An Investigation into Personality Typologies of Adolescent Sexual Offenders

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Abstract

The first chapter of the thesis systematically reviewed the research on personality typologies of adolescent sexual offenders and highlights the findings that different subgroups exist. Differences in factors affecting the grouping of these offenders such as inpatient vs. outpatient and the crime committed are explored. Chapter 2 investigated the validity and reliability of the Millon Adolescent Clinical Inventory (MACI, Millon, 1993) and reported generally good levels of reliability and validity for the MACI however limitations of the psychometric are also discussed. In particular, attention is drawn to the lack of research regarding the stability of the MACI over different time periods and with different samples. Some questionable findings regarding the concurrent validity of the MACI are also considered. Chapter 3 investigated personality typologies of adolescent sex offenders, using a sample of young men referred to a community based treatment programme (*N*=83). A cluster analysis was conducted and produced 4 distinct subgroups of offenders: Submissive/Anxious, Antisocial/Delinquent, Undersocialised/Isolated and Disturbed/Oppositional. The impact upon treatment, assessment and management of adolescent sex offenders is discussed in light of these results. Chapter 4 discusses the general findings of the thesis. The implications of these findings are considered in terms of future research, existing limitations and informing clinical practice.

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Introduction

This thesis forms part of the criteria for the qualification of the Doctorate for Forensic Psychology (ForenPsyD). Its overall aim is to examine the personality profiles of male adolescent sexual offenders. More specifically, it examines previous research into this area, current measurements and tools for assessing personality in adolescents and attempts to identify the presence and relevance of personality profiles for this population. This introduction aims to introduce readers to this area of research by way of definitions and an overview of the current literature.

Definition of Adolescent Sexual Offender

Adolescent sex offenders are defined by Ryan, Lane, Davis and Isaac (1987) as young people 'from puberty to the legal age of majority, who commit any sexual act with a person of any age, against the victim's will, without consent, or in an aggressive, exploitative or threatening manner' (p.385). This thesis will maintain this definition throughout, with the age range generally being 11-21 years of age, although chapter 3 reduces the age range to 13-19 due to measurement restrictions. Sex offences committed by adolescents are a serious problem. Nearly 16% of the arrests for rape and 17% of the arrests for all other sex offences in the UK in 1995 involved youth, under the age of 18 (Righthand & Welch, 2001) and roughly one third of sexual offences against children are committed by adolescents and often by boys aged between 12 to 15 years (Davis & Leitenberg, 1987; Snyder & Sickmund, 1999). An offence against a child is defined as 'sexual interactions with a child under the age of 14 with a person more than five years older than the child' (Finkelhor, 1984, p.3). A peer/adult offender is an individual who offends against a victim over the age of 14 or where the age gap between the offender and victim is less than five years.This definition will be utilised throughout the thesis in order to differentiate those who are child offenders or those who are

peer/adult offenders. In the United States in 1995, 16,100 adolescents were arrested for sexual offences (excluding rape and prostitution) and approximately 18 adolescents per 100,000 were arrested for rape (Sickmund, Snyder, & Poe-Yamagata, 1997). Furthermore, according to the majority of recent research somewhere between 9% and 15% of adolescent sex offenders will go on to reoffend in adulthood (Nisbet, Wilson & Smallbone, 2004) however, other studies have estimated as many as 70% will reoffend (Brannon & Troyer, 1995). Such figures highlight our lack of knowledge regarding adolescent sexual offending and consequently highlight the necessity for research into this area to help inform our assessment, treatment, management and risk appraisal methods for this population.

Adolescent sex offenders are a heterogeneous group who differ from each other not only in their offending behaviour but also in their developmental experiences, demographics and clinical features (Letourneau & Miner, 2005; Ronis & Borduin, 2007; Smallbone, 2006). Whilst they are quite distinct and separate from adult sexual offenders they are commonly not distinguishable from adolescent non-sexual offenders (Caldwell, 2002; Letourneau & Miner, 2005). As this finding suggests, adolescent sexual offenders are often part of a larger pattern of general juvenile offending rather than individuals being delinquent specialists in sexual offending (Lussier, 2005). Consequently, there is a general consensus in the research suggesting the recidivism of adolescent sex offenders to be higher for nonsexual offending than sexual offending (Caldwell, 2002, 2007; Righthand & Welch, 2001; Worling & Curwen, 2000; Worling & Langstrom, 2006).

Given the heterogeneity of the adolescent sex offender group, the importance of exploring classifications and typologies has been raised in recent research (Prentky & Burgess, 2000). Modern classification systems have attempted to group adolescent sex offenders by offence type, developmental factors and/or personality characteristics with the aim of providing useful information on etiology, treatment, and prognosis for this population.

Unfortunately, the rapist/child molester typologies commonly used in the adult sex offender literature do not fit the less homogenous adolescent sex offender groups (Hunter, Hazelwood & Slesinger, 2000), however there appears to be some support for distinctions between those who offend against children and those who offend against peers or adults (Gunby & Woodhams, 2010; Hendriks & Biljeveld, 2004; Hunter, Hazelwood & Slesinger, 2000). For example Gunby and Woodhams (2010) found adolescent child abusers to have significantly fewer age appropriate friendships and lower self-esteem and that they were more frequently the victims of bullying compared to peer-abusers. However, investigations into personality-based classifications have provided suggestions of both useful and distinctive clusters, however more research in this area is required (Oxnam & Vess, 2006; Smith, Monastersky & Deisher, 1987; Worling, 2001).

Personality and Adolescent Sex Offenders

Typology-focused research on adolescent sex offending has, in recent years, focused on personality profiles. Richardson, Kelly, Bhate and Graham (2004) and Worling (2001) were unable to provide support for a relationship between a personality-based typology and victim selection, however their findings were similar to those of Hunter, Figueredo, Malamuth and Becker (2003) and Miner et al. (2010) in that they stated this population are often characterised by psychosocial deficits (Ryan, Leversee & Lane, 2010). This research has repeatedly reported a “submissive” personality subtype and a “dysthymic/inhibited” type and research relates these personality types to the dynamics and mechanisms associated with the development of adolescent sexual offending. Specifically, the benefit of identifying subgroups of adolescent sex offenders based on personality traits allows the development of specific assessment and treatment for individuals based on their psychopathology rather than

their age and offence-type. According to Vizard, Monck and Misch (1995), intervention needs to occur as early as possible in order to reduce escalation of the offending and therefore, specific personality-focussed research with adolescents is vital.

Justification of Thesis

The aim of this thesis is to explore the existence of personality-based classifications in the adolescent sex offender population. According to Prentky and Burgess (2000), the goal of classification is to "uncover the laws and principles that underlie the optimal differentiation...of a domain into subgroups that have theoretically important similarities" (p. 25) and that the more heterogeneous the domain, the more important it is to develop a classification system. Largely, these classifications strive to help researchers and clinicians understand the characteristics of juvenile sex offenders. Pretky and Burgess (2000) identify four main aims of classification systems for sex offenders. Firstly, classifications aid the apprehension of the offender through investigative profiling. Secondly, they may serve to guide decisions about prosecution and sentencing by the criminal justice system. Thirdly, classifications may help to improve and target treatment plans and programmes. Finally, theories of etiology or ideas of offender life history that led to sexual offending behaviour may be better informed by the application of classification systems.

This thesis contributes to the literature as it aims to provide further functional information to this important body of research and to combine this with practical recommendations regarding the treatment, assessment and management of these individuals. The overall aim being to provide the professionals involved in the care and decision-making of adolescent sex offenders with an evidence-base which may inform and improve the services they provide.

A summary of each chapter within this thesis will be discussed in the subsequent section.

Thesis Structure

Chapter 1 comprises a literature review following a systematic approach and investigates the evidence-base for the personality profiles of male adolescent sex offenders. This chapter confirms that research in this area has produced several interesting findings regarding personality profiles of adolescent sex offenders and that these may have some value to clinicians and professionals working with this population. However, there were several limitations to this review which suggests that the methodological differences between the studies reviewed are too varied for the studies to be realistically comparable. This chapter concludes that there is a definite requirement for more research to be done in this area and that this research needs to be more specific than previous studies. In particular, it draws attention to the need for more longitudinal and controlled studies in order to investigate treatment impact, risk and recidivism rates.

Chapter 2 critically evaluates the Millon Adolescent Clinical Inventory (MACI, Millon, 1993), a frequently used measure for evaluating personality characteristics and psychopathology in adolescents. The psychometric properties and normative data for the MACI are explored. This chapter highlights generally good levels of reliability and validity of the MACI however limitations of the psychometric are also discussed. In particular, attention is drawn to the lack of research regarding the stability of the MACI over months or years. There are also some questionable findings regarding the concurrent validity of the MACI. The chapter concludes by highlighting the need for independent research to investigate the MACI's reliability and validity over different settings, ethnicities and across time periods as the validity and reliability data currently provided in the manual are not independent and are tested on limited samples. It also warns of the requirement for

professionals to understand the theoretical underpinnings of the assessment in order to use the results responsibly and practically.

Chapter 3 consists of a research project examining personality related typologies of community-based adolescent sex offenders. This chapter used a sample of 83 young men, aged between 13 and 19 who had been referred to an adolescent sex offender community-based treatment group within the London area. Each of these young men were assessed for their suitability for group treatment at which point they completed the Millon Adolescent Clinical Inventory (Millon, 1993) alongside a clinical interview. A cluster analysis identified four personality groups within this sample: Submissive/Anxious, Antisocial/Delinquent, Undersocialised/Isolated and Disturbed/Oppositional. The findings indicated important differences between these groups, emphasised the high levels of developmental difficulties experienced by this cohort and illustrated important differences between adolescent sex offenders and adult sex offenders. The findings within this chapter support previous personality-based typology research and suggest future research should have a developmental focus with regards to identifying the best treatment fit for adolescent sexual offenders.

The thesis concludes in Chapter 4 with a discussion of the general findings in relation to the aims of the thesis. The implications of the findings are considered in terms of research and clinical practice.

