=41, 80%). Only 4% were classified as low risk of harm post SFO and, 14% as medium risk of harm. One case was classified as very high risk of harm.

Statistical analyses

Preliminary analyses, using the Mann-Whitney U test for independent groups did not reach statistical significance in relation to the variables RoH, and age between those with and without personality disorder (as measured by the SAPAS and OASys PD screen) or in relation to RoH between violent and sexual SFO offenders with personality disorder on the SAPAS or OASys PD screen.

Consequently, the distribution of RoH was the same across categories of personality disorder (present or absent) on both the SAPAS and OASys PD screen. The distribution of age was also the same across categories of personality disorder on the SAPAS and OASys PD screen. In addition, the distribution of RoH was the same across categories of violent and sexual SFO offenders with personality disorder, as per the SAPAS and OASys PD screen.

Cronbach's alpha was calculated as a measure of how closely related the SAPAS items were as a group. The alpha coefficient for the eight items was 0.589, suggesting that the items have relatively low internal consistency (see guideline below for interpretation). Removal of any question, except question 8 (generally a perfectionist), would have resulted in a lower Cronbach's alpha. As the removal of question 8 would lead to a small improvement ($\alpha = 0.657$), it should be considered whether this item should be removed. See Table 27 for the SAPAS internal consistency in this study and the original validation study (Moran et al., 2003) .

It should be noted that the this is not necessarily a limitation of the SAPAS. You would not expect people who score positively on one item to score positive on all others, as they reflect different personality traits. Furthermore, small numbers of items give lower alphas (i.e., the lower-bound estimate of reliability). Internal

consistency is not sufficient for measuring homogeneity or unidimensionality in a sample of test items (Cortina, 1993). As the concept of reliability assumes that unidimensionality exists in a sample of test items, if this assumption is violated it causes a major underestimate of reliability. Hence why a more rigorous view of alpha is that it cannot simply be interpreted as an index for the internal consistency of a test (Cortina, 1993; Green, Lissitz, & Mulaik, 1977). The dimensionality of the scale was preliminary examined using factor analysis. The findings indicated that the SAPAS does not set out to be unidimensional, which supports the prior assertion.

As per Chapter 3, common guidelines for interpreting Cronbach's alpha suggest that an alpha of at least 0.8 is an average benchmark for widely used measures (Lance, Butts & Michels, 2006), whereas Field (2000) suggested that alphas over 0.6 reflect a measure that is internally consistent. Using these guidelines, one could interpret the findings as slightly lower than acceptable or satisfactory.

Table 27

SAPAS Internal Consistency in this Study and the Original Validation Study (Moran et al., 2003)

SAPAS item	Alpha Coefficient if item omitted (This study)	Alpha Coefficient if item omitted (Moran et al., 2003)
1. Difficulty making and keeping friends	0.47	0.59
2. Usually a loner	0.58	0.63
3. Trusting others	0.56	0.57
4. Normally loses temper easily	0.58	0.66
5. Normally impulsive	0.48	0.72
6. Normally a worrier	0.55	0.62
7. Depends on others a lot	0.54	0.68
8. Generally a perfectionist	0.66	0.70

Other studies examining the internal consistency of items on the SAPAS, found a moderate degree of overall internal consistency (α = 0.68), with 'normally impulsive' and 'generally a perfectionist' the least consistent items (Moran et al., 2003), whereas Hesse, Rasmussen and Pedersen (2008) reported slightly lower internal consistency (α = 0.62). The Cronbach's alpha coefficient in this study, was therefore similar to that found by Moran et al. (2003) and Hesse, Rasmussen and Pedersen (2008).

The following section will report the findings of each hypothesis in turn.

1. *That SFO offenders will have significantly higher total scores on the SAPAS and OASys PD screen, compared to the control group (non-SFO)*

   Differences on total SAPAS and OASys PD screen scores between SFO offenders and non-SFO offenders were explored using independent samples t-tests. The test results only showed a statistically significant difference in relation to total scores on the OASys PD screen. Therefore, an independent sample t-test showed that the difference in total OASys PD screen score between the SFO group (n = 51, m = 5.8, SD = 2) and the control group (n = 51, m = 3.1, SD = 2.7), was statistically significant, $t(100) = 5.558$, $p<.001$, 95% CI (1.702, 3.592), $d = 1.14$.

   The effect size for this analysis ($d = 1.14$) was found to exceed Cohen's (1988) convention for a large effect ($d = .80$). In contrast, the difference in total SAPAS score between the SFO group (n = 51, m = 2.8, SD = 1.9) and the control group (n = 51, m = 2.3, SD = 1.6), did not reach statistical significance, $t(100) = 1.423$, p = ns, 95% CI (-.193, 1.174), $d = 0.29$. The observed effect size for this analysis was small.

2. *The SFO group will have higher prevalence rates of personality disorder, as measured by the SAPAS and OASys PD screen, compared to the non-SFO group*

   As per the descriptives, frequencies showed that 53% (n=27) of SFO offenders scored 3 or more on the SAPAS, thus indicating likely presence of personality disorder. This was 14.2% higher than in the control group, who were likely to

have personality disorder on the SAPAS in 39.2% (n=20) of the sample. Using the OASys PD screen, a slightly lower prevalence of personality disorder (47.1%, n=24), was found in the SFO group. The difference in the non-SFO group was marked. Only 15.7% (n=8) scored above 7 or more on this measure.

The SAPAS therefore identified higher rates of personality disorder across groups. Non-SFO offenders had the lowest prevalence of antisocial personality disorder, as measured by the OASys PD screen and overall, the SFO group had higher rates of personality disorder on both measures.

3. *The prevalence of personality disorder on the SAPAS and OASys PD screen will not differ significantly between violent SFO offenders and sexual SFO offenders*

The relationship between type of SFO offender and the presence/absence of personality disorder was explored using a Pearson's Chi Square test. Table 28 reports the contingency table for these analyses.

This hypothesis was supported as the test results did not show a statistically significant association. The association between type of SFO offender, violent or sexual, and the presence or absence of personality disorder on the SAPAS was not significant $X^2(1) = .997$, p = ns. Similarly, the association between type of SFO offender, violent or sexual, and the presence or absence of personality disorder on the OASys PD screen was not significant $X^2(1) = .137$, p = ns.

A Spearman's Rank Order correlation was also run to determine the relationship between the total SAPAS score and OASys PD screen across groups (SFO vs. non-SFO). The Spearman's rho correlation coefficient (R_S, = 0.125) was not statistically significant.

Table 28

Crosstabulation of Type of SFO by Presence of Personality Disorder on the SAPAS and OASys PD Screen

		PD on SAPAS		**PD on OASys**	
		PD present	PD not present	PD present	PD not present
Violent SFO	Count	N=18	N=19	N= 18	N= 19
	% within violent/sexual	48.6%	51.4%	48.6%	51.4%
	% within PD	66.7%	79.2%	75%	70.4%
	% total	35.3%	37.3%	35.3%	37.3%
Sexual SFO	Count	N=9	N=5	N= 6	N= 8
	% within violent/sexual	64.3%	35.7%	42.9%	57.1%
	% within PD	33.3%	20.8%	25%	29.6%
	% total	17.6%	9.8%	11.8%	15.7%

4. *That scores on the SAPAS items of violent SFO offenders will be significantly different to sexual SFO offenders*

A series of Chi-Squared tests were performed to test whether there were significant associations between type of SFO offender (violent or sexual) with personality disorder and their responses to each item on the SAPAS. The test results did not show any statistically significant differences for any of the SAPAS items. As a result this hypothesis was not supported.

As the cells (25% or more) had an expected cell count of less than five, Fishers Exact tests have been reported (see Appendix 15 for the contingency tables). Table 29 provides a summary of the Fishers Exact test p-value for each SAPAS item by type of SFO offender with personality disorder on the SAPAS. The percentage of positive scores by type of SFO offender are also reported for each SAPAS item.

Table 29

Fishers Exact Test p-value for SFO Offenders with Personality Disorder by SAPAS Item

SAPAS question	Positive score %		Fishers exact test p-value
	Violent	Sexual	
Q1. In general do you have difficulty making and keeping friends?	50	56	1.000
Q2. Would you normally describe yourself as a loner?	33	22	.676
Q3. In general do you trust other people?	78	78	1.000
Q4. Do you normally lose your temper easily?	28	26	1.000
Q5. Are you normally an impulsive sort of person?	83	67	.367
Q6. Are you normally a worrier?	72	56	.423
Q7. In general do you depend on others a lot?	44	22	.406
Q8. In general are you a perfectionist?	56	67	.692

5. *Identification of which variables best predict group membership (SFO or non-SFO), to include the SAPAS, OASys PD screen and RoH*

Three simple logistic regressions were run, using total SAPAS and OASys PD screen scores and RoH, to predict group membership (SFO or non-SFO). The odds ratios and confidence intervals for the regression analyses are presented in Table 30.

Total SAPAS score was not a significant predictor of group membership ($X^2(1) = 2.04$, p=.15). However, the OASys PD screen total score was a significant predictor of group membership ($X^2(1) = 26.28$, p<0.001).

Specifically, a one unit increase in the score on the OASys PD screen was associated with a 1.5 fold increase in the odds of belonging to the SFO group (OR=1.54, 95% CI (1.27, 1.85)).

Moreover, RoH was also a significant predictor of group membership ($X^2(3) = 26.87$, $p<.001$). Those in the medium RoH category presented with a 16.5 fold increase in the odds of belonging to the SFO group (OR=16.5, 95% CI (3.49, 78.07)). Those in the high RoH category presented with a 28.29 fold increase in the odds of belonging to the SFO group (OR=28.29, 95% CI (5.21, 153.39)).

Simple logistic regression models were also run for individual items on the SAPAS. Individual examination of the items on the SAPAS revealed that items 1 and 7 were significant predictors of group membership. Items 2, 3, 4, 5, 6 and 8 were not significant. Consequently, people that reported not having difficulties making and keeping friends (SAPAS question 1) were less likely to belong to the SFO group ($X^2(2) =5.42$, $p=.02$). In addition, people that reported not depending on others a lot (SAPAS question 7) were also less likely to belong to the SFO group ($X^2(1) = 6.53$, $p=.01$). There were too few cases to examine if clustering SAPAS items 1 and 7 together would be more significant in predicting group membership.

Logistic regressions were also run to examine whether the same variables can predict sexual or violent further offending amongst SFO offenders. These analyses did not produce any significant results: the total SAPAS score was not significant ($X^2(1) =.01$, $p=.94$); RoH was not significant ($X^2(1) =1.36$, $p=.24$); nor was the OASys PD screen total score significant ($X^2(1) =.07$, $p=.79$). Similarly, SAPAS question 1 ($X^2(1) =.64$, $p=.42$) and SAPAS question 7 ($X^2(1) =.36$, $p=.55$) were not significant predictors of type of SFO (violent or sexual).

Another simple logistic regression model was built to examine whether RoH is a significant predictor of personality disorder (measured by the SAPAS) in

SFO offenders. The resulted indicated that RoH is not a significant predictor ($X^2(1) = 4.52$, p=.21) of personality disorder.

Table 30 shows that after adjusting for sex and age, RoH (medium and high RoH) remained a significant predictor of group membership (SFO or non-SFO). In the fully adjusted model RoH and OASys PD screen total score remained significant predictors of group membership. However, questions 1 and 7 of the SAPAS, although marginally significant in the regression model adjusting for age and sex, were not significant in the fully adjusted model.

Table 30

Logistic Regression of SAPAS, OASys PD screen and RoH

	OR (95% CI)	P value	OR * (95% CI)	P value	OR ** (95% CI)	P value
SAPAS total score	1.18 (.94-1.48)	.15	--	--	--	--
SAPAS Q1	.29 (.95-.87)	.02	.24 (.06-.95)	.04	.75 (.16-3.55)	.71
SAPAS Q2	1.44 (.55-3.78)	.46	--	--	--	--
SAPAS Q3	1.08 (.50-2.34)	.84	--	--	--	--
SAPAS Q4	1.53 (.53-4.41)	.42	--	--	--	--
SAPAS Q5	.85 (.39-1.87)	.68	--	--	--	--
SAPAS Q6	.67 (.31-1.47)	.32	--	--	--	--
SAPAS Q7	.17 (.04-.81)	.01	.12 (.02-.92)	.04	.34 (.04-2.70)	.31

SAPAS Q8	.58 (.26-1.26)	.17	--	--	--	--
OASys PD screen total	1.5 (1.27-1.85)	.001	1.51 (.01-2.50)	.001	1.37 (1.07-1.76)	.01
RoH – low	5.5 (3.33-90.73)	.23	8.44 (.22-330.58)	0.25	14.65 (.74-2883.66)	.32
RoH – medium	16.5 (3.49-78.07)	.001	26.89 (4.83-149.66)	.001	23.01 (3.40-157.02)	.001
RoH – high	28.29 (5.21-153.39)	.001	68.29 (8.70-536.39)	.001	35.13 (4.10-301.27)	.001

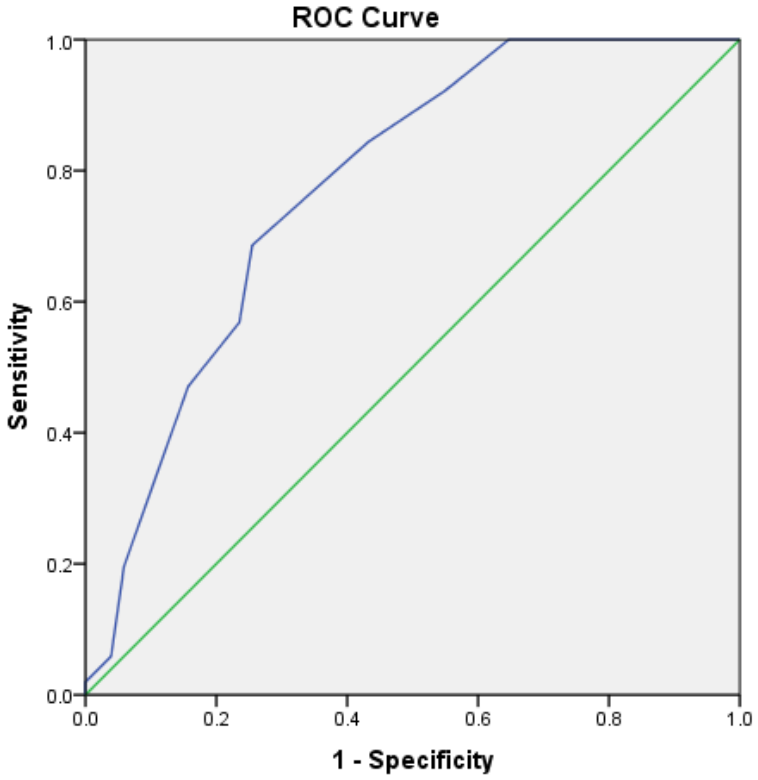
Notes *adjusted for age and sex ** fully adjusted model, adjusting for age, sex and remaining predictors

6. *How accurate the significant predictor(s) are in correctly classifying those that committed a SFO and those that did not*

A ROC test was performed to identify the cut-off points of the OASys PD screen that maximises sensitivity and specificity rates in terms of distinguishing between controls and SFO offenders. The overall accuracy of classification, as indicated by the area under the curve (AUC), was 78% (AUC=.78, p<.001). Figure 3 presents the ROC curve for the OASys PD screen.

Figure 3

Area Under the ROC Curve for the OASys PD Screen



A score of 2 on the OASys PD screen resulted in a sensitivity rate of 100% and a specificity rate of 35%. In contrast, a score of 9 had a sensitivity rate of 6% and sensitivity of 100%. A score of 5 balanced sensitivity and specificity between 69%/74% respectively. Table 31 presents the performance of the OASys PD screen at various cut-off points.

Table 31

Properties of the OASys PD Screen in Discriminating Group Membership

AUC (95% CI)	Cut-off score	Sensitivity (%)	Specificity (%)
AUC=.78, p<.001 95% CI (.685, .866)	1	100	25
	2	100	35
	3	92	45
	4	84	57
	5	69	74
	6	57	76
	7	47	82
	8	20	40
	9	6	96
	10	2	100

A ROC test was also performed to identify the RoH classification that maximises sensitivity and specificity rates in terms of distinguishing between controls and SFO offenders. The overall accuracy of classification, as indicated by the area under the curve (AUC), was 74% (AUC=.74, p<.001). Figure 4 presents the ROC curve for RoH and Table 32 presents the performance of the RoH assessment at various cut-off points.

A score of 1 (low RoH) resulted in a sensitivity rate of 96% and a specificity rate of 43%. In contrast, a score of 3 (high RoH) had a sensitivity rate of 35% and sensitivity of 87%. A score of 2, however (medium RoH) had more balanced sensitivity and specificity, 94/47% respectively.

Figure 4

Area Under the ROC Curve for RoH

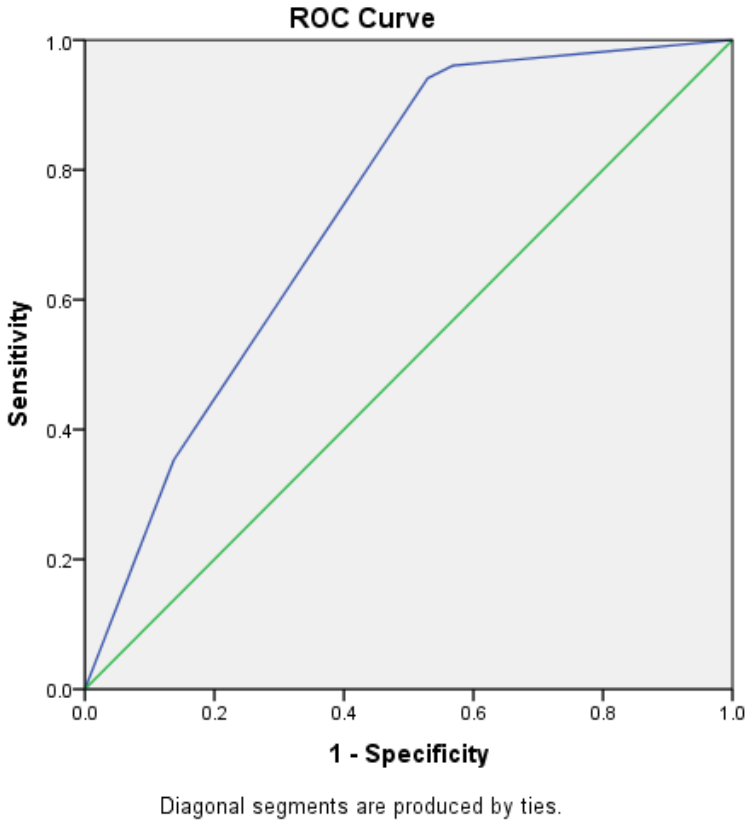


Table 32

Properties of the RoH Classification in Discriminating Group Membership

AUC (95% CI)	RoH	Sensitivity (%)	Specificity (%)
AUC=.74, p<.001 95% CI (.641, .835)	1 - low	96	43
	2 - medium	94	47
	3 - high	35	87

Power analysis – post hoc

Post hoc power analyses indicated that the sample size (group 1, n=37 and group 2, n=14) used in the Mann-Whitney tests was unlikely to be large enough to achieve

sufficient power to detect any effects that might have existed (1-β error prob = 0.45 for a one tailed test and 0.33 for a two tailed test). Consequently it is likely that a Type Two error occurred in these analyses.

A post hoc power analysis revealed that on the basis of the mean, between groups comparison effect size observed in the study (*d*= 1.14 for the OASys PD screen and *d*= .29 for the SAPAS), a study sample of 102, obtained statistical power above the recommended level .80 (Cohen, 1988) in respect of the OASys PD screen (1-β error prob = 0.99) but not in respect of the SAPAS (1-β error prob = .30 for a one tailed and .42 for a two tailed test).

In respect of the logistic regression analyses, using a sample of 102 participants, post hoc power analyses indicated that with an odds ratio of 1.5 (OASys PD screen variable), the 1-β error prob = 0.50. This reduced to 1-β error prob = 0.16 in respect of the total SAPAS score and consequently both these tests fell short of the desired level of statistical power. In contrast, RoH (medium) had a 1-β error prob = 1 which exceeds the recommended level (Cohen, 1988) of statistical power.

Discussion

The main aims of this study were: (a) to examine the prevalence of personality disorder in a sample of SFO offenders using the SAPAS and OASys PD screens, (b) to explore differences between SFO offenders and non-SFO offenders and between types of SFO offenders (violent or sexual) on these measures, and (c) to identify which variables best predict group membership (SFO vs. non-SFO). The discussion will begin with a summary of the results. The key findings will then be discussed in relation to the current evidence base. Consideration will be given to the study methodology and future directions for research and practice. Conclusions will then be drawn.

Summary of results

The SAPAS as a self-report measure for screening personality disorder, demonstrated adequate internal consistency (α = 0.657 if item 8 removed), which was similar to

previous studies (Moran et al., 2003; Hesse, Rasmussen & Pedersen, 2008). This study showed high prevalence rates of personality disorder in a sample of SFO offenders. Specifically, using the recommended cut-off scores of 3 and 7 respectively, the SAPAS identified likely personality disorder in 53% of the sample, and 47% on the OASys PD screen. There was a significant difference in total score on the OASys PD screen between SFO offenders and non-SFO offenders, the former having considerably higher prevalence rates.

In terms of differences between SFO offenders with personality disorder and SFO offenders without personality disorder, (as measured by the SAPAS and OASys PD screen), no differences were found on RoH (as measured by OASys) and age variables. Similarly no difference was found between violent SFO offenders with personality disorder and sexual SFO offenders with personality disorder on RoH.

Of those identified with personality disorder, violent SFO offenders and sexual SFO offenders were equally as likely to have a personality disorder on the SAPAS and OASys PD screen. The personality profiles (traits of personality disorder positively identified on the SAPAS) of violent SFO offenders and sexual SFO offenders were similar. The items most likely to receive a positive score on the SAPAS (across type of SFO) were questions 3 (in general do you trust other people), 5 (are you normally an impulsive sort of person), and 6 (are you normally a worrier), which are indicative of paranoid, borderline and obsessive-compulsive personality disorders. Those least likely to be scored positively were questions 4 (do you normally lose your temper easily), and 2 (would you normally describe yourself as a loner), which are indicative of antisocial and avoidant personality disorders.

In terms of the exploratory analyses, both the OASys PD screen total score and RoH variables were significant predictors of group (SFO) membership. The findings showed that the OASys PD screen was 78% accurate in correctly classifying those that committed a SFO and those that did not.

Key findings

The current research found that prevalence of personality disorder, as measured by the SAPAS and OASys PD screen, is higher in SFO offenders compared to a standard

probation sample (non-SFO offenders). Consequently, the findings supported the hypothesis that SFO offenders have higher prevalence rates of personality disorder, on both measures, compared to the non-SFO group.

Based on a cut-off score of 3 on the SAPAS this study identified personality disorder in 53% of SFO offenders, and 39.2% in non-SFO offenders. In respect of the OASys PD screen, 47.1% of the SFO group were identified as having possible personality disorder, and 15.7% of the control group. The findings in relation to the control group are very similar to the prevalence rates identified in the study by Shaw, Minoudis and Craissati (2012), which were 40.3% (SAPAS) and 15.1% (OASys PD screen) respectively. This is encouraging as data from their study formed the control group in this study. Therefore, on these variables, the control group (n=51) was not dissimilar to the wider general probation caseload (n=385) represented in the study by Shaw, Minoudis and Craissati (2012).

Had the cut-off score on the SAPAS reduced to two, as suggested by Pluck et al., (2011) in populations where levels of personality disorder are likely to be high, the prevalence rate of personality disorder in the SFO group would have increased to 69% and 62% in the non-SFO group. Although this would have maintained adequate psychometric properties (Pluck et al., 2011) and increase the number of antisocial cases being identified, it would have also been likely to increase the number of false positive identifications. This in itself could be problematic for probationers as it may have implications on how they are risk assessed and managed. Using a cut-off score of three on the SAPAS, with a good balance of sensitivity and specificity (Moran et al., 2003; Pluck et al., 2011), was therefore appropriate in this study.

At present there is no literature available on rates of personality disorder in SFO offenders using a similar methodology to this study, however, there is some research from which comparisons can be drawn. The Ministry of Justice (2011) estimated personality disorder prevalence in UK prison and probation populations between 60-70%. In a study using a general probation sample, Brooker et al. (2011, 2012) applied the SAPAS to a sub sample of 40 participants and found likely personality disorder prevalence in 48% of the sample. Similarly to this study, using file information, Craissati and Sindal (2009) identified that half of a SFO offender sample

(approximately 45 participants) scored positive on the OASys PD screen. Another study using a sample of SFO offenders reported much lower rates of personality disorder (Ansbro, 2006); however, this study did not assess personality disorder. Rather, they relied on pre-existing file based information to inform their understanding of prevalence rates.

This study is therefore the first to identify prevalence of personality disorder on the SAPAS in SFO offenders, which are higher than previously thought. The prevalence in respect of personality disorder on the OASys PD screen fits with the suggestion made by Craissati and Sindal (2009), and the wider evidence base on the prevalence of ASPD (Singleton, Melzer & Gatward, 1998; Hare, 1983). Furthermore, examination of prevalence rates on both measures, between types of SFO offenders (violent or sexual) did not discover a significant difference. This suggests that the nature of the SFO does not impact overall prevalence of personality disorder, rather membership of the SFO group is more significant.

Prevalence rates aside, comparisons between groups on the personality screens only found a significant difference between SFO offenders and non-SFO offenders on the OASys PD screen. This could be attributed to the SFO group being more antisocial than the non-SFO group, by virtue of the fact that they committed a further serious offence. This would build on the argument that ASPD is over-diagnosed in offending populations, because of the focus on antisocial behaviour rather than the underlying personality structure (Ogloff, 2006; Widiger & Corbitt, 1993). However, as the OASys PD screen draws on information populated in OASys prior to the SFO, it is likely that the difference between groups is true (a position supported by the observed effect size).

The finding that personality disorder, as identified by the SAPAS, was not significantly different between SFO offenders and non-SFO offenders could be explained by the findings from the study by Shaw, Minoudis and Craissati (2012). Here, the SAPAS demonstrated no relationship with risk of general offending and a negligible relationship with risk of violent offending. In contrast, and as would be expected, the OASys PD screen demonstrated a relationship to risk (moderate

association with increased risk of general offending and an elevated risk of violent offending).