Ethical Considerations

This study was reviewed by the NHS Ethics Research Committee and was also approved by the School of Psychology, University of Birmingham. Individuals whose information formed the database used in Chapter 3 signed consent forms to use their

information anonymously for the purpose of research and development. Confidentiality was ensured by anonymity. The database was stored on a password-protected computer in a locked room at the services offices. No psychological or physical harm was anticipated to participants as a consequence of completing this project. All details within the thesis are true to the knowledge of the author and are based on forensic assessment and clinical judgement. The completion of the thesis has fully conformed to the ethical guidelines as outlined by the British Psychological Society.

CHAPTER 1

A Literature Review Following a Systematic Approach: The Personality Profile of Adolescent Sex Offenders

Abstract

This systematic review investigated the relationship between personality factors and adolescent sex offenders. This review assessed articles to discover whether any evidence for personality profiles exists within the sample of adolescent sex offenders and therefore, whether such personality factors may be useful in the advancement and specificity of adolescent sex offender treatment programmes. The aim was to identify, appraise and analyse studies in this area and also to attempt to answer the questions: Is there a personality profile typical to adolescent sex offenders? Are there particular factors that appear to create variances in personality types e.g. is personality affected by being an inpatient or an outpatient? Do personality profiles differ depending on the type of crime committed? Five electronic databases were searched to identify relevant publications using specific search terms. Studies were assessed using inclusion criteria and the quality of the remaining studies was assessed using a checklist, data was then extracted from the relevant articles (N=16).

There are several interesting findings regarding personality profiles of adolescent sex offenders particularly in terms of types of offenders and psychopathology. However, there were several limitations to this review which suggests that the methodological differences between the studies reviewed are too large for the studies to be realistically comparable. Therefore there is a definite requirement for more research to be done in this area, however this research does need to be more specific than previous studies. For example, future research should pay particular attention to different offence types and the demographic and historical factors associated with each individual offender. In particular, there is a definite need for more longitudinal and controlled studies in order to investigate treatment impact, risk and recidivism rates.

Introduction

The adolescent sex offender is defined as a youth, from puberty to the legal age of majority, who commits any sexual act with a person of any age, against the victims will, without consent, or in an aggressive, exploitative or threatening manner (Ryan et al, 1987, p.385). Within the last few decades, clinicians have begun to realise and address the possible seriousness that these young sex offenders present. Such actions are motivated by findings which suggest that more than half of adult sex offenders are likely to begin offending in adolescence, and adolescents may be responsible for more than one third of child sex abuse cases (Davis & Lietenberg, 1987), therefore, much could be gained from closely examining this population. Furthermore, concern about sexual offending among adolescents has risen dramatically in the past few years alongside growing recognition that the victims are predominantly children (Milloy, 1994). However, up until recently, the severity of these offences was not always recognised and offenders were either referred to traditional counselling programs (Ryan, 1998) or frequently, were given no treatment because of the prevailing notion that sexual and abusive behaviour by young people is harmless (Ryan, 1999).

One of the first investigations in this area by Ryan et al. (1987) illustrates the histories of both juvenile and adult sexual offenders as containing a high incidence of sexual victimisation during their childhoods, suggesting a cyclical pattern of sexual abuse. The high incidence of childhood victimisation may suggest a reactive, conditioned and/or learned behaviour pattern and the development from early behaviours highlights the reinforcing pattern in the development and presentation of sexually abusive behaviours (Ryan et al., 1987). Such findings are supported by Milloy (1994) who discovered that juvenile sex offenders have some unique characteristics, such as being significantly more likely than non-sex offenders to have themselves been the victims of sexual abuse. They were also more

likely to have been assessed as having a major mental illness, or in need health or dental hygiene education, to have no age appropriate peer relationships, and to have problems with sexual identity.

However there are also many similarities found between sex offenders and non-sex offenders; in general they have been found to be similar to non-sex offenders with respect to childhood behavioural problems, current behavioural adjustment, and antisocial attitudes and beliefs but had a lower risk for further delinquency (Butler & Seto, 2002). Similarly, Milloy (1994) discovered that juvenile sex offenders are not necessarily specialists in sexual offending and are often involved in other types of criminal behavior, often to a greater extent than their participation in sex offending. Furthermore, the subgroup of sex-only offenders (those who committed only sex offences and no other type of offence) had fewer childhood behavioural difficulties, better current adjustment, more prosocial attitudes, and a lower risk for future delinquency than did the sex offenders who also committed other delinquent acts. This latter group of sex offenders presented as criminally versatile (Butler & Seto, 2002).

Interestingly, adolescent sex offenders are often referred to as a "hidden" population as they more closely resemble a normative adolescent population than a delinquent population in terms of problem behaviours. For example, juvenile sex offenders are more likely to perform well in school prior to conviction than other offenders (Milloy, 1994). They are also less likely to abuse alcohol or illegal drugs or to have any other convictions (Milloy, 1994). However, it must also be borne in mind that adolescent sex offenders do not constitute a homogeneous group, although this is an inaccuracy observable in many studies. Beckett (1999) states that many studies have placed adolescent child molesters and youngsters who have raped or sexually assaulted peers or older victims in to the same experimental groups (e.g. Hunter et al., 2003; Hunter et al., 2000). However, with closer observation it becomes clear that there are several significant differences between these two groups: child molesters

exhibit more socially inappropriate behaviour (Hsu & Starzynski, 1990; van Wijk, 1999), are more likely to have experienced sexual abuse (Ford & Linney, 1995; Worling, 1995) and are more likely to internalise problems (Becker & Hunter, 1997). In addition, Hendriks and Bijleveld (2006) report that adolescent child molesters score higher in neuroticism, have experienced more social problems and have been the victim of bullying at school more often than their peers. They therefore suggest that the child molester group may be in greater need of psychological intervention than other groups of adolescent sex offenders, emphasising the problems associated with merging sex offenders into the same experimental group.

A study conducted by van Wijk et al. (2005) confirmed that adolescent sex offenders, specifically violent sex offenders such as rapists and assaulters, are in many ways characteristically similar to non-sex offenders. However, they reported that sex offenders generally achieved higher grades in school but ran away from home more often. Nevertheless both sexual and non-sexual offenders reported experiencing severe family problems. It is possible that these contradictions in studies are due to a number of factors, such as the profound differences in samples. The sample used by Hendriks and Bijleveld (2006) had completed residential treatment for an average of two years and were therefore likely to have committed serious offences. It is also probable that such serious offending was accompanied by social difficulties and this may help to explain the differences found between this population and their peer group comparison sample. On the other hand, the sample used by van Wijk et al. (2005) was younger males who remained in school and had commited 'moderate or minor' offences. It was therefore, less likely that differences between this sample and a peer group sample would be observable.

The question has been put forward, what makes a youth sexually offend rather than violently offend? In an attempt to answer this question studies have looked specifically at the characteristic differences between offending groups. For instance, Epps and Fisher (2004)

constructed a study where they looked in detail at four types of young offenders: child molesters, sexual assaulters, violent offenders and property offenders. Their results indicated that child molesters were less criminally active than the other groups and were generally more socially isolated and victims of peer-group bullying. Alternatively, sexual assaulters were more aggressive in presentation, particularly towards peers, and they more often formed part of a gang.

Following the discovery of such diversity within the group of adolescent sex offenders, clinicians have begun to look into the possibilities of typologies, which can provide more detailed and specific information in regards to a particular population. Graves, Openshaw, Ascione and Ericksen (1996) ran a meta-analysis using data from 16,000 juvenile sex offenders and identified three different classifications: 1) paedophilic 2) sexual assault and 3) undifferentiated, each of these groups had unique sociopsychological traits. For example, the paedophilic group presented with more social difficulties such as isolation and lack of confidence. A further typology was developed by Prentky, Harris, Frizzell and Righthand (2000) where 96 male adolescent sex offenders were classified into six groups due to differing offence characteristics, they were: 1) child molesters 2) rapists 3) sexually reactive children 4) fondlers 5) paraphilic offenders and 6) unclassifiable. The differences between the results of these two studies may be explained by varying methodological techniques utilised by the researchers. Graves et al. (1996) performed a meta-analysis with a very large number of studies and not all of these provided detailed enough information to be able to group individuals as specifically as Prentky et al.'s (2000) study . This may explain why Graves et al. (2006) identified fewer groups and included an "undifferentiated" cluster.

These discoveries indicate that juvenile and adult offenders vary in their characteristics and therefore, adult sex offender typologies should not be relied upon when creating treatment or assessment requirements for adolescent sex offenders. It is important to

note that adolescent offenders are still at an important stage of development where familial, social and psychological changes may have important impacts upon their offending behaviour. This fluidity in adolescents with regards to offending behaviours offers an important explanation as to why one should be cautious when applying theoretical and practical knowledge based on adults to a younger cohort (Barberee & Marshall, 2006). Furthermore, there is no empirical evidence to support that both male and female adolescent sex offenders can be grouped together (Vandiver & Teske, 2006).

One important similarity to note between adolescent sex offenders and non-sex offenders is the likelihood of re-offence, which is highest for both groups during the first year at risk (Milloy, 1994). Recent studies indicate that between 3% and 70% of apprehended adolescent sex offenders re-offend (Brannon & Troyer, 1995; Kenny, Seidler, Blaszczynski & Keogh, 1999; Sipe, Jensen & Everitt, 1998). The risk of adolescent sex perpetrators reoffending may not only be high but also dangerous as recidivists typically have large numbers of victims (Raumussen, 1999) and therefore a small number of offenders can harm a large number of victims. Consequently, it is vital that clinicians attempt to accurately predict recidivism and to provide relevant treatments in order to reduce the chance of further harm being caused (Kenny, Keogh & Seidler, 2001).

According to Hanson and Bussiere (1996), although several studies have attempted to uncover predictors of sexual recidivism, this has been difficult, as there appear to be no obvious factors. However, there are several factors that are more strongly associated with offending than others. Gal and Hoge (1999) state ‘poor attachment, negative family history, and physical, emotional and sexual abuse in early childhood’ are all pathways into offending (p.127). Furthermore, impaired social relationships, low intellectual functioning and psychopathy have all been strongly associated with future recidivism of adolescent sex offenders (Gal & Hoge, 1999). A frequently debated proposal is that deviant sexual fantasies

are directly related to recidivism. Kenny, Keogh and Seidler (2001) support this idea adding that cognitive distortions are indirectly associated with the reoffending of adolescent sex offenders through their deviant sexual fantasies. This is an area that has therefore been targeted by many treatment programmes.