As per Chapter 2, despite extensive literature supporting the relationship between personality disorder and reoffending (Fridell et al., 2008; Hiscoke et al., 2003; Listwan, Piquero & Van Voorhis, 2010), it appears that a significant part of the relationship between personality disorder and serious further offending is accounted for by antisocial features. This would fit with the evidence base for the association between ASPD and violent recidivism (Coid et al., 2006; Fountoulakis, Leucht, Kaprinis, 2008; Varley-Thornton, Graham-Kevan & Archer, 2010; Walter et al., 2011); Wormwith et al., 2007). Consequently the SAPAS was less reliable in this sense, a pattern also replicated in the logistic regression analyses.

Similarly to the finding that type of SFO offender does not impact on prevalence of personality disorder, the personality profiles (traits of personality disorder identified on the SAPAS) of violent SFO offenders were not significantly different to the personality profiles of sexual SFO offenders. There were some patterns however in how violent and sexual SFO offenders responded to the SAPAS. Violent SFO offenders were more likely to score positively on SAPAS questions 1, 2, 5, 6 and 7, whereas, sexual SFO offenders were more likely to score positively on question 8. Both types of SFO offender scored positive in equal measure on questions 3 and 4. The overall profile for violent SFO offenders, reflected in order of the highest scoring first, included traits indicative of antisocial, borderline, paranoid and avoidant personality disorders. The overall profile for sexual SFO offenders included traits indicative of paranoid, obsessive-compulsive, antisocial and borderline personality disorders.

Despite the lack of statistical significance, the patterns identified fit with the literature (Borchard, Gnoth, & Schulz, 2003; Coid et al., 2006; Fountoulakis, Leucht & Kaprinis, 2008; Varley-Thornton, Graham-Kevan & Archer, 2010). Both types of SFO offenders scored positively on items indicative of antisocial, borderline and paranoid personality disorder. This study found that the SAPAS item reflecting ASPD was the most closely associated item between violent and sexual SFO offenders with personality disorder on the SAPAS. What followed is also interesting,

as both violent and sexual SFO offenders indicated the presence of cluster C personality disorders (the anxious and fearful cluster). Here, sexual SFO offenders scored positively on the item indicative of obsessive-compulsive personality disorder whereas violent SFO offenders scored positively on the item indicative of avoidant personality disorder.

The evidence base discussed in Chapter 3, suggests that the SAPAS may not function adequately as a screen for antisocial cases (Hesse & Moran, 2010; Shaw, Minoudis & Craissati, 2012). As a result of the limitations of the SAPAS, specifically its sensitivity to antisocial cases, this study used a combined screening method. This proved useful as the personality trait least likely receive a positive score in the SFO group on the SAPAS was the item indicative of ASPD. Consequently, the SAPAS as a self report measure, did not identify comparable rates of ASPD in SFO offenders (Fazel & Danesh, 2002; Hare, 1983; Singleton, Melzer & Gatward, 1998).

Furthermore, the correlation analysis between the total SAPAS score and OASys PD screen did not reach statistical significance. This finding is consistent with the study by Shaw, Minoudis and Craissati (2012). They found that when treated as dimensional scales, the two measures did not correlate. Furthermore, 56.9% of OASys PD screen cases were not classified as personality disordered by the SAPAS. This is unsurprising because the OASys PD screen measures antisocial traits alone, whereas the SAPAS measures other personality disorder traits but not ASPD. This finding reinforces the use of a combined screening approach.

It is acknowledged that the SAPAS is by no means diagnostic (rather each question reflects a trait commonly found in 8 of 10 personality disorder types), and that it utilises a categorical approach to determine the likely presence of personality disorder. However, a trait approach to exploring possible differences between types of SFO offenders is interesting as it could be helpful in better understanding the empirical relationship to risk in the sexual SFO group. In addition, exploration of participants' responses on the SAPAS by cluster could overcome some of the difficulties inherent in putting people in categories i.e. personality disorder present or not present. The system of classifying personality disorders by level of severity (Tyrer & Johnson, 1996) is another option balancing categorical and dimensional

approaches. Although this would require further personality assessment, it would be a useful approach with SFO offenders as complex severity of problems and multiple diagnoses of personality disorder are common in forensic populations (Coid et al., 1999; Zimmerman, Rothschild & Chelminski, 2005).

Although this study did not identify a difference in risk status or age between those with and without personality disorder, differences between the study and control groups were evident on these variables. The average age of SFO offenders was 24 years old. In comparison, the average age of the control group was 36 years old. Reflecting on what is known about SFO offenders generally, they tend to be aged between 21-25 years old (Ansbro, 2006) or in the sample used by Craissati and Sindal (2009) on average 28 years old. This finding provides support for the view that SFO offenders are largely a heterogeneous group (Craissati & Sindal, 2009) and that age of the commission of a SFO has no relationship to personality disorder. Alternatively it may be that the samples were so close in age, and that SFO offenders tend to be young in general, as young people are more likely to be sentenced to Probation. Using this explanation, one might find a higher number of young SFO offenders as they might have received a community based order rather than a custodial sentence for the offence prior to the SFO. Consequently if a sample with a wider age range were included the results may have been different. Regardless of the possible explanations, labelling personality disorder in young adults is considered to be unethical as their personality is still developing. An awareness of emerging personality disorder in children and adolescents is often more helpful.

These findings show that within the SFO group, irrespective of whether personality disorder was identified, SFO offenders are seemingly heterogeneous on a number of variables (RoH, age, and positive responses to items on the SAPAS). In contrast, differences between groups (SFO vs. non-SFO) were more marked, particularly in relation to age, RoH, and total scores on the OASys PD screen. As a result, there appear to be some common factors amongst SFO offenders. These are outlined below.

The relationship of the screening measures and RoH to serious further offending was explored using logistic regression. Similarly to the study by Shaw, Minoudis and

Craissati (2012), personality disorder identified by the SAPAS (as a categorical measure) demonstrated no relationship with serious further offending. However, both personality disorder as identified by the OASys PD screen and RoH were predictive of group membership (they also retained their significance in the fully adjusted model). It is not surprising that the OASys PD screen and RoH assessment demonstrated a relationship with serious further offending as both have an empirical relationship to recidivism (Craissati & Sindal, 2009; Shaw, Minoudis & Craissati, 2012). What is interesting is how each of these factors contributed to an increase in the odds of belonging to the SFO group.

This study found that a one unit increase in the score on the OASys PD screen was associated with a 1.5 fold increase in the odds of belonging to the SFO group. Those in the medium RoH category presented with a 16.5 fold increase in the odds of belonging to the SFO group and those in the high RoH category presented with a 28.29 fold increase. Used in this way, the OASys PD screen as a continuous measure demonstrates greater utility than a categorical approach. The issue of whether the same variables (total SAPAS score, SAPAS items 1 and 7, OASys PD score, and RoH) had the ability to predict type of SFO was examined but they were discovered not to be significant predictors.

These findings could have significant implications on practice and support the LPP which currently uses the OASys PD screen as the method to screen for personality disorder in probation caseloads. Using the current categorical approach, with a recommended cut-off score of 7, would suggest that an individual meeting this threshold would have a 10.5 fold increase in the odds of belonging to the SFO group. This coupled with a RoH assessment in the high risk category (another pre-requisite for the LPP) would indicate a significantly higher likelihood of the individual going on to commit a SFO.

In terms of how likely an individual with ASPD is to recidivate, this study has found higher rates than what is reported in the literature (Fridell et al., 2008; Hiscoke et al., 2003). This may be in part due to the fact that the OASys PD screens for severe antisocial cases, if not psychopathy, which is associated with higher levels of recidivism (Hare et al., 2000). As the SFO group were sampled from a number of

category A prisons included within the DSPD Programme (HMP Frankland and HMP Whitemoor), although their status in this respect is not known, it is hypothesised that some of the sample may have met the DSPD inclusion criteria.

Despite the total SAPAS score not being a significant predictor of group membership, examination of individual items on the SAPAS found that questions 1 (difficulties making and keeping friends) and 7 (depending on others a lot) were significant. These items are indicative of personality disorders found in clusters A (schizotypal) and C (dependent). As such, they do not clearly fit with the evidence base which suggests that traits of ASPD, borderline personality disorder, paranoid and narcissistic/histrionic personality disorder increase the likelihood of violent offending (Coid et al., 2006; Johnson et al., 2000). How this relates to an increased likelihood of a sexual SFO is unknown, as type of SFO was not predictive of outcome. Having said that, items 1 and 7 were not significant in the fully adjusted model.

As a result of the limitations identified in Chapter 3 in relation to the sensitivity and specificity of the SAPAS, and the fundamental need for screening tools to balance the two, a ROC analysis was conducted. As the SAPAS was not a significant predictor of group membership (SFO vs. non-SFO), sensitivity and specificity rates for different cut-off points were only meaningful for the OASys PD screen (as a continuous measure). The ROC curve showed that the OASys PD screen had an overall accuracy in classification of 78%. A score of 5 on the OASys PD screen had an optimum balance of sensitivity and specificity (69%/74% respectively), which is important in assessing personality disorder for the purpose risk management. Having said that, one could argue that a higher sensitivity rate is advantageous as this could contribute to risk management and possibly prevent serious harm to others. The converse argument is that a low specificity may have undue implications on the management of the individual, such as limitations to their freedom, quicker recalls, and/or harsher sentencing such as custody vs. community.

Despite the OASys PD screen being a professionally rated measure, this finding is encouraging as it quantifies the overall ability of the measure to discriminate between those that committed an SFO and those that did not. It therefore provides further support for relationship between ASPD and recidivism and the utility of the OASys

PD screen in risk assessments. Consequently, this study has identified that the SAPAS has little or no utility in predicting whether a probationer will go on to commit a SFO. Rather the measure of choice is the OASys PD screen.

Methodological considerations

A number of limitations need to be considered with this study. The first is the methodological design. This study used a cohort design which was partially retrospective as the reoffending had already occurred. As cohort studies are not without their limitations these will be relevant to the conclusions that can be drawn from this study. These are considered below.

A key component of this study was its reliance on the accuracy of the data recorded by the LPT Inspections and Standards Unit about probationers that had been charged with an SFO. Furthermore, as the research was based on SFOs that had resulted in criminal conviction, the records held by the LPT on the electronic database Delius were also a potential source of bias as the information held on this database informed part of the screening process for study inclusion or exclusion. Had there been any misclassification of non-SFO probationers, this would have seriously undermined the results. In respect of the quality of the records available to the researcher, specifically the data pertaining to SFO outcome i.e. reconviction records, this study used criminal conviction data from Her Majesty's Courts Service. Compared to other studies on recidivism, see systematic review in Chapter 2, this study used high quality, reliable records based on conviction data.

An advantage of retrospective cohort studies is that the sample is already defined. However, large samples are often required for meaningful conclusions to be established. The sample used in this study (total n=102) is fair, however, post hoc analyses indicated that limited statistical power because of the modest sample size may have played a role in limiting the significance of some of the statistical comparisons conducted. This was largely problematic in relation to the analyses within the SFO group (n=51). The regression analyses also fell short of the desired level of statistical power. Consequently, the reliability of some of the findings are limited. A larger sample size could resolve this problem.

Numerous attempts were made to maximize sample size, to ensure that that there were a sufficient number of participants included for the analyses to be adequately powered. However, a number of obstacles were encountered. The overall response rate for participating in the study was 28%. The researcher attempted to reduce sampling bias by including all able and willing SFO offenders that met the study inclusion criteria for the period specified. However, as the majority of SFO offenders refused to participate in the study (36%) for reasons of disinterest or concern that participation would somehow affect decisions around parole or inform risk assessment, this introduced sampling bias. The second most common reason for non-participation was lack of cooperation by either the prison detaining the offender or the OM/OS managing the offender. This affected 35 potential participants (19%). Other reasons for non-participation included restricted access on Delius for a small number of recent SFOs in the media, SFO offender case transfers within the prison system, no allocated OS in the prison, order terminations and active mental illness. Sampling was therefore heavily dependent on the cooperation of both the SFO offender and relevant prison/probation establishment.

Due to time constraints it was not feasible or practical for the researcher to extend the data collection period, or to collect the data in person as participants were located in over 25 prisons across England. The target population was not easily accessible and all possible attempts were made to include all able and willing participants. The researcher contacted the relevant OM/OS on a regular basis (often twice weekly) to follow up progress. Senior prison staff were also contacted (by email and telephone) to encourage their staff to facilitate the research.

At the point of planning the study, consideration was given to offering participants a financial incentive to take part. Not only was this not financially feasible, it also raised a number of ethical issues as a controversial method of recruitment with vulnerable populations (Emanuel et al., 2008; Singer & Bossarte, 2006). In addition, in response to the high number of SFO offenders that refused to participate, a tentative request was made to the LPT Research and Development department to access the data held on Delius for this group. The idea was to examine some key variables for those who consented to participate versus those who didn't. This was not

deemed ethical as the SFO offender had not consented to their information being used in this way.