According to Worling and Curwen (2000) the most essential treatment goals for an adolescent sex offenders treatment programme are: increasing offender accountability, assisting offenders to understand their offending behaviour in a cognitive behaviour therapeutic context, to reduce deviant sexual arousal, improve family relationships, enhance victim empathy, improve social skills, improve attitudes towards sex and intimate relationships and reducing the offender's personal trauma. Furthermore, Worling and Curwen (2000) found that such specialised treatments reduce the risk of recidivism in both sexual and non-sexual offending for adolescent sex offenders. In conclusion they suggest that an intervention which includes offence specific work alongside family and relationship work may be the most successful for young sexual offenders.

However, many studies have arrived at different conclusions and several suggestions have been put forward as to why this may be. Beckett (1999) proposes that many of these studies regarding adolescent sex offenders are judged wrongly as they treat them as a homogeneous group whereas adolescents who abuse children should not be assessed alongside adolescents who abuse peers or adults. As a result of flawed methods such as this, differences in the reoffence rates that would normally be expected between the different sex offender types will be unavailable and results will be unable to be generalised to this population as a whole. Vizard et al., (1995) report that observations made in different studies have resulted in varying understanding and interpretations due to diverse cultures and social customs. It is possible that the differences in results have arisen from the comparison of varying samples who are at diverse stages of the criminal justice system and who have

received different levels of intervention. Furthermore, according to Rind, Tromovitch and Bauserman (2001) a large amount of this research has been based on clinical populations which puts it at risk of an external validity bias, particularly when these are compared with non-clinical samples. Additionally there are several more methodological difficulties that are apparent throughout adolescent sex offender research, for instance, small sample sizes, biased sampling, non-standardised measurement instruments and a dependence on self-report information. Moreover when sex offenders are compared to non-sex offenders, satisfactorily defined samples are often lacking (Davis & Leitenberg, 1987; Truscott, 1993; Righthand & Welch, 2001).

Overall, one of the main issues of discussion surrounding the assessment and treatment of adolescent sex offenders is what is acceptable and expected of young people and what is inherently wrong and criminal. A matter often put forward by researchers is the difficulty in distinguishing sexual crimes from normal activity. For example, if a 15 year old youth has sexual intercourse with his 13 year old girlfriend, should this be regarded as criminal sexual activity or normal adolescent development? On the other hand, adolescent sexual offending often results in a large number of victimised individuals who suffer severely due to these events (Barbaree & Marshall, 2006). In fact, Kilpatrick et al. (2000) report that such victimisation can lead to immediate and long term negative effects such as depression, anxiety, substance abuse, early pregnancy, antisocial conduct, even suicide and is therefore an issue that should be taken very seriously. Although such negative effects are noted for the victims of sexual crimes, there are also arguments regarding the effect that such a conviction can have on the offender; many criminal systems avoid the prosecution of such delinquents so to avoid applying the label of "sex offender" at such a young age. Barbaree and Marshall (2006) feel that this is no longer the case and that the 'pendulum has swung too far in the opposite direction' (p.6) stating that 'adolescents who face prosecution are taken from their

families and placed in custody or foster homes; ostracised by friends, family, community and society and suffer persecution and stigma that outlasts whatever temporal criminal sentence may be imposed' (p.6). Such issues are still debated and must be borne in mind when working with a young and vulnerable sample.

A growing number of recent research studies regarding adolescent sex offenders draw attention to the importance of personality (e.g., Oxnam & Vess, 2006). This topic is introduced and discussed below.

Personality

Personality can be defined as a 'dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviours in various situations' (Ryckman, 2004, p.5). A personality profile represents those personality traits which are elevated on a personality measurement scale and which combine together to form a complete description of the individual's presentation. One of the principal theories in this area is known as the "Big 5" by McCrae and Costa (1987). They simplified the concept of personality and developed the idea of a five-factor model where they established that the majority of personality traits could be categorised into five higher-order traits: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. The extraversion trait is portrayed by talkative, sociable, high-spirited and friendly behaviours. Agreeableness is described as displaying compassionate, warm and trusting characteristics whereas conscientiousness usually requires a reliable, trustworthy and productive manner. Neuroticism illustrates an anxious, insecure and self-conscious character and lastly, openness to experience is portrayed by daring, unorthodox and creative people who enjoy particularly broad interests.

McCrae and Costa (1987) considered that by measuring these five basic personality traits, one would be able to sufficiently describe a personality. A number of meta-analyses have confirmed the predictive value of the Big Five across a wide range of behaviours. For example Saulsman and Page (2004) investigated the possible relationships between the Big Five personality traits and the 10 personality disorder categories highlighted in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV). Over 15 independent samples, the researchers discovered that each individual disorder displayed a unique, specific personality profile. According to Saulsmand and Page (2004) the most predictive factors were positive associations with neuroticism and negative associations with Agreeableness. On the other hand, there are criticisms of this theory which state that it does not explain all of personality (McAdams, 1995) and that this is due to its focus falling on factors being openly observable in individuals but not those that are held more personal and private.

A different approach to personality theory is the Person-Centred theory by Rogers (1959) which was developed from a humanistic perspective. He maintains that humans have an underlying ‘actualizing tendency’, which aims to develop positively and to move ourselves towards autonomy. According to Rogers (1959), this tendency is directional, constructive and present in all living things and it encompasses all motivations; tension, need, or drive reductions; and creative as well as pleasure-seeking tendencies. Rogers (1959) illustrated that personality centres on ‘self-concept’, which is known as a collection of beliefs about one’s own nature, unique qualities, and typical behaviour. In other words, his theory was based on the idea of a person’s self-perception of their own personality. He reports that individuals strive to make their personality as consistent as possible with their self-concept and called the difference between one’s self-concept and one’s reality ‘incongruence’. He claimed that people would attempt to show their favourable self-concept by ignoring or

distorting certain experiences that are contradictory, or even doing certain things to prove that their self-concept is accurately describing their actual personality.

Further early research explored the possibility of measuring personality, this became of vital importance during the Second World War when psychologists were set the task of trying to match the right people to suitable jobs (Cattell, 1943). This led to the creation of personality assessments, which was fronted by Cattell's (1943) 16PF instrument designed for identifying personality factors. From this point onwards, psychologists used complex statistics and testing to produce more intricate and detailed assessment tools. These are employed by psychologists in the majority of clinical and forensic settings and produce detailed results of individual's personality profiles which can inform staff of any underlying personality or clinical dimensions which may be important to their treatment. However, it is important to note that many of these tools have been criticised due to a lack of construct validity and measurement problems such as response biases and invalid responses from self-report questionnaires. The personality measurement tools included in the reviewed papers are described in the following section. This will provide an understanding of the factors measured by each and how the results can be interpreted.

Personality Assessments

Millon Adolescent Clinical Inventory (MACI) (1993).

The MACI is a replacement for the Millon Adolescent Personality Inventory (MAPI, 1982) and is designed for the evaluation of troubled adolescents and may be used for 'developing diagnoses and treatment plans and as outcome measures' (Millon, 1993; p.1). Table 1 lists the MACI scales and the number of items in each scale:

Table 1

MACI Scale Names

Scale	Name
Personality Patterns	
1	Introversive
2a	Inhibited
2b	Doleful
3	Submissive
4	Dramatising
5	Egotistic
6a	Unruly
6b	Forceful
7	Conforming
8a	Oppositional
8b	Self-Demeaning
9	Borderline Tendency
Expressed Concerns	
A	Identity Diffusion
B	Self-Devaluation
C	Body Discomfort
D	Sexual Discomfort
E	Peer Insensitivity

F	Social Insensitivity
G	Family Discord
H	Childhood Abuse
Clinical Syndromes	
AA	Eating Dysfunctions
BB	Substance Abuse Proneness
CC	Delinquent Predisposition
DD	Impulsive Propensity
EE	Anxious Feelings
FF	Depressive Affect
GG	Suicidal Tendency
Modifying Indices	
X	Disclosure
Y	Desirability
Z	Debasement
VV	Validity

This instrument is easy to administer to literate adolescents; it is also time-efficient and works alongside the American Psychiatric Association's, Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; APA, 1994). The MACI has also undergone careful development and is a widely used personality measure for adolescent clinical populations. Millon (1993) reported acceptable internal consistency and test-retest reliability estimates and adequate validation for this instrument. This has been continually reported from subsequent studies with internal consistency ratings ranging from 0.71 to 0.93

(Blumentritt & VanVoorhis, 2004; Pinto & Grilo, 2004; Salekin, 2002; Velting, Rathus & Miller, 2000).

California Psychological Inventory (CPI; Gough, 1987).

The CPI is a popular personality test for adolescents over the age of 12, designed to assess 20 variables: Dominance, Capacity for Status, Sociability, Social Presence, Self-acceptance, Independence, Empathy, Responsibility, Socialization, Self-control, Good Impression, Communality, Well-being, Tolerance, Achievement via Conformance, Achievement via Independence, Intellectual Efficiency, Psychological-mindedness, Flexibility, and Femininity/Masculinity. The test manual reports adequate levels of internal consistency (median $\propto = 0.72$ for male respondents) and test re-test reliability (median = 0.68).

Minnesota Multiphasic Personality Inventory (MMPI-A; Archer, 1992).

The MMPI-A is a 478-item self-report personality inventory utilised to detect and categorise the presence and patterns of psychopathology among adolescents between the ages of 14 and 18. Table 2 displays the clinical factors measured by the MMPI-A.

Table 2

Clinical factors of the MMPI-A

Scale	**Name**
1 HS	Hypochondriasis
2 D	Depression

3 Hy	Hysteria
4 Pd	Psychopathic Deviate
5 Mf	Masculinity/ Femininity
6 Pa	Paranoia
7 Pt	Psychasthenia
8Sc	Schizophrenia
9 Ma	Hypomania
10 Si	Social Introversion

The MMPI-A is a psychometrically sound instrument that has a test re-test reliability score of 0.19 ranging to 0.84 and a one year test re-test score of 0.51 ranging from 0.75 (Archer, 1992). The internal consistency values for the MMPI-A range from 0.43 to 0.80 and it is generally seen as capable of accurately identifying clinical difficulties and personality profiles (Archer, 1992).