On this basis one might question to what extent the study sample was representative of the SFO offender population. It may be that those who refused to participate were more antisocial than those that consented to take part. Conversely it may be that the approach of the OM/OS affected participation on the basis of how they explained the study or as a result of previous difficulties in managing the SFO offender. It is difficult to surmise to what extent the research outcomes may have been different if these individuals had been included in the sample. Nonetheless this study still represents a recent investigation into an area of political interest, specifically the Offender Personality Disorder Programme (DoH/NOMS, 2012).

As discussed, it is expected that the way in which the data were collected may have impacted on participation rate and responses on the SAPAS. As the SFO offender OM/OS was the key person providing an explanation of the study and administering the SAPAS, it is also likely that some error was introduced by interviewer bias. It is unlikely however that the impact of this was significant as the SAPAS was not systematically applied by one person. In addition, attempts were made to reduce this bias by providing the OM/OS with written guidelines on how to apply the study documents and how to introduce the SAPAS (see Appendix 11). Furthermore each OM/OS consulted on the telephone with the researcher prior to any contact with the SFO offender.

In some instances the OM/OS opinions, prejudices, or non-verbal cues may have influenced participant's responses. Response bias is not uncommon in the population being studied particularly in relation to self report measures (Edens, Buffington, Tomicic, & Riley, 2001; Tan & Grace, 2008). Participants may have shaped their responses on the SAPAS in order to please the OM/OS or they may have responded in what they believed was the desired manner. Equally, they may have responded in a way to present a favourable impression of themselves, known as 'faking good'. Feedback from those that refused to participate highlighted that some held beliefs about the implications of their responses and how that information may be used in the future. Despite providing information to participants to address these anxieties it is

likely that they still had an impact. Therefore one cannot assume that these factors did not affect the responses of those that took part in the study.

Use of the SAPAS as the measure to screen for the presence of personality disorder is another area that warrants consideration. The evidence supports the SAPAS as a valid and reliable screening tool for identifying the presence of DSM-IV personality disorder (Bukh et al., 2010; Crawford et al., 2009; Moran et al., 2003). It has been recommended for use to get an impression of the degree of personality pathology in a clinical population, as well as for screening purposes, hence it is clearly not a substitute for a full personality assessment. Research into the utility of the SAPAS in forensic populations is developing and there is evidence to support its use with probation samples (Pluck et al., 2011; Shaw, Minoudis & Craissati, 2012), however, it has been criticised for its ability to detect antisocial cases (Hesse & Moran, 2010). Although the problems with the SAPAS sensitivity to antisocial cases was overcome by using a combined screening approach, there is only limited data supporting the validity of the OASys PD screen as a screen for severe antisocial personality features. Further validation of the OASys PD screen would therefore be useful.

It is also necessary to mention the control group which came from the study by Shaw, Minoudis and Craissati (2012). This data set was generally comparable to the study group, however, age and gender were somewhat different (the control group included more females and participants had a higher average age). These variables were adjusted for in the regression model, and both RoH and OASys PD remained significant predictors. As a result it is likely that the difference between groups on these variables had little impact on the conclusions drawn. Whether the findings from the study are generalisable to other probation samples is less clear, as both the study sample and control sample comprised an inner-city, multi-ethnic population.

Future directions for research and practice

An improved understanding of personality disorder and its relationship to risk could inform LPT staff at all stages of offender assessment, both pre and post sentence. This is turn could have implications on how SFO offenders are assessed in terms of their personality and how this information is incorporated into risk assessment tools such as OASys. This could further impact on risk assessment/classification,

implementation of appropriate risk management plans, and confidence in initiating timely breach or recall proceedings.

Consequently the treatment and management of SFO offenders with personality disorder could be tailored to better fit their needs. This might involve more intensive supervision by the Probation Service or increased restrictions on activity such as a curfew or exclusion requirements. Treatment could involve integrative working with the health service via the provision of specialist personality disorder services as opposed to rehabilitation via general offending behaviour programmes alone. This would accord with the current Offender Personality Disorder Programme (DoH/NOMS, 2012) which aims to develop a pathway of interventions which will support management in prison and where necessary in the community, increase the number of places available in prison for treating this group of offenders, and make the treatments and interventions they receive more effective.

Of course none of this would be possible without an improved and systematic method of identifying/screening for personality disorder within offending populations. The current system is patchy, although positive developments are underway in London and it is anticipated that the rest of country will soon follow suit (DoH/NOMS, 2012). At present the LPP screens for cases of likely ASPD using the OASys PD screen. In light of the study findings, this approach is sensible, particularly in relation to risk management. What is missing is an approach using a screening tool for other types of personality disorder, as numerous cases of personality disorder may be missed if the screening relies solely on the OASys PD screen. Although the purpose of the LPP is to focus on high risk of harm cases, the current approach ignores the clinical needs of other types of personality pathology. It also ignores the substantial group of offenders categorised as medium RoH, which has been shown to be an important variable in the prediction of serious further offending in this study.

Validation of a combination screening method and/or further validation of the SAPAS as a self-report measure in probation/prison samples would therefore be valuable. Similarly, further validation of the OASys PD screen is necessary. An approach in which personality is assessed on a dimensional scale, and/or in terms of severity, would prove an addition to the evidence base and reflect the evolving way in which

personality disorder is conceptualised. As a categorical approach to personality disorder can be limiting, an approach using continuous data would be likely to produce richer findings.

Although SFO offenders make up a small proportion of the entire LPT caseload the impact of their offending behaviour is significant and far-reaching. On-going research is therefore necessary to develop what we know about SFO offenders. Research with a larger sample size than used in this study would be advantageous. The various obstacles encountered in accessing SFO offenders would therefore need to be overcome. Alternatively the data gathered via the screening stage of the LPP could be used in a study adopting a prospective design, with recidivism as the outcome of interest. Those not meeting the inclusion criteria on the basis of the RoH classification could serve as the control group.

Conclusion

This study is the first to explore the prevalence and type of personality disorder, using the SAPAS and OASys PD screen, in a group of offenders that commit high harm sexual or violent crimes while under the active supervision of the Probation Service. It is also the first to explore the predictive utility of the OASys PD screen and the OASys RoH assessment in discriminating between those that committed a SFO and those that did not.

This study has added to the evidence base by identifying common features observed among SFO offenders in respect of their personality and how this relates to recidivism. This includes higher prevalence rates of antisocial personality features on the OASys PD screen, compared to non-SFO offenders, and how this measure, in addition to RoH, contributes to SFO group membership. What can be extrapolated from these findings is that the likelihood of a probationer committing a SFO can be informed by their score on the OASys PD screen (5 or above balanced sensitivity and specificity) and their RoH classification (specifically medium and high RoH). As this study also found a lack of difference between types of SFO, the nature of the SFO

does not appear to impact overall prevalence of personality disorder, rather membership to the SFO group is more meaningful.

Consequently, this study has identified key differences between SFO and non-SFO offenders, highlighting that a significant part of the relationship between personality disorder and serious further offending is accounted for by antisocial features. As SFO offenders are more antisocial than non-SFO offenders, the OASys PD screen combined with the RoH assessment, are useful tools for assessing the likelihood of an offender going on to commit a SFO.

The findings of this study demonstrate that personality disorder, particularly ASPD, is an important variable in assessing risk and likelihood of reoffending. This study therefore supports the view that having a diagnosis of ASPD increases the likelihood of serious further offending. The study findings are of political and organisational significance, and provide support for the approach used in the LPP which forms part of the wider Offender Personality Disorder Strategy (DoH/NOMS, 2012). As earlier studies on SFO offenders have only described the general characteristics of the population it is hoped that this study represents an addition to the literature. However, the scientific knowledge and understanding of SFO offenders remains sparse. Therefore further research is imperative.

Rationale for Chapter 5

Chapter 4 has shown that levels of personality disorder are high in SFO offenders, and that ASPD in particular is related to an increased chance of serous further offending. Chapter 5 goes on to present a single case study, involving the assessment and treatment of a man on Licence with emerging ASPD, that went on to commit grievous bodily harm 6 months post treatment.

CHAPTER FIVE

Psychological therapy with a man on Licence with emerging antisocial personality disorder: A single case study

Ethical Considerations

The case study presented is based upon a factual account of the assessment, formulation, treatment planning and intervention with a man released on Licence from prison under the management of the London Probation Trust. Client anonymity has been protected by removing identifiable information. Permission was obtained from the client (signed consent form available on request) to use his case details in this report. For the purpose of the case report, the client will be referred to using the pseudonym "Joe".

Abstract

This study followed a single case design involving the assessment and treatment of a 22 year old man on Licence in the community under the supervision of the London Probation Trust. Joe was referred via his Offender Manager as it was a condition of his Licence to undergo a psychological assessment. He presented with traits indicative of antisocial personality disorder (ASPD). Most of his offending was violent in nature and he was alleged to be a gang leader.

Following initial assessment, Joe engaged in a further 31 one-to-one sessions on a voluntary basis. A narrative longitudinal formulation based on Davidson's (2007) Cognitive Model of Personality Disorders was constructed collaboratively as a means to form hypotheses about the client's difficulties. Information from two personality measures, the Standardised Assessment of Personality – Abbreviated Scale (SAPAS) (Moran et al., 2003) and Young's Schema Questionnaire version 2 Long Form (YSQ-2) (Young & Brown, 2003), was integrated into the formulation. The formulation was used to guide therapy which was based on a Cognitive Behavioural Therapy framework and informed by three outcome goals: to develop his insight into his personality by developing an individual narrative linking the past and present; to explore his core beliefs about self and others; and to identify any problem behaviours associated with these beliefs.

Outcome data from various sources (attendance as a measure of the alliance, report from the Offender Manager, self report and recidivism) is discussed and reflections on the learning experience are presented. It was concluded that the evidence base for the most suitable and effective psychological treatments for people with ASPD is sparse and that the core characteristics of ASPD make it difficult to develop and maintain a rapport with those suffering from the disorder. Despite these obstacles, attendance as a proxy measure of the alliance indicated a positive effect.

CHAPTER SIX

Discussion

Aims of the thesis

The purpose of this thesis was to examine the relationship between personality disorder and further offending in adults in the criminal justice system. Firstly it wished to identify from the literature if there was a clear association between personality disorder and recidivism. The intention was that if a link could be identified, it may develop understanding as to which personality traits or disorders contribute to reoffending, and if certain types of personality disorders or traits contribute to certain types of reoffending. Following this, the thesis explored the psychometric properties of the SAPAS, a screening tool for personality disorder. The intention of this chapter was to examine the ability of the SAPAS to screen for personality disorder in forensic populations, highlighting both the tools shortcomings and positive qualities.

The thesis then went on to investigate the prevalence of personality disorder in SFO offenders. The intention was firstly to ascertain the rates of personality disorder in SFO offenders, as they have long been considered an unknown entity. Further to this, differences between types of SFO offender and between SFO offenders and controls (a generic probation sample) were explored, again to further the knowledge and understanding of this group in relation to their personality. Two key variables (OASys PD screen and RoH classification) were also explored in relation to their ability to discriminate between groups (SFO vs. non-SFO). The purpose of this was to start developing a method for assessment of personality disorder in offenders and to consider how this relates to future risk of high harm reoffending.

The thesis concluded by examining the psychological assessment and treatment of a man on Licence with emerging ASPD, which took place over the course of a year. This provided context for the difficulties associated with working with this client group, specifically the limitations in current research on the evidence base for treating this disorder using psychological therapies.

Main findings

The relevance of personality disorder within prison and probation populations has gathered increasing significance as a result of the joint Offender Personality Disorder Pathway project by Department of Health and National Offender Management

Service (2012). This initiative has acknowledged the high prevalence of personality disorder within criminal justice settings and highlighted the need for joint working across both health and criminal justice settings.

The investigation into the relationship between personality disorder and further offending began with a systematic review of the literature, presented in Chapter two. The review considered the extent to which the existing evidence base was able to explain the general association between personality disorder and recidivism. The review specifically set out to explore if personality disorder is associated with greater likelihood of recidivism; if personality disordered offenders are more likely to recidivate generally and/or more seriously; if certain types or clusters of personality disorder are associated with recidivism and if other factors such as substance misuse increase the likelihood of recidivism.

On the basis of eight included studies the review found that in general personality disorders are associated with a greater likelihood of recidivism. In terms of how much more likely they were to recidivate comparative to those without personality disorder, the included studies estimated between 2-4 times more likely (Fridell et al., 2008; Hiscoke et al., 2003). Some differences were found in terms of the types of further offences committed by personality disorder offenders. For example, borderline personality disorder predicted the commission of future violent crimes (Hernandez-Avila et al., 2000) and violent recidivism was more likely in offenders with antisocial personality disorder (Hiscoke et al., 2003; Walter et al., 2011; Wormwith et al., 2007). Another key finding from the review was that substance misuse in combination with personality disorder was a strong predictor of future criminal behaviour (Fridell at al., 2008; Walter et al., 2011).

A limitation of the review was the small number of studies considered for review. Although significant results were found in some studies, due to the heterogeneity of included studies, statistical comparison between groups was not appropriate. Hence the review used a qualitative approach. How this might generalise to a wider forensic population is therefore questionable. Consequently it was difficult to draw any firm conclusions about the reliability of the factors investigated and their relationship to personality disorder and recidivism. The variation in the quality of the studies

included (to include factors such as methodology, clarity of reporting and outcome measures) supports the conclusion that additional investigation into the relationship between personality disorder and recidivism is required. Having said that, the review laid the foundation for the potential influence personality disorder might have on offending and highlighted the complexity in attempting to establish a clear association between personality disorder and further offending.

Following the literature review, a critique of the SAPAS (Moran et al., 2003) was presented in Chapter three. This chapter presented an overview of the tool and the available literature on the validity and reliability of the tool. Consideration was also given to its utility in research and practice. It was acknowledged that the tool is in the early stages of application in forensic settings and that the evidence base is developing in this respect.

The critique concluded that the SAPAS has a number of advantages. It is a simple and brief tool for screening the presence of DSM-IV personality disorder and it does not require formal training to administer. It possesses adequate psychometric properties and demonstrates clinical utility. A number of disadvantages were also evident. The consequences of applying a tool which purports to identify the presence of personality disorder in as few as eight yes/no questions without any training could have significant implications on the individual completing the SAPAS. This was discussed in relation to its application in criminal justice settings. Another disadvantage was the limited ability of the SAPAS to detect antisocial cases and its correlation with cluster B personality disorders (Shaw, Minoudis & Craissati, 2012; Hesse & Moran, 2010). Whilst these factors were acknowledged, it was decided that the advantages of the SAPAS outweighed the disadvantages. However, in order to overcome what was deemed a critical limitation, the SAPAS was used in conjunction with the OASys PD screen in the empirical study.

The empirical study was presented in Chapter four. The study sought to add to the current evidence base by further examination of the relationship between personality disorder and further offending. The study was based on an adult probation population that committed a serious violent or sexual further offence whilst under the active supervision of the London Probation Trust. The control group also came from a

sample of offenders on Probation in London, however, they were representative of a generic probation caseload and therefore had not committed a SFO.

The overarching aim of the study was to examine the prevalence of personality disorder, using the SAPAS and OASys PD screen, in a group of high harm re-offenders known as SFO offenders. Until this study, the prevalence of personality disorder within this population was unknown. This study therefore extended the existing scientific knowledge base about SFO offenders. This was further explored by personality disorder type and complexity by type of offence and between SFO offenders with and without personality disorder. The SAPAS and OASys PD screen were also explored in relation to their ability to predict serious further offending.

The study found higher prevalence of personality disorder in SFO offenders than non-SFO offenders, particularly in relation to antisocial traits measured on the OASys PD screen. No difference was observed in prevalence between violent SFO offenders and sexual SFO offenders, however, they responded differently to items on the SAPAS. Two variables, the OASys PD screen and RoH classification were significant variables in predicting group membership (SFO vs. non-SFO). The study therefore discovered that on some variables SFO offenders are seemingly heterogeneous, however, on other variables there appeared to be some commonalities.

As very few studies exist examining SFO offenders, there was a limit to the comparisons that could be drawn. This highlights the paucity of research using SFO offender samples and the limitations in the methodologies previously employed to investigate prevalence rates of personality disorder in probation. The study findings have implications for the practices of Offender Managers/Supervisors. They also provide support for the screening approach used by the London Pathways Project which forms part of the wider Offender Personality Disorder Strategy (DoH/NOMS, 2012). However, the study was not without limitations. It included the use of a retrospective cohort study design, and the implications of the reliance on historical data which may have contained inaccuracies and inconsistencies. Although efforts were employed to ensure that the study would be sufficiently robust for the conclusions to be meaningful, such as consideration of the sample size required for the statistical analyses, sample size remained a limiting factor. As post hoc power

analyses pointed to the possibility of the presence of Type Two errors for some of the statistical analyses the conclusions drawn about the reliability of the findings were tentative.

In the penultimate chapter of this thesis, Chapter five, a single case study was presented. This was based on the psychological assessment, formulation and treatment of a young man on Licence in the community under the supervision of the London Probation Trust with emerging antisocial personality disorder. The work undertaken spanned approximately one year and engagement was on a voluntary basis. This work highlighted the challenges associated with working with individuals with antisocial personality disorder. It also highlighted the limitations with the current evidence base for the psychological treatment of individuals with antisocial personality disorder and guidelines for clinicians working with these individuals, particularly on a one-to-one basis within criminal justice settings.

Limitations of the thesis and future research

Despite the inconsistencies across the research that does exist, particularly the limited research in relation to SFO offenders, personality disorder and further offending remains a growing area of importance. This is not least because of the political agenda to develop the workforce to be better equipped to work with personality disordered offenders but also the significant implications of serious further offending on individuals, communities and the government. It is therefore hoped that this thesis contributes to the current evidence base regarding personality disorder and further offending by a presentation of a review of the existing literature. It is also hoped that the evidence base is extended by exploring personality disorder in SFO offenders in the empirical study. How this relates in practice i.e. methods of identifying personality disorder and working with personality disordered offenders has been explored in the critique and case study.

The quality of the studies included in the review and the limitations within the empirical study suggest that further work is required before clinicians and researchers can assert with confidence a clear understanding of the relationship between personality disorder and further offending. The relationship is complex and multi-faceted. By no means is there a clear association between the two, or a suggestion of

causality, as there are many variables affecting the relationship. This was evident within the empirical study. This raises a number of potential avenues for further research.

Although many have attempted to understand the relationship between personality disorder and crime, the evidence base examining personality disorder and recidivism is sparse and limited by poor methodology. Further high quality work examining the relationship between personality disorder and recidivism is necessary. Based on the findings of the review a number of amendments would be necessary in order to improve study quality. Issues of study design and which outcome measures of recidivism are used are of critical importance. Similarly, as discovered in the critique of the SAPAS, the tool used to measure personality must have established empirical reliability and validity for the population it is being applied to. Studies of recidivism also require adequate periods of follow-up in which potential confounding factors need to be carefully considered.

Further research of improved quality into the relationship between personality disorder and further offending could have implications on both the commissioning of services such as the Offender Personality Disorder Strategy (DOH/NOMS, 2012) and the front-line practice of criminal justice staff. Given the high prevalence of personality disorder in SFO offenders the same could be said in respect of this group of offenders. Further research could improve targeting of resources for screening and early identification of personality disorder. It could provide the rationale for psychologically informed assessment and case formulation of personality disordered offenders and training of criminal justice staff to be equipped to carry out this out. There could be a focus on sentence planning with clear guidance on appropriate court disposals and sentence requirements that are most appropriate for the individual. Research could also inform access to services such as high secure personality disorder treatment services or accredited offending behaviour programmes. Consequently, further research could make an important contribution to the understanding of the relationship between personality disorder and further offending and have significant implications on practice.

The issue of identifying personality disorder within criminal justice settings was a key feature of this thesis and is another area for further research. Following on from the critique in Chapter three, the empirical study concluded that the SAPAS if combined with other methods of assessment such as the OASys PD screen could be a useful first-stage screening measure for personality disorder in criminal justice settings. However, it was acknowledged that although the SAPAS is useful, particularly in settings in which resources are scarce it will not serve as a substitute for a full assessment of personality disorder and must be used with caution. Furthermore, the empirical study identified that the SAPAS had less utility than the OASys PD screen in detecting likely personality disorder in a sample of SFO offenders. Assessment focusing on antisocial traits is therefore key in relation to SFO offenders. This position was further supported by the finding that the OASys PD and OASys RoH classification were significant variables in predicting group membership. Further validation of this approach to screening for personality disorder, and/or an alternative combined method would therefore be valuable. Clearly a larger sample size would be necessary to detect any statistical differences that may be apparent and to improve the strength of the findings. It is suggested that the Probation Service take a lead on this research given the magnitude of the implications of SFOs for the service and beyond.

This thesis has also identified a lack of robust findings in relation to the psychological treatment of individuals with antisocial personality disorder. This was particularly evident in relation to offenders with antisocial personality disorder and working with these individuals on a one-to-one basis as opposed to a group. The results from a Cochrane review suggested that there is insufficient evidence to justify using any psychological intervention for adults with antisocial personality disorder (Gibbon et al., 2010). Given the evidence to suggest that rates of personality disorder within offending populations are high it is disappointing that the recommendations by NICE (2009) which are underpinned by the evidence base do not reflect the needs of this population. This clearly needs to be an urgent priority for future research. Without this, one could question the ethics of identifying personality disorders such as antisocial personality disorder when the guidelines for treatment are lacking.

In conclusion, many questions remain in respect of personality disorder and further offending. There are a number of possible avenues for further research, some of

which have been suggested within this thesis. Whilst it is hoped that this thesis has contributed towards a developing evidence base, it is acknowledged that this was not without limitations.

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Appendices

Appendix 17 – Intake assessment template

Appendix 18 – OASys Personality Disorder screen

Appendix 19 – Patient Health Questionnire-9 and Generalised Anxiety Disorder-7

Appendix 20 – Young's Schema Questionnaire

Appendix 21 – Cognitive model of personality disorders

Appendix 22 – Behavioural experiment worksheet

Appendix 23 – Service user exit questionnaire

Appendix 1 – Systematic review poster

Appendix 2 - Search syntax - first search

All OVID (Embase, PsychInfo and Medline)

(personality or personality traits or personality disorder) AND (recidivism or reoffending or sexual reoffending or violent reoffending or criminality or criminal behaviour or crime)

(personality or personality traits or personality disorder) AND (recidivism or reoffending or sexual reoffending or violent reoffending or criminality or criminal behaviour or crime)

Limits on age and title search only

Appendix 3 - Search syntax - second search

All Proquest (ASSIA and NCJRS and dissertation/theses)

(personality or personality traits or personality disorder) AND (recidivism or reoffending or sexual reoffending or violent reoffending or criminality or criminal behaviour or crime)

No limits applied other than title search only

Appendix 4 - Example quality assessment checklist

Question	Y	P	N	U	Comments
Screening questions					
Did the study address a clearly focussed issue? *Consider in terms of population studied, exposure defined and outcomes measured.*					
Did the authors use an appropriate method to answer their question? *Consider if a prospective study (group of people followed up over time, comparing outcomes between p's exposed or not exposed) a good way of answering the study question(s)?*					
Sampling & Selection bias					
Was the sample representative of a defined population? *Look out for age, presence/absence of PD, previous offending history, and nature of index offence.*					
Were p's defined as having PD by methods that are accepted structured clinical assessment tools? *I.e. an empirically based assessment tool?*					
Is the classification system clear?					
Was the sample recruited in an acceptable way? *I.e. was there any selection bias that might compromise the generalisability of the findings?*					
Were confounding variables considered? *Consider previous criminality, age, nature of index offence, mental health status i.e. stable vs. acutely unwell.*					
Was there any control/adjustment for the effects of these confounding factors?					
Performance bias					
Was the outcome assessment (recidivism leading to a conviction) the same for all p's?					
Was an objective measure of recidivism used? *Consider if p was convicted in a court of law as opposed to for example self report.*					
Did they account for confounding variables? *Consider environment, substance abuse and acute mental illness at the time of reoffending.*					

Detection bias					
Were the measurements for outcome objective? *Consider use of police conviction data/court outcome information.*					
Was the outcome assessed in the same way across groups?					
Were the researchers blind to participants' PD status? *Look out for different researchers' scoring vs. those undertaking the assessment.*					
Attrition bias					
Was there a follow-up?					
Was the follow-up of p's long enough? *More than 1 year*					
Were those who participated the same as those who did not?					
Were those followed up the same as those who did not?					
What proportion of the sample was followed-up?					
Were drop-out rates and reasons for drop-out similar across groups?					
Statistical analysis					
Was there any statistical attempt to deal with missing data?					
Was the statistical analysis appropriate?					
Reporting					
Are the hypothesis/aims of the study clearly labelled?					
Are the main findings of the study clearly described?					
Power					
Did the study have sufficient power to detect a clinically important effect where the probability value for a difference being due to chance is less than 5%?					

Total = **Percentage =** **%** **Total no. U's =**

Appendix 5 - Example data extraction form

General information

Date of data extraction:
Author:
Article type:
Source (e.g. journal, grey material):
Reference Manager ID:
Identification of the reviewer:

Notes:
_____
_____
_____
_____

Study characteristics

Re-verification of study eligibility:

Population:	Y	N	?
Intervention:	Y	N	?
Comparator:	Y	N	?
Outcomes:	Y	N	?

Specific information
Population characteristics
Target population (describe)

Inclusion criteria

Population:

Exposure:

Comparator:

Outcome:

Exclusion criteria (describe if reported)

Recruitment procedures (participation rates if reported)

Characteristics of p's before measure

Age (mean)

Ethnicity

Family/SES

Gender

Geographical region

MI/PD status

Other

No. ps in each group
Exposure – applicable?

Intervention/setting

Setting in which the exposure delivered?

Description of the assessment procedure

Outcomes

What was measured at baseline?

What was measured at follow-up?

Who carried out the assessment?

Was the assessor blind? YES/NO

How was outcome measured?

Was this better than self report alone?

Time interval between baseline and follow up?

Additional outcomes?

Reported drop-out rate =
Proportion that did not agree to participate =
Reasons for drop-out =
.....
.....
.....
.....

Notes:
_____
_____
_____
_____
_____
_____
_____

Analysis

Stats used

Do the stats adjust for confounding variables? YES/NO

If so, how?

Was missing data reported? YES/NO

How was missing data dealt with?