Adolescents Temperament List (ATL; Feij & Kuiper, 1984).

The ATL is a self-report questionnaire and consists of three subscales: impulsivity, extraversion and thrill seeking. According to Evers, van Vliet-Mulder and Groot (2000) the Cronbach's alpha reliability coefficients are fair.

Attributional Style Questionnaire (ASQ; Seligman, Abramson, Semmel & von Baeyer, 1979)

The ASQ is used to assess causal attributions for positive and negative life events as they relate to the dimensions of internality, stability and globality. Research conducted regarding this measure suggests that reliability is improved when all items are combined into two scales: one for positive outcomes and one for negative outcomes (Peterson et al., 1982). The ASQ presents 12 hypothetical events, half good and half bad, and the test-taker is asked to write down the one major cause of each event and then rate the cause along a 7-point continuum for each of the three causal dimensions. There is evidence that the ASQ is a predictor of depression, physical health, and achievement in various domains (in academics, work, and sports) (Seligman et al., 1979). Alpha coefficients for the combined positive and negative outcomes have been found to be 0.75 and 0.72 respectively (Peterson et al., 1982).

Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979).

The NPI is used to assess personality traits and attitudes associated with narcissism as defined by the DSM-III criteria. This 40 item scale has seven subscales: authority, self-sufficiency, superiority, exhibitionism, exploitiveness, vanity and entitlement. Research has supported that this assessment measures both maladaptive narcissism as well as the healthier aspects of narcissism, such as positive self-worth (Emmons, 1987). Studies also support both the internal consistency of the scale (alphas range from 0.80 to 0.86 across studies) as well as its construct validity (Emmons, 1987).

Erikson Psychological Stage Inventory Scale (EPSI; Rosenthal, Gurney & Moore, 1981).

The EPSI is used to measure level of psychosocial maturity. This instrument consists of six subscales based on Erikson's first six stages of psychosocial development: Trust, Autonomy, Initiative, Industry, Identity and Intimacy. This test has been widely used and has been found to have adequate psychometric qualities. The alpha reliability coefficients have been found to range from 0.57 to 0.75 across subscales(Greenberger & Sorensen, 1971). Its construct validity has been found to be supported by findings of significant correlations with other personality assessments (Greenberger & Sorensen, 1971).

Amsterdam Biographical Questionnaire (ABV; Wilde, 1970; Van Dijl & Wilde, 1982).

This is a Dutch questionnaire designed to study the emotional stability of children and adolescents from 9 to 17 years old. The questionnaire includes a scale for psych-neurotic complaints (N), neuroticism manifested in physical symptoms (NS), extraversion (E) related to social competence and test attitude (T). The assessment consists of 115 items and is used to assess the influence of the organisation of the self-system on the emotional functioning of children.

Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, 1993).

The SNAP is a factor analytically derived self-report instrument designed to assess psychopathology associated with personality. This measure consists of 375 items, including 5 validity scales, 13 diagnostic scales to assess the personality disorder criteria reported in the DSM-III, 12 trait scales and 3 temperament scales measuring both primary traits and general affective traits. According to Clark (1993), both the internal consistency and the validity of

the SNAP are supported by statistical evidence. In particular, the SNAP assessment is designed to assess sadistic and other DSM-III personality disorders that may be present. The criteria for sadistic personality disorder can be seen in Table 3.

Table 3

DSM-III diagnostic criteria for sadistic personality disorder

A. A pervasive pattern of cruel, demeaning, and aggressive behaviour, beginning by early adulthood, as indicated by the repeated occurrence of at least four of the following:

1) Has used physical cruelty or violence for the purpose of establishing dominance in a relationship (not merely to achieve some noninterpersonal goal, such as striking someone in order to rob him or her)
2) Humiliates or demeans people in the presence of others
3) Has treated or disciplined someone under his or her control unusually harshly e.g. a child, student, prisoner or patient.
4) Is amused by, or takes pleasure in, the psychological or physical suffering of others (including animals).
5) Has lied for the purpose of harming or inflicting pain on others (not merely to achieve some other goal)
6) Gets other people to do what he or she wants by frightening them (through intimidation or even terror)
7) Restricts the autonomy of people with whom he or she has a close relationship e.g. will not let spouse leave the house unaccompanied or permit teenage daughter to attend social functions
8) Is fascinated by violence, weapons, martial arts, injury or torture

B. The behaviour in A has not been directed towards only one person (e.g. spouse, one child) and has not been solely for the purpose of sexual arousal (as in sexual sadism)

(Feister & Gay, 1991)

Behaviour Assessment System for Children (BASC; Reynolds & Kamphaus, 1992).

The BASC self-report of personality is a true/ false questionnaire for children and adolescents aged between 8 and 11 and 12 and 18 years old. Its main advantage is that it is

short and is simple to complete. It has three validity scales designed to detect a lack of reading comprehension, random responding, presenting oneself in an excessively positive manner and presenting oneself in an overly negative way. Within the BASC's next 14 scales are items designed to measure school maladjustment, clinical maladjustment and personal adjustment. These are broken down into the following scales: anxiety, attitude to school, attitude to teachers, atypicality, depression, interpersonal relations, locus of control, relations with parents, self-esteem, self-reliance, sense of inadequacy, sensation seeking, social stress and somatisation. The test re-test reliability for the BASC self-report is reported to be 0.76 and internal consistency is reported to be high, ranging from 0.85 to 0.97 (Reynolds & Kamphaus, 1992). Construct and content validity are also reported to be high due to factor analyses which show the scales to adequately fit the data and comparisons with similar personality assessment tools (Reynolds & Kamphaus, 1992).

Several literature reviews have explored the relationship between personality profiles and adolescent sex offending. These are discussed below. Each of the personality measures presented above are utilised within the literature reviews discussed below and it is important to be aware of the different factors the assessments measure and the impact this may have on their results.

Conclusions from Previous Literature Reviews

Several fundamental points are raised regarding previous research on the topic of adolescent sex offenders by Van Wijk et al. (2006) in their review of the literature from 1995 – 2005. In particular they propose that studies are difficult to compare due to methodological inconsistencies. They report that often, criminal versatility is ignored and offenders are classed as sexual offenders with just one sexual offence and a vast history of non-sexual

criminal offending. This may be difficult to differentiate as this is not often specified in the majority of studies but may cause methodological flaws and needs to be monitored when assessing a study. Furthermore, Van Wijk et al., (2006) report that a large majority of studies group together adolescent sex offenders homogeneously without allowing for possible variations between types of offender, for example judging those who offend against peers as the same as those who offend against young children.

Although this literature review (Van Wijk et al., 2006) covered a wide range of topics, interesting results were raised regarding personality profiles of adolescent sex offenders versus non-sex offenders. They found several similarities between sex offenders and non-sex offenders; as children they both often had conduct disorder problems under the age of 11 years old, they scored similarly on assertiveness and self concept on the MMPI-A and the PCL-R assessments, they showed similar coping strategies, they had similar levels of self-esteem, they both frequently scored highly on affective, anxiety, disruptive and psychotic disorders; internalizing or externalising behaviour, neuroticism, thrill seeking behaviour, extraversion, impulsivity; psychosocial assistance. They were also both similarly likely to have disruptive diagnoses of depression or anxiety. However, there were also important differences, such as; sex offenders had fewer conduct problems from age 12 and up, lower scores on psychological variables, such as impulsive predisposition and antisocial tendencies; sex-only offenders had fewer childhood conduct problems, better current behavioural adjustment than non-sex offenders, higher MMPI F-score (psychopathology) and more social emotional disturbance. Sex offenders were also more likely to have attended special school due to behavioural problems; sex offenders were less extravert and impulsive, more neurotic, had fewer substance misuse disorders and less inhibitions. The finding that sex offenders had fewer conduct disorder problems yet were more likely to have attended special school due to behavioural problems than non-sex offenders is puzzling. However, rather than reflecting

specific conduct disordered behavior, it may reveal the additional support required by adolescent sex offenders in school, given their high levels of depression, anxiety and social emotional disturbance (Van Wijk et al., 2006).

Van Wijk et al., (2006) also concluded that in terms of peer functioning, sex offenders generally received lower scores than non-sex offenders. However, child molesters experienced a greater need for control and inclusion in relationships and rapists were found to be more detached with less desire to initiate affectionate contacts. Child molesters were more often victims of physical and sexual abuse and had earlier and more frequent exposure to pornographic materials. This may highlight that more significant differences may exist between types of adolescent offenders and that drawing conclusions about adolescent sex offenders as a homogeneous group may be dangerous.

A literature review by Becker (1998) reports upon the history of research into this area and identifies that based on 73 early studies, adolescent sex offenders were found to be a heterogeneous group. Furthermore, he reported a number of personality characteristics as being prevalent within this group including a lack of interpersonal skills (Awad & Saunders, 1989; Katz, 1990) and a history of conduct-disordered behaviour (Awad & Saunders, 1989; Schram, Milloy & Rowe, 1991). This finding opposes the findings of Van Wijk et al. (2006) and suggests the use of different samples where individuals may have been at different stages of the Criminal Justice System, for example Van Wijk et al.'s (2006) sample was constructed of community-based offenders who may have committed less serious or fewer offences than those in Awad and Saunder's (1989) sample.

Other studies at the time also present adolescent sex offenders as lacking impulse control (Smith et al., 1987) and experiencing depression (Becker, Kaplan, Tenke & Tartaglini, 1991). However, Becker (1998) reports that further research in this area revealed that there were noticeable personality characteristic differences between different types of sex

offenders. For example, the paedophilic offender is described as lacking in confidence in terms of social interactions particularly with peers. The sexual assault offender is defined by Becker (1998) as ‘a youth who has committed a variety of offences, involving children much younger than themselves. Their offences may also involve exhibitionism, voyeurism, frotteurism etc.’ (p. 69). According to Becker (1998), these offenders are described as having the most widespread and severe social and psychological difficulties.