Misc
QA score:

Adverse events:

Notes:
_____
_____
_____
_____
_____
_____
_____

Appendix 6 – List of serious further offences

Violent Serious Further Offences

Murder
Attempt to commit murder or a conspiracy to commit murder
Manslaughter
Kidnapping
False imprisonment
Soliciting murder (section 4 of the Offences against the Person Act 1861)
Attempting to choke, suffocate or strangle in order to commit or assist in committing an indictable offence (section 21 of the Offences against the Person Act 1861)
Using chloroform etc. to commit or assist in the committing of any indictable offence (section 22 of the Offences against the Person Act 1861)
Causing bodily injury by explosives (section 28 of the Offences against the Person Act 1861)
Using explosives etc. with intent to do grievous bodily harm (section 29 of the Offences against the Person Act 1861)
Placing explosives etc. with intent to do bodily injury (section 30 of the Offences against the Person Act 1861)
Endangering the safety of railway passengers (section 32 of the Offences against the Person Act 1861)
Causing explosion likely to endanger life or property (section 2 of the Explosive Substances Act 1883)
Attempt to cause explosion, or making or keeping explosive with intent to endanger life or property (section 3 of the Explosive Substances Act 1883)
Child destruction (section 1 of the Infant Life (Preservation) Act 1929)
Infanticide (section 1 of the Infanticide Act 1938)
Causing or allowing the death of a child or vulnerable adult, also called 'familial homicide' (Section 5 of the
Domestic Violence, Crime and Victims Act 2004)
Possession of firearm with intent to endanger life (section 16 of the Firearms Act 1968)
Use of firearm to resist arrest (section 17(1) of the Firearms Act 1968)
Possession of firearm at time of committing or being arrested for offence specified in Schedule 1 to that Act
Carrying a firearm with criminal intent (section 18 of the Firearms Act 1968)
Robbery or assault with intent to rob (section 8(1) of the theft Act 1968). *[NB. Only where* a *firearm/imitation firearm is used]*
Burglary with intent to- Inflict grievous bodily harm on a person, (section 9 of the Theft Act 1968) –
Aggravated burglary (section 10 of the Theft Act 1968)
Aggravated vehicle-taking involving an accident which caused the death of any person (Section 12A of the Theft Act 1968)
Arson with intent to endanger life of another or being reckless as to whether the life of another would be thereby
endangered. (section 1 of the Criminal Damage Act 1971)
Aggravated criminal damage - destroying or damaging property other than an offence of arson (section 1(2a) of
the Criminal Damage Act 1971)
[NB - - there must be intention or recklessness as to the endangerment of life by the criminal damage].
Hostage-taking (section 1 of the Taking of Hostages Act 1982)
Hijacking (section 1 of the Aviation Security Act 1982)
Destroying, damaging or endangering safety of aircraft (section 2 of the Aviation Security Act 1982)
Other acts endangering or likely to endanger safety of aircraft (section 3 of the Aviation Security Act 1982)
Torture (section 134 of the Criminal Justice Act 1988)
Causing death by dangerous driving (section 1 of the Road Traffic Act 1988)
Causing death by careless driving when under influence of drink or drugs (section 3A of the Road Traffic Act 1988)
Endangering safety at aerodromes (under section 1 of the Aviation and Maritime Security Act 1990)
Hijacking of ships (section 9 of the Aviation and Maritime Security Act 1990)
Seizing or exercising control of fixed platforms (section 10 of the Aviation and Maritime Security Act 1990)
Destroying fixed platforms or endangering their safety (section 11 of the Aviation and Maritime Security Act 1990)

Other acts endangering or likely to endanger safe navigation (section 12 of the Aviation and Maritime Security Act 1990)
Offences involving threats (section 13 of the Aviation and Maritime Security Act 1990)
Offences relating to Channel Tunnel trains and the tunnel system (Part II of the Channel Tunnel (Security) Order 1994 (S.I. *1994/570))*
Genocide, crimes against humanity, war crimes and related offences), other than one involving murder (section 51 or 52 of the International Criminal Court Act 2001)
Female genital mutilation (section 1 of the Female Genital Mutilation Act 2003)
Assisting a girl to mutilate her own genitalia (section 2 of the Female Genital Mutilation Act 2003)
Assisting a non-UK person to mutilate overseas a girl's genitalia (section 3 of the Female Genital Mutilation Act
2003)

Sexual Serious Further Offences
Rape (section 1 of the Sexual Offences Act 1956)
Intercourse with girl under thirteen (section 5 of the Sexual Offences Act 1956)
Incest by a man with a woman whom he knows to be his grand-daughter, daughter, sister or mother (section 10(1) of the Sexual Offences Act 1956)
Abduction of woman by force or for the sake of her property (section 17 of the Sexual Offences Act 1956)
Permitting girl under thirteen to use premises for intercourse (section 25 of the Sexual Offences Act 1956)
Burglary with intent to commit rape (section 9 of the Theft Act 1968)
Rape (section 1 of the Sexual Offences Act 2003)
Assault by penetration (section 2 of the Sexual Offences Act 2003)
Rape of a child under 13 (section 5 of the Sexual Offences Act 2003)
Assault of a child under 13 by penetration (section 6 of the Sexual Offences Act 2003)
Sexual assault of a child under 13 (section 7 of the Sexual Offences Act 2003)
Causing or inciting a child under 13 to engage in sexual activity (section 8 of the Sexual Offences Act 2003)
Sexual activity with a child (section 9 of the Sexual Offences Act 2003)
Causing or inciting a child to engage in sexual activity (section 10 of the Sexual Offences Act 2003)
Arranging or facilitating commission of a child sex offence (section 14 of the Sexual Offences Act 2003)
Sexual activity with a child family member (section 25 of the Sexual Offences Act 2003)
Inciting a child family member to engage in sexual activity (section 26 of the Sexual Offences Act 2003)
Sexual activity with a person with a mental disorder impeding choice (section 30 of the Sexual Offences Act 2003)
Causing or inciting a person with a mental disorder impeding choice to engage in sexual activity (section 31 of the Sexual Offences Act 2003)
Inducement, threat or deception to procure sexual activity with a person with a mental disorder (section 34 of the Sexual Offences Act 2003)
Causing a person with a mental disorder to engage in or agree to engage in sexual activity by inducement, threat or deception (section 35 of the Sexual Offences Act 2003)
Paying for sexual services of a child (section 47 of the Sexual Offences Act 2003)
Causing or inciting child prostitution or pornography (section 48 of the Sexual Offences Act 2003)
Controlling a child prostitute or a child involved in pornography (section 49 of the Sexual Offences Act 2003)
Arranging or facilitating child prostitution or pornography (section 50 of the Sexual Offences Act 2003)
Trafficking into the UK for sexual exploitation (section 57 of the Sexual Offences Act 2003)
Trafficking within the UK for sexual exploitation (section 58 of the Sexual Offences Act 2003)
Trafficking out of the UK for sexual exploitation (section 59 of the Sexual Offences Act 2003)
Causing a person to engage in sexual activity without consent (Section 4 Sexual Offences Act 2003) Note: only where penetration is involved
Care workers: Sexual activity with a person with a mental disorder (Section 38 Sexual Offences Act 2003) note: only where penetration is involved
Care workers: causing or inciting sexual activity (Section 39 Sexual Offences Act 2003) note: only where penetration is involved

Appendix 7 – Participant information sheet

Participant Information Sheet
(Final Version 1 – 14th December 2012)

Title of Study: **Personality disorder in Serious Further Offenders: An exploratory study of prevalence and type using the Standardised Assessment of Personality Abbreviated Scale (SAPAS)**

Name of Researcher(s): Laura West

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. Your Probation Officer/Supervisor will go through the information sheet with you and answer any questions you have. Talk to others about the study if you wish and ask if there is anything that is not clear.

What is the purpose of the study?

The purpose of the study is to explore the personality of individuals that commit a serious further offence. It will ask questions about what you are usually like.

It will be part of a doctoral research project and included in a Thesis.

Why have I been invited?

You are being invited to take part because you have been convicted of a serious further offence. We are inviting over one hundred participants like you to take part.

Do I have to take part?

No, you do not have to take part. It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. This would not affect your legal rights.

If you decide not to take part it will not impact your treatment in prison/probation.

What will happen to me if I take part?

Taking part will involve completing a short questionnaire. This will be completed by you with a Probation Officer/Offender Supervisor. It will take between 2-5 minutes to complete.

This study also involves the researcher accessing historic and current file data – you do not need to do anything in regards to this information. This information is held by the Probation Service and based on what they know about you, for example, previous convictions, substance misuse information and relationship history.

If you agree to take part the first thing to do is sign the Consent form, it is at the end of this information sheet. Your probation officer/supervisor will then agree with you a time to complete the questionnaire. Once completed the questionnaire will be sent back to the

researcher securely. All questionnaires and signed consent forms will be locked away in a secure filing cabinet.

Expenses and payments

Participants will not be paid to participate in the study.

What are the possible disadvantages and risks of taking part?

It is not expected that taking part will cause you any harm. It is likely that you have been asked similar questions before.

If the questions cause you any distress, support and reassurance is offered at the end of the interview by way of a debrief. A list of helpful support services will also be provided and you can always talk to either prison or probation staff should you feel you need extra support following the interview.

What are the possible benefits of taking part?

The study will not help you personally but the information we get from this study may help others by identifying if people with certain personality characteristics commit serious further offences. In the long-term this could lead to the development of specialist support services for offenders with needs relating to their personality.

What happens when the research study stops?

There will be no changes to your care or management as a result of participating in this study.

What if there is a problem?

If you have a concern about any aspect of this study, you should direct any requests for information, complaints and queries through your prison establishment/probation trust.

Will my taking part in the study be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence.

If you join the study, some parts of your prison/probation records and the data collected for the study will be looked at by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password protected database. Any information about you which leaves the prison or probation office will have your name and address removed (anonymised) and a unique code will be used so that you cannot be recognised from it.

Research data will be kept securely for 7 years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data.

Although what you say while completing the questionnaire is confidential, should you disclose anything which we feel puts you or anyone else at any risk, or if you disclose information about a crime you committed which you have not been convicted of, we may feel it necessary to report this to the appropriate person(s). The following information will be disclosed: behaviour that is against prison rules and can be adjudicated against, illegal acts, and behaviour that is potentially harmful to the research participant (e.g. intention to self-harm or complete suicide) or others.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you withdraw then the information collected so far cannot be erased and this information may still be used in the project analysis.

Involvement of the General Practitioner/Family doctor (GP)

Your GP will not be involved in the study.

What will happen to the results of the research study

The results will be written up as part of a research chapter in a Forensic Psychology Doctorate Dissertation. This will be written under the standards of the University of Nottingham. The research will also be sent to an academic journal in late 2013/early 2014. You will not be identified in any of the published material.

Who is organising and funding the research?

This research is being organised by the University of Nottingham and is being funded by the University of Nottingham.

Who has reviewed the study?

All research in the prison and probation services is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by The University of Nottingham Research Ethics Committee and the National Offender Management Service (NOMS) National Research Committee.

Appendix 8 – Study consent form

CONSENT FORM
(Final Version 1.0 – 14th December 2012)

Title of Study: Personality disorder in Serious Further Offenders: An exploratory study of prevalence and type using the Standardised Assessment of Personality Abbreviated Scale (SAPAS)

REC ref: 269-12

Name of Researcher: Laura West

Name of Participant: **Please initial box**

1. I confirm that I have read and understand the information sheet version number ……...dated..... for the above study and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my legal rights being affected. I understand that should I withdraw then the information collected so far cannot be erased and that this information may still be used in the project analysis. ☐

3. I understand that relevant sections of my prison/probation notes and data collected in the study may be looked at by authorised individuals from the University of Nottingham, the research group and regulatory authorities where it is relevant to my taking part in this study. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential. ☐

4. I agree to take part in the above study. ☐

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

3 copies: 1 for participant, 1 for the project notes and 1 for the prison/probation notes

Appendix 9 - Standardised Assessment of Personality Abbreviated Scale

Standardised Assessment of Personality – Abbreviated Scale (SAPAS)

Patient Details

Name _____

Gender M / F (circle) **Date of Birth _ _ / _ _ / _ _**

Ethnicity _____

Main psychiatric diagnosis *(If any)* **_____**

Please give the following explanation before proceeding to the questions:

'I'd like to ask you some questions about yourself. Your answers will help me better understand what you are usually like. If the way you have been in recent weeks or months is different from the way you usually are, please look back to when you were your usual self.'

NB. Only circle 'Yes' (or in the case of q3 'No'), if the client thinks that the description applies to them most of the time/ more often than not and in most situations.

Please circle

1. *In general,* do you have difficulty making and keeping friends? Y / N

2. Would you *normally* describe yourself as a loner? Y / N

3. *In general,* do you trust other people? Y / N

4. Do you *normally* loose your temper easily? Y / N

5. Are you *normally* an impulsive sort of person? Y / N

(If need clarification: Do you rush into most things without thinking about the consequences?)

6. Are you *normally* a worrier? Y / N

7. *In general,* do you depend on others a lot? Y / N

8. *In general,* are you a perfectionist? Y / N

(Check that this applies to most tasks – not just isolated areas of their life)

Appendix 10 – Study debrief form

Study Debrief

(Final version 1.0 – 14th December 12)

Title of Study: **Personality disorder in Serious Further Offenders: An exploratory study of prevalence and type using the Standardised Assessment of Personality Abbreviated Scale (SAPAS)**

Name of Researcher(s): Laura West

Thank you for taking part in the study.

This study is concerned with personality and serious further offending. The purpose of this research is to explore the personality of individuals that commit a serious further offence as very little is known about this.

How was this tested?
In this study, you were asked a number of questions relating to your personality i.e. how you are usually. All participants were asked the same questions in the same order.

Additionally the information the prison/probation services know about you will be gathered for example, previous convictions and substance misuse. This is because it is expected that individuals that go on to commit a serious further offence may share some similarities.

What happens now?
You do not need to do anything. The researcher will write up the results of all participants' questionnaire and descriptive data and this will be published as part of Doctorate in Forensic Psychology thesis.

If you have a concern about any aspect of this study, you should direct any requests for information, complaints and queries through your prison establishment/probation trust.

If you find that some of the areas discussed during the questionnaire bring up some thought for you and in some cases this may cause you some distress. This is not the intention of the interview, but you might find you're your attention shifts to these questions in the next few hours. If this happens, please gain some reassurance and support.

You can do this by:

- Talking to a member of staff from your prison or probation team
- Gaining support from a close friend or family member who you trust

Below are some examples of other helpful services you can access should you wish to:

- Prison listeners scheme
- Prison chaplaincy
- Prison mental health in-reach team
- The Samaritans – you can phone them on 08457 90 90 90 for support 24 hours a day
- Your G.P. or local doctor

Appendix 11– Study instruction guide for OM/OS

Letter to Offender Manager

(Final Version 1 - 14 December 2012)

Title of Study: Personality disorder in Serious Further Offenders: An exploratory study of prevalence and type using the Standardised Assessment of Personality Abbreviated Scale (SAPAS)

Name of Researcher(s): Laura West, Doctoral student at the University of Nottingham and partnership worker in London Probation

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Dear Offender Manager,

Please would you assist in the above research study which has been ethically approved by the University of Nottingham ethics committee, NOMS and the MoJ. It will be part of a doctoral research project and included in a Thesis.

The purpose of the study is to explore the personality of individuals that have committed a serious further offence (SFO). It is based on a brief screening tool (8 yes/no questions) which can be applied to SFO offenders as part of a normal supervision session. The tool itself should take 2-5 minutes to complete by the participant. It is expected that involvement in the study should take no longer than 30 minutes in total.

The following outlines the study steps (what to do) and where to send completed study forms.

Please do not hesitate to contact me via email should you have any questions.

Thank you for your assistance,

Laura West

What you should do - study steps

The following steps must be applied in order. Please do not skip any of these steps. The guidance under each step provides detailed instructions on what you should do.

1. Ask the SFO offender if they would be interested in taking part in a research study looking at the personality of people that have committed a SFO.

   - If they are interested please move onto step 2
   - If they are not interested this signifies the end of their involvement in the study. Please ask them for a brief reason why and email this to me at laura.west@london.probation.gsi.gov.uk

2. Provide the SFO offender with the participant information sheet attached. They can either read this themselves or with your assistance during supervision. Please allow them time for reflection and questions.

   - If after reading the participant information sheet they wish to take part in the study please move onto step 3
   - If they do not wish to take part this signifies the end of their involvement in the study. Please ask them for a brief reason why and email this to me at laura.west@london.probation.gsi.gov.uk

3. Please provide the participant with the consent form attached. They can either read this themselves or with your assistance during supervision. In order to provide full written consent they must initial each box, print their name, sign and date it. You also need to do the same.

   - If they provide written consent please move onto step 4
   - If they do not provide written consent this signifies the end of their involvement in the study. Please ask them for a brief reason why and email this to me at laura.west@london.probation.gsi.gov.uk

4. Please apply the screening tool (the SAPAS) attached. Please give the following explanation before proceeding to the questions:

   'I'd like to ask you some questions about yourself. If the way you have been in recent weeks or months is different from the way you usually are, please look back to when you were your usual self.'

   Please advise the participant not to think too long about the questions. This should take no more than 5 minutes to complete. Once the SAPAS has been completed please move onto step 5.

5. Please debrief the participant using the debrief form attached. They should read this immediately after they have completed the SAPAS as it provides sources of support should they feel they need it. They should also take it away with them.

Checklist of study steps to follow

Inform offender about study [ ]

Provide them with/go through the participant information sheet [ ]

Get signed consent from the participant [ ]

Complete the SAPAS questionnaire with the participant [ ]

Debrief the participant [ ]

Return study forms to the researcher (see below) [ ]

Where to send completed study forms

Please return ALL study forms by secure probation/prison fax marked to:

Laura West - London Probation
Fax number - 020

Alternatively you can post them to:

Laura West
London Probation

OR via email to:

Laura.west@london.probation.gsi.gov.uk

Checklist of documents to return

Signed/dated consent form [ ]

Completed SAPAS questionnaire [ ]

Appendix 12 –Ethics Committee approval letter

Miss Laura West
Institute of Work Health and Organisations
International House
Jubilee Campus
Wollaton Road
Nottingham
NG8 1BB
lwxlw4@nottingham.ac.uk

National Offender Management Service
National Research Committee
Email: National.Research@noms.gsi.gov.uk

21 February 2013

APPROVED SUBJECT TO MODIFICATIONS – NOMS RESEARCH

Title: Personality disorder in serious further offenders
Ref: 269-12

Dear Miss West

Further to your application to undertake research across NOMS, the National Research Committee (NRC) is pleased to grant approval in principle for your research. The Committee has requested the following modifications:

- Before commencing the project, please contact Harriet Fearn, the Research and Commissioning Manager at London Probation Trust (Harriet.Fearn@london.probation.gsi.gov.uk; 0300 048 0136).
- The following should be included in the participation information sheet/consent form:
  - If possible, the respondents should be given the opportunity to have any supplied data removed on request (up to a specified date).
  - It needs to be clear that the following information has to be disclosed: behaviour that is against prison rules and can be adjudicated against, illegal acts, and behaviour that is potentially harmful to the research participant (e.g. intention to self-harm or complete suicide) or others.
  - The respondent should be asked to direct any requests for information, complaints and queries through their prison establishment/probation trust. Direct contact details should be removed.

Before the research can commence you must agree formally by email to the NRC (National.Research@noms.gsi.gov.uk), confirming that you accept the modifications set out above and will comply with the terms and conditions outlined below and the expectations set out in the NOMS Research Instruction (http://www.justice.gov.uk/downloads/offenders/psipso/psi-2012/psi-13-2012-research-applications.doc).

Please note that the decision to grant access to prison establishments or probation trusts (and the offenders and practitioners within these establishments/trusts) ultimately lies with the Governing Governor or Contract Manager of the establishment/trust concerned. If establishments/trusts are to be approached as part of the research, a copy of this letter must be attached to the request to prove that the NRC 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.

Please quote your NRC reference number in all future correspondence.

Yours sincerely

National Research Committee

Appendix 13 – G* Power output

Post hoc

t tests - Means: Difference between two independent means (two groups)

Analysis:	Post hoc: Compute achieved power		
Input:	Tail(s)	=	**Two**
	Effect size d	=	0.5
	α err prob	=	0.05
	Sample size group 1	=	37
	Sample size group 2	=	14
Output:	Noncentrality parameter δ	=	1.5934917
	Critical t	=	2.0095752
	Df	=	49
	Power (1-β err prob)	=	0.3456489

t tests - Means: Wilcoxon-Mann-Whitney test (two groups)

Options:	A.R.E. method		
Analysis:	Post hoc: Compute achieved power		
Input:	Tail(s)	=	**One**
	Parent distribution	=	Normal
	Effect size d	=	0.5
	α err prob	=	0.05
	Sample size group 1	=	37
	Sample size group 2	=	14
Output:	Noncentrality parameter δ	=	1.5571681
	Critical t	=	1.6781424
	Df	=	46.7014126
	Power (1-β err prob)	=	0.4560908

t tests - Means: Wilcoxon-Mann-Whitney test (two groups)

Options:	A.R.E. method		
Analysis:	Post hoc: Compute achieved power		
Input:	Tail(s)	=	**Two**
	Parent distribution	=	Normal
	Effect size d	=	0.5
	α err prob	=	0.05
	Sample size group 1	=	37
	Sample size group 2	=	14
Output:	Noncentrality parameter δ	=	1.5571681
	Critical t	=	2.0120801
	Df	=	46.7014126
	Power (1-β err prob)	=	0.3321077

A priori

t tests - Means: Difference between two independent means (two groups)

Analysis:	A priori: Compute required sample size		
Input:	Tail(s)	=	**Two**
	Effect size d	=	0.5
	α err prob	=	0.05
	Power (1-β err prob)	=	0.80

	Allocation ratio N2/N1	=	1
Output:	Noncentrality parameter δ	=	2.8284271
	Critical t	=	1.9789706
	Df	=	126
	Sample size group 1	=	64
	Sample size group 2	=	64
	Total sample size	=	128
	Actual power	=	0.8014596

t tests - Means: Difference between two independent means (two groups)

Analysis:	A priori: Compute required sample size		
Input:	Tail(s)	=	**One**
	Effect size d	=	0.5
	α err prob	=	0.05
	Power (1-β err prob)	=	0.80
	Allocation ratio N2/N1	=	1
Output:	Noncentrality parameter δ	=	2.5248762
	Critical t	=	1.6602343
	Df	=	100
	Sample size group 1	=	51
	Sample size group 2	=	51
	Total sample size	=	102
	Actual power	=	0.8058986

t tests - Means: Wilcoxon-Mann-Whitney test (two groups)

Analysis:	A priori: Compute required sample size		
Input:	Tail(s)	=	**Two**
	Parent distribution	=	Normal
	Effect size d	=	0.5
	α err prob	=	0.05
	Power (1-β err prob)	=	0.80
	Allocation ratio N2/N1	=	1
Output:	Noncentrality parameter δ	=	2.8279915
	Critical t	=	1.9789766
	Df	=	125.9606
	Sample size group 1	=	67
	Sample size group 2	=	67
	Total sample size	=	134
	Actual power	=	0.8013372

t tests - Means: Wilcoxon-Mann-Whitney test (two groups)

Analysis:	A priori: Compute required sample size		
Input:	Tail(s)	=	**One**
	Parent distribution	=	Normal
	Effect size d	=	0.5
	α err prob	=	0.05
	Power (1-β err prob)	=	0.80
	Allocation ratio N2/N1	=	1
Output:	Noncentrality parameter δ	=	2.5152354
	Critical t	=	1.6603560
	Df	=	99.2225438
	Sample size group 1	=	53
	Sample size group 2	=	53
	Total sample size	=	106
	Actual power	=	0.803218

Appendix 14 – Prison/probation establishments

Prisons:

- HMP Blundeston
- HMP Wealstun
- HMP Ford
- HMP Moorland
- HMP Whitemoor
- HMP Foston Hall
- HMP Swaleside
- HMP LIttlehey
- HMP Brixton
- HMP Highpoint
- HMP Lowdham-Grange
- HMP Wayland
- HMP Wakefield
- YOI Ayelsbury
- HMP Rye Hill
- HMP Coldingley
- HMP Parkhurst
- HMP Bure
- HMP Onley
- HMP Pentonville
- HMP Rochester

Probation Units:

- Lewisham
- Southwark
- Kingston
- Bromley
- Ealing

Appendix 15 – Contingency tables

SFO offenders with PD by type - violent/sexual * sapas.ques.1

			sapas.ques.1		Total
			yes	no	
SFO offenders with PD by type - violent/sexual	Violent with PD	Count	9[a]	9[a]	18
		% within SFO offenders with PD by type - violent/sexual	50.0%	50.0%	100.0%
		% within sapas.ques.1	64.3%	69.2%	66.7%
		% of Total	33.3%	33.3%	66.7%
	Sexual with PD	Count	5[a]	4[a]	9
		% within SFO offenders with PD by type - violent/sexual	55.6%	44.4%	100.0%
		% within sapas.ques.1	35.7%	30.8%	33.3%
		% of Total	18.5%	14.8%	33.3%
Total		Count	14	13	27
		% within SFO offenders with PD by type - violent/sexual	51.9%	48.1%	100.0%
		% within sapas.ques.1	100.0%	100.0%	100.0%
		% of Total	51.9%	48.1%	100.0%

SFO offenders with PD by type - violent/sexual * sapas.ques.2

			sapas.ques.2		Total
			yes	no	
SFO offenders with PD by type - violent/sexual	Violent with PD	Count	6[a]	12[a]	18
		% within SFO offenders with PD by type - violent/sexual	33.3%	66.7%	100.0%
		% within sapas.ques.2	75.0%	63.2%	66.7%
		% of Total	22.2%	44.4%	66.7%
	Sexual with PD	Count	2[a]	7[a]	9
		% within SFO offenders with PD by type - violent/sexual	22.2%	77.8%	100.0%
		% within sapas.ques.2	25.0%	36.8%	33.3%
		% of Total	7.4%	25.9%	33.3%
Total		Count	8	19	27
		% within SFO offenders with PD by type - violent/sexual	29.6%	70.4%	100.0%
		% within sapas.ques.2	100.0%	100.0%	100.0%
		% of Total	29.6%	70.4%	100.0%