For the purpose of discovering a personality profile of adolescent sex offenders, Smith et al. (1987) directed one of the first studies of this type administering the MMPI. The results proposed four major dimensions in terms of adolescent sex offender’s personalities: the first factor which was representative of over 50% of the variance was ‘acting out’, the second represented depression and social introversion, the third was masculinity/femininity and hysteria and the final factor to emerge was the lie scale. In a comparison between adolescent sex offenders and non-sex offenders McGraw and Pegg-McNad (1989) discovered two significant differences between the groups using the Rorscharch scale: the sex offender group gave more responses in general and also more anatomy responses (hypochondriacal preoccupation, repressed hostility, self-absorption) than non-sex offenders. Further, it is noted that future research should pay particular attention to whether the subjects are inpatient or outpatient as this may have an effect on the results of personality assessments (inpatients are found to present with more psychopathic tendencies (Becker, 1998)).

Aims and Objectives

Since the topic of adolescent sex offenders is vast, it would not be possible to evaluate all of the literature systematically, therefore, this systematic review concentrated purely on research regarding personality profiles of sex offenders under the age of 21. It aimed to

identify, appraise and analyse studies in this area and also aimed to answer the questions: is there a personality profile typical to adolescent sex offenders? Are there particular factors that appear to create variances in personality types, i.e., is personality affected by being an inpatient or an outpatient? And, do personality profiles differ according to the type of crime committed?

Method

Search Strategies

A preliminary search was run during early May 2009 in order to gain an understanding of the available literature on this particular topic and it was discovered that the papers were restricted in number and therefore would have to include many different types of intervention (e.g., a variety of personality assessment instruments). However, this increased the number of papers available so the author chose to limit the search to references published after 1996 as this year represents a period where the majority of currently used personality assessment tools were available. In order to identify primary studies on the personality characteristics of adolescent sex offenders three sources were searched comprehensively using the search terms specified in Figure 1. These sources were:

a) *Online electronic databases* (details of syntax applied are available in Figure 1)

OVID: Medline (1996- week 21 2009)

OVID: PSYCInfo (1996 – week 21 2009)

Cochrane Library (1996 – week 21 2009)

ISI Web of Science (1996 – week 21 2009)

SAGE (1996 – week 21 2009)

The search terms are detailed in Figure 1. All search terms were modified to meet the requirements of each database, according to the differences between them. The search was restricted to English language peer reviewed publications due to time constraints and language barriers.

Population

Adolescent OR young OR youth OR teenager OR young adult OR juvenile OR child

AND

Sex offense OR sex offence OR sex crimes OR sex offender OR sex perpetrator OR sex delinquent OR sex abuser OR rapist OR child molester OR incest OR sexual aggression OR sex assault

Intervention and Outcome

Personality OR personality profile OR profile OR personality typology OR typology OR personality traits OR personality characteristics OR characteristics

Figure 1. Search terms used for online databases

b) *Bibliography*

- Calley, N. G. & Reppert, B. (2007). Bibliography of 25 years of scholarly research and literature related to juvenile sexual offending: 1982- 2007.

A full reference list from this bibliography was included, and the articles contained in the list were considered via the inclusion/ exclusion criteria. This bibliography was obtained by contacting an expert (Professor Tony Beech) in this area of work.

c) *Literature Reviews*

Several literature reviews were identified via the electronic database search:

- Ardrade, J. T., Vincent, G. M., & Saleh, F. M. (2006). Juvenile sex offenders: A complex population. *Journal of Forensic Sciences, 51, 1,* 163-167.
- Boyd, N. J., Hagan, M., & Cho, M. E. (2000). Characteristics of adolescent sex offenders: A review of the research. *Aggression & Violent Behaviour, 51, 2,* 137-146.
- Van Wijk, A., Vermeiren, R., Loeber., R., Hart-Kerkhoffs, L., Doreleijers, T., & Bullens, R. (2006). Juvenile sex offenders compared to non-sex offenders: A review of the literature. *Trauma, Violence and Abuse, 7, 4,* 227-243.
- Veneziano, C. & Veneziano, L. (2002). Adolescent sex offenders: A review of the literature. *Trauma & Violence, 3/4,* 247-260.

The full reference lists from these literature reviews were considered for the review via the inclusion/ exclusion criteria. The information from these studies formed the basis of knowledge regarding this area of research.

Each of the references collected led to correspondence with either the author, the libraries of the University of Birmingham, the British Library or the Oxleas NHS libraries. All studies that were received before 20th July 2009 were reviewed.

The systematic review criteria were re-searched on 20th May 2011 and one further suitable paper was discovered:

Purcell, M. (2010). A personality-based classification of a community sample of male adolescent sex offenders using the Millon Adolescent Clinical Inventory (MACI). (Unpublished master's thesis). University of Auckland, New Zealand.

Unfortunately this study was unavailable for review within the required time period.

Inclusion/ Exclusion criteria

To be included in the review, studies were required to meet the following criteria:

Population: Adolescents aged between 11 and 21 who have been convicted of a sexual offence. This wide age range was set in order to include a maximum number of research papers and to encompass the common definition of an adolescent in current literature.

Intervention: Completed Personality Assessment (MACI, MMPI-A etc)

Outcome: Personality measured

Study types: Experimental/ quasi-experimental, cohort, case control, cross sectional or retrospective.

Exclusions: Narrative reviews, editorials and commentaries due to a lack of statistical analysis.

Language: English only, to avoid misinterpretation.

An inclusion/exclusion form was applied to each of the studies in the review.

Quality Assessment

Following the removal of studies that did not meet the inclusion criteria, the quality of the remaining studies was assessed using the following methods:

1) Threshold criteria

The threshold criteria applied were as follows:

- A clear and comprehensive classification and definition of ‘adolescent’.
- A clear and comprehensive classification and definition of ‘sex offender’ or ‘sexual offence’.
- A clear description of the personality assessment tool applied and its reliability and validity.
- A clear evaluation of results and conclusions regarding these.

2) Quality assessment forms

The remaining studies were then assessed using the quality assessment form (Appendix A). The following scoring system was applied:

0 = condition not met

1 = condition partially met

2 = condition fully met

U = unclear / insufficient information

The overall quality was assessed by the final score received on the quality assessment form. The higher this score, the better the overall quality of the study was deemed to be. The clarity of the study was considered by summing the number of unclear items in the quality assessment form. The higher this score, the less clear the study. These scores are presented in the last column of Tables 4, 5 and 6. In order to avoid bias, a secondary reviewer read 3 of the quality assessed articles in order to ensure a consistent approach and assessment. Any differences were discussed and taken onboard by the author.

Data Extraction

Data from the studies were extracted using a pre-designed data extraction form, detailed in Appendix B. The quality assessment and clarity scores for each individual paper were also noted on this form.

Search Results

Figure 2 illustrates the numbers of studies evaluated and the final studies selected for this review. The initial number of references yielded was 1679 including those from the literature reviews and bibliography. Of these, 523 duplicates were removed, which left 1156 references. Of these remaining references, 1,025 did not meet the inclusion criteria and 99 were not traceable- mostly due to being unpublished or being published in unobtainable sources. This left 32 studies available for the quality assessment element. Of these 32 publications, 16 were excluded due to poor study quality (i.e. did not meet the quality assessment threshold criteria). Therefore, 16 publications were reviewed.

Since none of the literature reviews provided ample detail or specific results, they were unable to be included in the review. However, they were summarised in the introduction in order to provide some background on the results of previous efforts to collate literature on this topic.

Description of studies in the review

The studies used were divided into three groups: Studies which found specific personality profiles in adolescent sex offenders (group 1; N=9), studies which found some or few less notable personality factors in adolescent sex offenders (group 2; N=5) and studies which found no distinct personality profiles for adolescent sex offenders (group 3; N=2). The mean quality score for group 1 was 16 out of 24 (66%), group 2 also scored 16 out of 24

(66%) and group 3 scored 15 out of 24 (64%) (the higher the score the higher the quality of the study). The mean number of unclear items for group 1 was 2.6, for group 2 it was 2 and for group 3 it was 3.3 (the lower the number of unclear items, the better the clarity and detail of the report). It is therefore clear that the studies were all of a similar standard and that this will not affect the overall findings, although the studies in group 3 were reported with slightly less clarity than the studies in group 1 and 2.

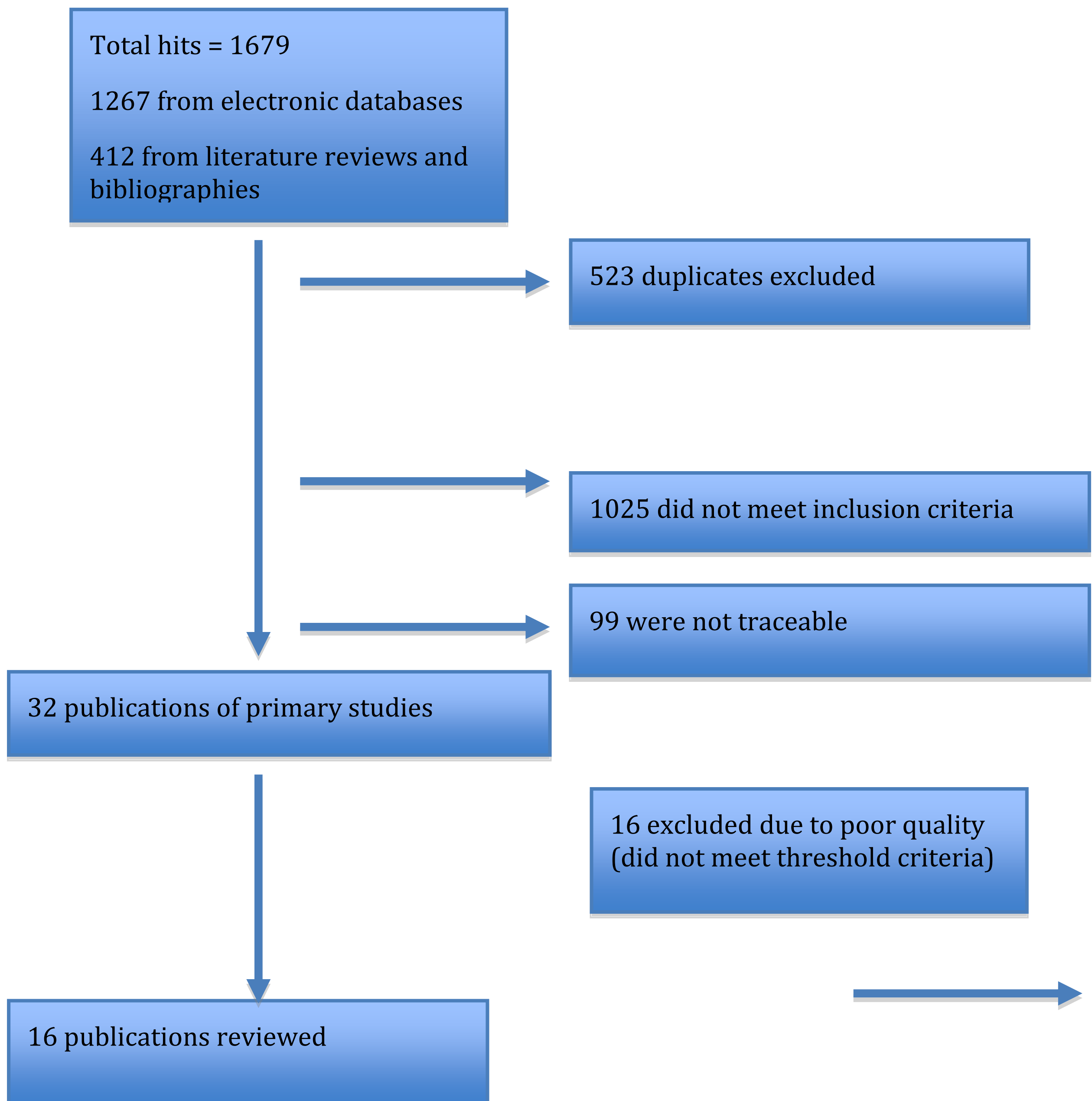

Figure 2. Search results and evaluation of primary studies.

Table 4

Studies which found specific personality profiles in adolescent sex offenders

	Participants	Inpatient or Outpatient	Definition of 'sex offender'	Assessment Tool	Comparison group (if applicable)	Results and Findings	Quality assessment (no. of unclear items)
Losada-Paisey (1998) USA	N=51. 21 Sex offenders and 30 non-sexual offenders. All male adolescents aged between 13 and 17. Mean age 15. All participants were committed to the department of Connecticut following committing their crime, they were recruited from here.	Inpatient	Legal definition.	Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A)	Adolescent male non-sexual offenders	A single discriminant function (Wilks Lambda=.64; F= 6.39, $p \leq .001$) was defined by four scales: hysteria, psychopathic deviate, psychasthenia and schizophrenia, it attained statistical significance. 77% of the control group and 71% of sex offenders could be correctly classified. In sex offenders, the most frequent elevations were 'mania', 'psychopathic deviate' & 'schizophrenia'.	20/24 (2/12)

						The current findings indicate that personality dimensions such as hysteria, anxiety disorders, antisocial personality and cognitive disorganisation differ in sex offender and non-sex offender juvenile populations.	
Worling (2001) USA and Canada	112 male adolescent sex offenders aged between 12-19. Mean age 15.59. Recruited during an assessment for a treatment programme	Outpatient	Convicted of or acknowledged an illegal sexual offence	California Psychological Inventory (CPI) (Gough, 1987)	Within group and offence type.	Four cluster groups were discovered: 1) Antisocial/ Impulsive N=43. Elevations on ‘antisocial’, ‘impulsive’ ‘anxious’, ‘unhappy’ & ‘rebellious’ 2) Unusual/ Isolated N=15. Elevations on ‘unusual’, ‘isolated’ ‘undependable’ & ‘confused’. 3) Over controlled/ Reserved. N=20. Elevated on ‘emotionally over controlled’, ‘responsible’, ‘reserved’ ‘reliable’, ‘suspicious of others’ & ‘rigid’.	18/24 (2/12)

						4) Confident/ Aggressive. N=19. Elevated on 'confident', 'self-centred', 'outgoing', 'aggressive', 'sociable', 'dependable', 'organised' & 'optimistic'. When groups 2 and 3 were compared to 1 and 4, it was found that they (2 and 3) were significantly more likely to assault interfamilial victims. However groups 1 and 4 were more likely to assault younger siblings in their family. Four-group typology is suggestive of differential etiological pathways and treatment needs.	
Herkov et al., (1996)	N=61 male adolescents aged between 12 and 18yrs, mean age 15.27. Including	Inpatient	American legal definition	MMPI-A (Luteijn & Kok, 1995)	Adolescent sex offenders and adolescent inpatient psychiatric	Sodomy subjects scored significantly higher than the rape and sexual abuser offenders and inpatients on scale 8	17/24 (3/12)

USA	22 sexual abusers, 19 rapists, 18 sodomists and 15 non-offending inpatients on a psychiatric unit. All recruited from a state youth offenders programme or an adolescent inpatient psychiatric unit.		unit.	(schizoid). The sodomy and inpatient groups, although not different from each other produced significantly higher elevations on scale 6 (Paranoia) than the sexual abuse group and the rape group, this is associated with increased anger and poor interpersonal ratings. Scale 4 (psychopathic deviate) occurred most often among the inpatients and sex abuser groups, this may also be associated with the frequency of the diagnosis of conduct disorder among the sample. May also reflect the impulsivity and disregard for societal standards of the sex abuser subjects.

						The sodomy and rape groups were more often associated with serious psychopathology than the adolescent psychiatric inpatients. The MMPI-A also proved useful in distinguishing among adolescent offender groups. The most prominent differences were observed between the sex abuser and sodomy subjects.	
Oxnam & Vess (2006) New Zealand	25 male adolescent sex offenders aged 13-17. Mean age is 15.8. Recruited from a community treatment group in New Zealand. All participants	Outpatient	Legal definition. The majority of participants had ‘hands-on’ offences	Millon Adolescent Clinical Inventory (Millon,1993)	Within group	Three groups were identified by cluster analysis: 1) Antisocial and externalising types (N=11). Elevations on ‘unruly’, ‘oppositional’, ‘family discord’, ‘delinquent predisposition’ & ‘impulsive	16/24 (1/12)

had committed a sexual offence		propensity' 2) Socially inadequate types (N=7). Elevations on 'introversive', 'inhibited', 'self-demeaning' 'self-devaluation', 'peer insecurity', 'depressive affect' & 'childhood abuse' 3) Normal (N=7) with no significant elevations. Also evidence that adolescent sex offenders display similar personality profiles to delinquent non-sexual offenders. Suggests potential different pathways and different treatment needs for adolescent sex offenders

Richardson et al., (2004) UK	112 adolescent sex offenders, male aged 13-19. Mean age 15.36. They had all been referred to an outpatient adolescent forensic mental health service between 1997-2000.	Outpatient	Unclear but participants were all referred for sexual offence specific assessment or treatment	Millon Adolescent Clinical Inventory (Millon, 1993)	Within group and offence type.	Five cluster groups were identified: 1) Normal N=28. No base rate over 75 or raised personality pattern scales. 10/28 offended against children. 2) Antisocial N=12. Elevations on 'social insensitivity' & 'family discord'. Mixed victim group. 3) Submissive N=11. Elevation on 'anxious feelings'. Mixed victim group. 4) Inhibited. Elevation on 'depressive	16/24 (3/12)

						affect'. 15/39 offended against children. 5) Dysthymic/ Negativistic. Elevations on 'self devaluation', 'family discord', 'substance abuse proneness', 'impulsive propensity' & 'depressive affect' 10/22 offended against adults.	
Burton (2008) USA	74 adjuncted sexual abusers and 53 nonsexual abusers. All male and under the age of 18, mean age= 17.84. Mixed ethnicities and	Inpatient	American legal definition.	MACI (Millon, 1993)	Adjuncted sexual abusers & Nonsexual abusers	The sexual abusers had concerning scores on 'unruly' and 'oppositional' whereas non-sexual abusers had concerning scores on 'dramatising' and 'unruly'. Using logistic regression to understand the contribution of	16/24 (2/12)

	SES. All recruited from a large residential facility, only those that could get consent from guardians could complete the assessments.					personality and victimisation, the researcher developed a model. The variables that contributed significantly to this model were ‘sexual abuse and ‘physical neglect’ from the CTQ and the ‘submissive’ and ‘forceful’ scales on the MACI. The final model successfully classified 75.61% of the youths, incorrectly classifying 19% of the nonsexual abusing youths and 30% of the sexually abusing youths.	
van Wijk et al., (2005) The Netherlands	The participants are split into two groups: 1) sex offenders (N=112) and 2) non-sex offenders (N=165). The sex offenders group was then split further into rapists/assaulters	Outpatient	Legal definition, same as adults.	Adolescent Temperament List (ATL) (Feij & Kuipers, 1984)	Sex offenders (rapists/ assaulters vs child molesters) & Non sex-offenders (violent offenders vs property	Violent offenders were significantly more extraverted and impulsive and had higher scores on lack of conscience than other offenders. Child molesters showed significantly higher	15/24 (3/12)

	(N=57, mean age 14.7) and child molesters (N= 55, mean age 14.4). The non sex-offenders was split into violent offenders (N=85, mean age 15.9) and property offenders (N=80, mean age 15.6). The participants were all recruited via the institute for forensic assessment (FOR A).				offenders)	scores on neuroticism. Sex offenders as a whole had higher scores on bad contact with peers and lower scores on extraversion and impulsiveness. Violent offenders appear to have the most problematic personality profiles.	
Hunter & Figueredo (2000)	N=235 all male and aged between 13 and 17. 55 adolescent child molesters	Outpatient	American legal definition	Attributional style questionnaire (ASQ; Seligman et al., 1979)	Adolescent child molesters with a history of sexual offending, adolescent	Adolescent child molesters were found to have more deficits in self-confidence, independence, assertiveness and self-	15/24 (3/12)