SFO offenders with PD by type - violent/sexual * sapas.ques.3

			sapas.ques.3		Total
			yes	no	
SFO offenders with PD by type - violent/sexual	Violent with PD	Count	14[a]	4[a]	18
		% within SFO offenders with PD by type - violent/sexual	77.8%	22.2%	100.0%
		% within sapas.ques.3	66.7%	66.7%	66.7%
		% of Total	51.9%	14.8%	66.7%
	Sexual with PD	Count	7[a]	2[a]	9
		% within SFO offenders with PD by type - violent/sexual	77.8%	22.2%	100.0%
		% within sapas.ques.3	33.3%	33.3%	33.3%
		% of Total	25.9%	7.4%	33.3%
Total		Count	21	6	27
		% within SFO offenders with PD by type - violent/sexual	77.8%	22.2%	100.0%
		% within sapas.ques.3	100.0%	100.0%	100.0%
		% of Total	77.8%	22.2%	100.0%

SFO offenders with PD by type - violent/sexual * sapas.ques.4

			sapas.ques.4		Total
			yes	no	
SFO offenders with PD by type - violent/sexual	Violent with PD	Count	5[a]	13[a]	18
		% within SFO offenders with PD by type - violent/sexual	27.8%	72.2%	100.0%
		% within sapas.ques.4	71.4%	65.0%	66.7%
		% of Total	18.5%	48.1%	66.7%
	Sexual with PD	Count	2[a]	7[a]	9
		% within SFO offenders with PD by type - violent/sexual	22.2%	77.8%	100.0%
		% within sapas.ques.4	28.6%	35.0%	33.3%
		% of Total	7.4%	25.9%	33.3%
Total		Count	7	20	27
		% within SFO offenders with PD by type - violent/sexual	25.9%	74.1%	100.0%
		% within sapas.ques.4	100.0%	100.0%	100.0%
		% of Total	25.9%	74.1%	100.0%

SFO offenders with PD by type - violent/sexual * sapas.ques.5

			sapas.ques.5		Total
			yes	no	
SFO offenders with PD by type - violent/sexual	Violent with PD	Count	15[a]	3[a]	18
		% within SFO offenders with PD by type - violent/sexual	83.3%	16.7%	100.0%
		% within sapas.ques.5	71.4%	50.0%	66.7%
		% of Total	55.6%	11.1%	66.7%
	Sexual with PD	Count	6[a]	3[a]	9
		% within SFO offenders with PD by type - violent/sexual	66.7%	33.3%	100.0%
		% within sapas.ques.5	28.6%	50.0%	33.3%
		% of Total	22.2%	11.1%	33.3%
Total		Count	21	6	27
		% within SFO offenders with PD by type - violent/sexual	77.8%	22.2%	100.0%
		% within sapas.ques.5	100.0%	100.0%	100.0%
		% of Total	77.8%	22.2%	100.0%

SFO offenders with PD by type - violent/sexual * sapas.ques.6

			sapas.ques.6		Total
			yes	no	
SFO offenders with PD by type - violent/sexual	Violent with PD	Count	13[a]	5[a]	18
		% within SFO offenders with PD by type - violent/sexual	72.2%	27.8%	100.0%
		% within sapas.ques.6	72.2%	55.6%	66.7%
		% of Total	48.1%	18.5%	66.7%
	Sexual with PD	Count	5[a]	4[a]	9
		% within SFO offenders with PD by type - violent/sexual	55.6%	44.4%	100.0%
		% within sapas.ques.6	27.8%	44.4%	33.3%
		% of Total	18.5%	14.8%	33.3%
Total		Count	18	9	27
		% within SFO offenders with PD by type - violent/sexual	66.7%	33.3%	100.0%
		% within sapas.ques.6	100.0%	100.0%	100.0%
		% of Total	66.7%	33.3%	100.0%

SFO offenders with PD by type - violent/sexual * sapas.ques.7

			sapas.ques.7		Total
			yes	no	
SFO offenders with PD by type - violent/sexual	Violent with PD	Count	8[a]	10[a]	18
		% within SFO offenders with PD by type - violent/sexual	44.4%	55.6%	100.0%
		% within sapas.ques.7	80.0%	58.8%	66.7%
		% of Total	29.6%	37.0%	66.7%
	Sexual with PD	Count	2[a]	7[a]	9
		% within SFO offenders with PD by type - violent/sexual	22.2%	77.8%	100.0%
		% within sapas.ques.7	20.0%	41.2%	33.3%
		% of Total	7.4%	25.9%	33.3%
Total		Count	10	17	27
		% within SFO offenders with PD by type - violent/sexual	37.0%	63.0%	100.0%
		% within sapas.ques.7	100.0%	100.0%	100.0%
		% of Total	37.0%	63.0%	100.0%

SFO offenders with PD by type - violent/sexual * sapas.ques.8

			sapas.ques.8		Total
			yes	no	
SFO offenders with PD by type - violent/sexual	Violent with PD	Count	10[a]	8[a]	18
		% within SFO offenders with PD by type - violent/sexual	55.6%	44.4%	100.0%
		% within sapas.ques.8	62.5%	72.7%	66.7%
		% of Total	37.0%	29.6%	66.7%
	Sexual with PD	Count	6[a]	3[a]	9
		% within SFO offenders with PD by type - violent/sexual	66.7%	33.3%	100.0%
		% within sapas.ques.8	37.5%	27.3%	33.3%
		% of Total	22.2%	11.1%	33.3%
Total		Count	16	11	27
		% within SFO offenders with PD by type - violent/sexual	59.3%	40.7%	100.0%
		% within sapas.ques.8	100.0%	100.0%	100.0%
		% of Total	59.3%	40.7%	100.0%

Appendix 16 – DSM IV Criteria for ASPD

Criteria no.	Criteria description
1	**Failure to conform to social norms** with respect to lawful behaviours as indicated by repeatedly performing acts that are grounds for arrest
2	**Deceitfulness** as indicated by repeated lying, use of aliases or conning others for personal profit
3	**Impulsivity** or failure to plan ahead
4	**Irritability and aggressiveness**, as indicated by repeated physical fights or assaults
5	**Reckless** regard for safety of self or others
6	**Consistent irresponsibility**, as indicated by repeated failure to sustain consistent work behaviour or honour financial obligations
7	**Lack of remorse**, as indicated by being indifferent or rationalising having hurt, mistreated or stolen from another
8	Aged at least 18
9	Evidence of conduct disorder with onset before 15 years
10	The recurrence of anti-social behaviour is not exclusively during the course of schizophrenia or a manic episode

Appendix 17 - Intake Assessment template

FMHP SERVICE - INTAKE ASSESSMENT

SURNAME		**NAMES (S)**	
DATE OF BIRTH		**ADDRESS**	
TELEPHONE			
DATE			

PRESENTING COMPLAINT AND SYMPTOM REVIEW

PAST HISTORY				
PSYCHIATRIC				
GENERAL				
MEDICATION	**DOSE**	**FREQ.**	**DURATION**	**INDICATION**
PSYCHOSOCIAL INTERVENTIONS AND TREATMENT COMPLIANCE				
SUBSTANCE USE Illicit & Non-Prescribed drugs including caffeine				
FAMILY HISTORY Genogram				

PERSONAL / DEVELOPMENTAL / FORENSIC HISTORY

EDUCATIONAL / VOCATIONAL HISTORY	
RELATIONSHIP HISTORY	
FORENSIC HISTORY	

SOCIAL CIRCUMSTANCE	
PREMORBID PERSONALITY Attitudes, Relationships, Mood, Coping, Illness, Behaviour	

MENTAL STATE EXAMINATION	
APPEARANCE/BEHAVIOUR	
SPEECH	
MOOD	
THOUGHT FORM	
THOUGHT CONTENT	
PERCEPTIONS	
COGNITION	
INSIGHT	

RISK ASSESSMENT	RATIONALE	OVERALL RATING (1-5)
ACCIDENTAL SELF-HARM		
DELIBERATE SELF-HARM		
HARM TO OTHERS		
VULNERABILITY		

FORMULATION

MANAGEMENT/RECOMMENDATIONS

NAME Forensic Mental Health Practitioner	
SIGNATURE	

Appendix 18 – OASys PD Screen

1. One or more convictions under 18 years
2. Any breaches?
3. Three or more different categories of convictions (as an adult)
4. Did any of the offences include violence/threat of violence/coercion?
5. Did any of the offences include excessive violence/sadism?
6. Does the offender recognise the impact of their offending on the victim/community/wider society?
7. Over-reliance on friends/family/others for financial support
8. Manipulative/predatory lifestyle
9. Reckless/risk taking behaviour
10. Childhood behavioural problems
11. Impulsivity
12. Aggressive/controlling behaviour

Appendix 19 – PHQ-9 and GAD-7

PHQ- 9

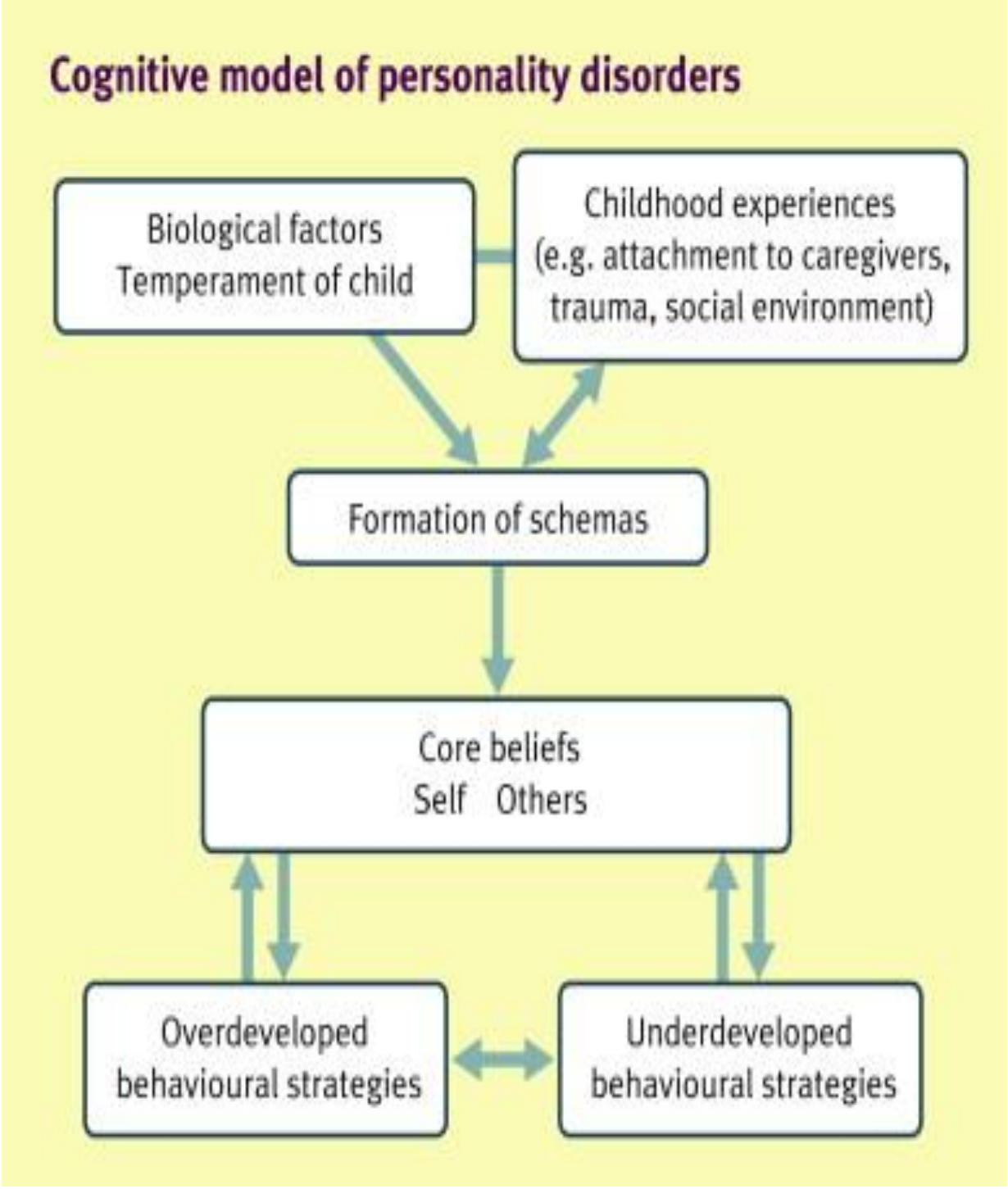
	Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1	Little interest or pleasure in doing things	0	1	2	3
2	Feeling down, depressed, or hopeless	0	1	2	3
3	Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4	Feeling tired or having little energy	0	1	2	3
5	Poor appetite or overeating	0	1	2	3
6	Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7	Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8	Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9	Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3
		A11 – PHQ9 total score			☐

GAD-7

	Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1	Feeling nervous, anxious or on edge	0	1	2	3
2	Not being able to stop or control worrying	0	1	2	3
3	Worrying too much about different things	0	1	2	3
4	Trouble relaxing	0	1	2	3
5	Being so restless that it is hard to sit still	0	1	2	3
6	Becoming easily annoyed or irritable	0	1	2	3
7	Feeling afraid as if something awful might happen	0	1	2	3
		A12 – GAD7 total score			☐

Appendix 20 – Young's Schema Questionnaire

Appendix 21 – Cognitive Model of Personality Disorder



Appendix 22 – Behavioural experiment worksheet

Appendix 23 – Service user exit questionnaire