USA	with a history of sexual offending 72 adolescent child molesters without a history of sexual victimisation 28 adolescents with a history of sexual victimisation but no history of sexual perpetration. 40 adolescents with a history of emotional or behavioural maladjustment but no history of sexual victimisation or sexual perpetration. 40 adolescents without a history of sexual victimisation, sexual		Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979) Erikson Psychosocial Stage Inventory Scale (EPSI; Rosenthal et al., 1981)	child molesters without a history of sexual victimisation, adolescents with a history of sexual victimisation but no history of sexual perpetration, adolescents with a history of emotional or behavioural maladjustment but no history of sexual victimisation or sexual perpetration & adolescents without a history of sexual victimisation, sexual perpetration, or significant emotional or	satisfaction than non-perpetrating youths. They were also found to be more pessimistic and apt to self-blame in their explanation of the negative events that occur in their lives. There was no support that the sex offenders are more sexually maladjusted, psychosocially immature or narcissistically entitled and exploitative. They were no more less likely than other adolescents to have internal, stable and global attributions for the positive events that occur in their lives. Therefore, this sexual acting may be more reflective of compensatory behaviour than psychopathy and

	perpetration, or significant emotional or behavioural maladjustment. All participants categorised by file or information from parents. Sex offenders were referred from treatment centres.				behavioural maladjustment.	arrested sexual development and paraphiliac interest.	
Valliant & Bergerson (1997) Canada	N= 32. 13 non-offenders, 13 sex offenders & 16 general offenders. All male, aged between 16 and 18 and completing sentences in a YOI. Non-offenders were recruited from a local school and	Inpatient	Legal definition.	Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A)	Adolescent male non-sexual offenders and adolescent males with no convictions	There was a significant difference on the consistency scale (F= 3.90, p≤.05, eta²=17%). Tukey post hoc showed adolescent sex offenders were significantly elevated on the consistency scale in comparison to non-offenders. A significant difference was also noted on the	11/24 (5/12)

	had no convictions.		psychopathic deviate scale (F=3.09, p≤.05, n^2=29%) and Tukey post hocs showed that general offenders and sex offenders scored higher than non-offenders. There was a significant difference on the Paranoia scale (F=3.84, p≤.05, n^2=20%), a post hoc Tukey showed the adolescent general offender group scored higher than the non-offenders. A significant difference was also noted on the schizophrenia scale (F=3.09, p≤.05, n^2=14%), Tukey post hocs revealed that sex offenders scored higher than non-offenders.

Table 5

Studies which found some or few less notable personality factors in adolescent sex offenders

Authors (Year of Study) & Country	Participants	Inpatient or Outpatient	Definition of 'sex offender'	Assessment Tool	Comparison group (if applicable)	Results and Findings	Quality assessment (no. of unclear)
Jacobs et al., (1997) USA	N=156. 78 sex offenders, 78 non-sexual offenders. Aged between 13-18, all male incarcerated in a training school for male juvenile delinquents. Mixed ethnicity and mixed SES.	Inpatient	At least 'one third-degree felony'	Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A)	Adolescent male non-sexual offenders	Sexual offenders obtained higher mean f scale scores that non-sexual offenders (i.e. they endorsed more symptoms of psychopathology) No other significant statistical differences.	15/24 (2/12)
Bijleveld & Hendriks (2003)	N=99 male adolescents aged between 12 and 17, mean age of	Mixture	Dutch legal definition.	Adolescent Temperament List (ATL; Feij & Kuiper, 1984)	Solo offenders & Group offenders	The group offenders were found to have fairly average	19/24 (1/12)

The Netherlands	15. All juvenile sexual offenders registered for personality screening by judiciary. Split into two group 1) Solo offenders N=63 2) Group offenders 3) N=36		MMPI-A (Luteijn & Kok, 1995) and Amsterdam Biographical Questionnaire (ABV; Wilde, 1970; Van Dijl & Wilde, 1982)	scores and the solo offenders deviated negatively from this pattern. Solo offenders had significantly higher scores than the group offenders for neuroticism ($p \leq 0.01$), and impulsivity ($p \leq 0.02$) they also had significantly lower scores for sociability ($p \leq 0.03$). There were no significant differences found in the level of conscience between solo offenders and group offenders.

						However, group offenders did have significantly lower scores on sensation seeking.	
Freeman et al., (2005) USA	Adolescent male sex offenders (N=18) and non-sex offenders (N=18) aged between 11 and 18. Mean age was 14.89. Both the sex offenders and the non-sex offenders were recruited on a residential programme for delinquent youths and were matched on age, Axis 1 diagnosis and number of offences.	Inpatient	American legal definition.	MMPI-A (Luteijn & Kok, 1995)	Adolescent sex offenders & adolescents non-sexual delinquents.	Independent t-tests revealed no significant differences in the mean scores between the groups on validity and clinical scales. The mean score for 'psychopathic deviance' was in the clinical range for non-sexual offending delinquents but not for the adolescent sex offenders. Non-sex	15/24 (3/12)

						offenders were more likely to respond on the MMPI-A in a manner that indicates difficulties with externalising behaviour problems, moodiness and disrespect for authority. The mean number of elevated scales for the sex offending group was 1.72 which suggests that sex offending adolescents demonstrate more difficulties than normal children.	
Myers &	N= 14 Adolescent	Inpatient	American legal	Schedule for Nonadaptive	Within group.	Schizoid and schizotypal were	16/24

Monaco (1998) USA	males who have simultaneously committed sexual assault and homicide/ attempted homicide. Aged between 13 and 17 yrs, mean age 15.2 yrs. Participants were identified through state department of corrections file.		definition	and Adaptive Personality (SNAP; Clark, 1993)		the most common personality disturbances found in this group (each present in 38% of the group). Alongside these disturbances were factors such as: 'aloofness', 'disturbed interpersonal functioning', 'idiosyncratic thinking and a greater reliance on fantasy for fulfillment due to impairment in their capacity for relationships with others.	(2/12)
Van Wijk et al., (2007) The Netherlands	Male adolescent sex offenders (N= 30) and non-sexual offenders (N=368). All aged between 12 and 18yrs. All recruited at a	Inpatient	Dutch legal definition.	Adolescent Temperament List (ATL; Feij & Kuiper, 1984)	Adolescent sex offenders & Adolescent no-sexual offenders	Sex offenders scored significantly lower on disinhibition (non-conformist lifestyle, use of drugs and	15/24 (2/12)

	youth detention centre		alcohol, parties and a free sex moral (F=5.21, p=0.02). There is also a trend towards externalising problem behaviour in sex offenders. No other differences were found in terms of personality or in terms of psychiatric disorders (i.e. anxiety, affective, disruptive and psychotic behaviour).

Table 6

Studies which found no distinct personality profiles for adolescent sex offenders

Authors (Year of Study) & Country	Participants	Inpatient or Outpatient	Definition of 'sex offender'	Assessment Tool	Comparison group (if applicable)	Results and Findings	Quality assessment (no. of unclear)
Dalton et al., (2003) USA	2 groups of accused male sex offenders. Group one aged 12-14 N=59 Mean age 13.3. Group 2 aged 15-18 N=47 Mean age 15.8. Tests were administered during assessment phase of private clinics for sexual offender treatment	Outpatient	Little information other than accused sexual offenders who had applied for treatment programmes. According to the study, the majority had been accused of offending against a younger child.	Behaviour Assessment System for Children (BASC self report of personality) (Reynolds & Kamphaus, 1992)	The two age groups. 1 12-14yrs and 2 15-18 yrs.	The younger group scored significantly higher on the L scale (t-2.64, $p \leq .01$) meaning they were significantly more likely to answer in a socially desirable manner. However neither of these scores for the two groups was outside the normative standards in the manual.	13/24 (4/12)

						For the remaining items describing school, clinical and personal adjustment, the mean profiles for the two age groups are generally very similar to those described in the manual for normal (nonclinical) adolescents.	
Kennedy et al., (2004) USA	381 adolescent male sex offenders, mean age of 16.02yrs. All recruited at juvenile corrections centres.	Inpatient	Those who had committed a sexual third degree felony were included.	MACI (Millon, 1993)- looking in particular at those scales designed to tap into conduct disorder thinking and acting: 'unruly', 'oppositional', 'social insensitivity', 'delinquent predisposition' & 'impulsive	Within group.	Only three scales related to conduct-disordered behaviour had a mean base rate score of above 60: unruly (61.4), Social insensitivity (60.9) and delinquent predisposition (66.9) and only one index	17/24 (3/12)

		propensity'.	score: desirability (65.44), however, none of these were above 75, the minimum for clinical significance. The other scales were considerably below the cut off point for clinical significance.

Of the 16 studies included in the systematic review, 9 presented distinct personality profiles for adolescent sex offenders (group 1), 5 presented personality correlations and tendencies but no specific profiles (group 2) and 2 studies did not find any significant personality correlations or relationships (group 3). Table 7 displays information regarding the methodological considerations for the systematically reviewed studies.

Table 7

Methodological considerations for systematically reviewed studies of personality profiles of adolescent sex offenders (N=16)

	Group 1 (N=9)	Group 2 (N=5)	Group 3 (N=2
Large sample size (i.e., over 50)	Richardson et al., (2004)	Jacobs et al., (1997)	Dalton et al., (2003)
	Worling (2001)	Bijleveld & Hendriks (2003)	Kennedy et al., (2004)
	Losada-Paisey (1998)		
	van Wijk et al., (2005)		
	Burton (2008)		
	Hunter & Figueredo (2000)		
	Herkov et al., (1996)		
Comparison/ control group used	Herkov et al., (1996)	Jacobs et al., (1997)	
	Losada-Paisey (1998)	Bijleveld & Hendriks (2003)	
	Valliant & Bergerson (1997)	Freeman et al., (2005)	
	van Wijk et al.,	Van Wijk et al.,	

	(2005) Burton (2008) Hunter & Figueredo (2000)	(2007)	
Inpatient sample	Losada-Paisey (1998) Valliant & Bergerson (1997) Burton (2008) Herkov et al., (1996)	Jacobs et al., (1997) Freeman et al., (2005) Myers & Monaco (1998) Van Wijk et al., (2007) Bijleveld & Hendriks (2003) (Both)	Kennedy et al., (2004)
Outpatient sample	Oxnam & Vess (2006) Richardson et al., (2004) Worling (2001) van Wijk et al., (2005) Hunter & Figueredo (2000)	Bijleveld & Hendriks (2003) (Both)	Dalton et al., (2003)

Discussion

The current systematic review aimed to answer the following questions:

1) *Is there a personality profile typical to adolescent sex offenders?*

Several studies present personality types discovered for adolescent sex offenders and there appear to be similarities between these findings. Oxnam and Vess (2006) present three personality groups identified in their study: antisocial, socially

inadequate and normal. Richardson et al. (2004) report similar findings with offenders falling into one of five personality profiles: antisocial, submissive, inhibited, dysthymic/ negativistic and normal. Likewise, Worling (2001) discovered that adolescent sex offenders fell into one of four categories: antisocial/ impulsive, unusual/ isolate, over controlled/ reserved and confident/ aggressive. These three studies looked purely at adolescent sex offenders, applying the norms set by the assessment tools as a comparison group. It is clear that there are similar factors arising in each of the studies, for example, antisocial, submissive and inhibited traits seem to emerge in each of the studies. However, it is important to note that none of the studies have discovered one typical profile for adolescent sex offenders; in fact, the majority of studies determine four or five cluster groups of personality factors which have a propensity for arising simultaneously. However, these clusters may be useful in determining what treatment pathways would be most applicable to which styles of personality.

It is also important to note that two out of the sixteen studies were unable to find any significant personality differences between adolescent sex offenders and the assessment tool norms. Dalton et al., (2003) looked particularly at two different age groups of adolescent sex offenders and found that neither of the scores for the two groups were outside the normative standards in the manual and that for the remaining items describing school, clinical and personal adjustment, the mean profiles for the two age groups are generally very similar to those described in the manual for normal (nonclinical) adolescents. Furthermore, Kennedy et al., (2004), with a large sample of 381 adolescent sex offenders discovered that only three scales related to conduct-disordered behaviour had a mean base rate score of above 60: unruly (61.4), Social insensitivity (60.9) and delinquent predisposition (66.9) and only one index score:

desirability (65.44), however, none of these were above 75, the minimum for clinical significance and the other scales were considerably below the cut off point for clinical significance.

2) *Are different personality types/characteristics evident in inpatient and outpatient samples?*

According to previous studies there is a possible relationship between personality profile and an inpatient or an outpatient status (Becker, 1998). The studies within this systematic review examining an inpatient sample appear to discover more psychopathic and clinical tendencies than the outpatient samples, for example, Losada-Paisey (1998) found the highest mean scores to be in 'hysteria', 'psychopathic deviate', 'psychasthenia' and 'schizophrenia'. This is also endorsed by Valliant and Bergerson (1997) who report that inpatient adolescent sex offenders score clinically high on 'paranoia', 'psychopathic deviate' 'paranoia' and 'schizophrenia'. Herkov et al., (1996) similarly found clinical elevations on 'paranoia' and 'psychopathic deviate'. Jacobs et al., (1997) found that inpatient sex offenders endorsed more symptoms of psychopathology. In contrast, Freeman et al., (2005) present that non-sex offenders actually score higher than inpatient sex offenders on the psychopathy scale but that sex offenders do demonstrate more difficulties than normal children. The majority of inpatient sample studies present some clinical difficulties, the most common being psychopathy, schizoid, difficulty externalising behaviour and disturbed interpersonal functioning, being the most frequently reported generally.

In terms of outpatient samples, Oxnam and Vess (2006) report that adolescent sex offenders treated in the community score high on 'antisocial' and 'socially inadequate' scales but that many profiles are close to 'normal'. This finding is

supported by Richardson et al. (2004) who found similar elevations alongside elevations on 'submissive', 'inhibited' and 'dysthymic/ negativistic' traits. Worling (2001) also presented outpatient profiles as being one of four types; 'antisocial/ impulsive', 'unusual/ isolative', 'overcontrolled/ reserved' or 'confident/ aggressive'. Hunter and Figueredo (2000) report that outpatient sexual offenders are not found to be sexually maladjusted, psychosocially immature or narcissistically entitled and alongside such findings there appears to be no evidence for psychopathy within this sample.

Such findings clearly suggest that inpatient samples of adolescent sex offenders have more clinical difficulties, present with more psychopathic traits and are less socially adjusted and able (Hunter & Figueredo, 2000). However, this can be explained by reasons other than situation. For example, inpatients are more likely to have committed more serious offences which could explain the severity in social deficiencies and clinical problems. It is also likely that those in community placements are receiving therapeutic input which can explain lower score on psychopathic and clinical traits. However, it may also suggest (with further research) that community based treatment programmes are more successful than inpatient facilities for working with adolescent sex offenders.

3) *Do personality profiles differ depending on the type of crime committed?*

Several studies have looked in detail at the differences in personality profiles of adolescent sex offenders according to the crime committed. Comparisons between studies can be difficult due to differing or a lack of definitions, therefore notable differences should be viewed with interest rather than as solid evidence. The studies in this systematic review find few differences between offence types, however 'child

molesters' appear to be distinctive due to recurring similar findings. For example, Richardson et al. (2004) report that those with a normal or an 'inhibited/ depressive' personality profile are more likely to abuse children whereas those offenders with a 'dysthymic/ negativistic' personality profile are more likely to offend against adults. Correspondingly, Worling (2001) describes that 'unusual/ isolated' and 'over-controlled/ reserved' personality styles are more likely to offend against intra-familial victims although those offenders with 'antisocial/impulsive' and 'confident/ aggressive' personalities are more likely to offend against younger victims. Van Wijk et al. (2005) add to the debate by reporting that child molesters scored significantly higher on neuroticism. Hunter and Figueredo (2000) explain that the child molester sample within their study have noted deficits on self-confidence, independence, assertiveness and self-satisfaction and are more likely to be pessimistic and prone to self-blame.

Bijleveld and Hendriks (2003) looked in particular at possible differences between solo offenders and group offenders. They discovered that solo offenders scored higher on neuroticism, impulsivity and sensation seeking but had lower scores than the group offenders on sociability. Herkov et al., (1996) ascertained that offenders who committed sodomy scored significantly higher on the schizoid and paranoia scales. Those who commit sexual abuse scored higher on 'psychopathic deviate' but those who had committed sodomy or rape were most often found to score highly on 'serious psychopathy'. As previously mentioned, although these findings are interesting and there seems to be some similarities in terms of personality traits of child molesters in particular, it is important to bear in mind that these studies may well regard 'child molester' in different senses, for example we are unclear as to whether this means intra-familial or extra-familial and the extent, repetitiveness and

brutality of the offences. Such details may have important influences on the results and data sets of such studies and therefore require important consideration.

4) *Is there a noted personality difference between sex offenders and non-sex offenders within the same age range?*

Within the studies identified in this systematic review, there are many differences noted between adolescent sex offenders and adolescent non-sex offenders, however it is important to note that between studies the comparison group may vary from a sample of violent offenders, property offenders or adolescents who have no offending history. Losada-Paisey (1998) reports that sex offender groups score significantly higher on 'hysteria', 'psychopathic deviate', 'psychasthenia' and 'schizophrenia' and that this profile has the ability to classify sex offenders 71% of the time. Similarly, Valliant and Bergerson (1997) found that offenders scored significantly higher on 'psychopathic deviate' and the 'schizophrenia' scale than non-offenders, this is also supported by Jacobs et al., (1997). However, Hunter and Figueredo (2000) report that they found no evidence to support that sex offenders score higher on 'sexually maladjusted', 'psychosocially immature' or 'narcissism' and therefore suggest that sex offenders are more likely to be psychopathic. In fact, Freeman et al., (2005) report that non-sex offenders score clinically high on 'psychopathic deviate' whilst the sex-offenders in their sample do not.

In other areas, Van Wijk et al., (2005) discovered that violent offenders were more extraverted, impulsive and had higher scores on 'lack of conscience' than property and sex offenders, however sex offenders were found to score higher on 'bad contact with peers' and lower on extraversion and impulsiveness. On the whole there appears to be a large number of studies reporting adolescent sex-offenders as having

more clinical elevations and social difficulties, but there also seems to be evidence that such difficulties are masked in antisocial and inhibited youths. On the other hand violent offenders are reported to have the most difficult personality types however this is often more obvious and perhaps measurable in terms of ‘disrespect’ and ‘extraversion’.

Limitations

It should be noted that systematic reviews are prone to biases, and in particular publication bias, since the articles utilised are generally the most accessible. This bias was increased by placing a date restriction within the inclusion criteria resulting in several significant articles being unavailable and therefore omitted. This resulted in a less systematic approach where not all available articles were quality assessed. This was further emphasised by only searching for articles written in English, however, the articles used do originate from around the world.

The majority of other limitations were methodological issues, for example, studies tend to categorise adolescent sex offenders homogeneously without looking in detail at the specific offence that they have committed but rather treating them as one group e.g. rapists. The studies that have considered different groups of offenders based on their offence have often noted a marked difference between groups, in particular, those that are child molesters. Future research in this field needs to be mindful of these differences and avoid treating adolescent sex offenders homogeneously. Similarly, there have been noted variances in personality profiles between young adolescent sex offenders and those who are slightly older. For example, one would expect a development in personality between the age of 13 and

19 yet offenders of these ages are often placed in the same sample. Furthermore, there is also a difference in personality types between offenders who offend alone or those that offend in a group. Therefore it is important that samples of adolescent sex offenders be treated with care and these methodological issues addressed.

A further methodological issue is the definitions used to describe a sex offender. Often studies do not define what a sex offender is but rather state from where the sample was recruited. Although this is useful in terms of the sample's legal status as sex offenders it is unable to enlighten us with what kind of offences we are studying and their severity. One problem is that it can be difficult to classify an offender, particularly if they have a history of non-sexual offending and one sexual offence, therefore samples can vary dramatically between studies. Comparison groups and control groups can also vary from study to study with some being violent offenders and others being property offenders, for example. Additionally, studies rarely inform us of the stage of treatment and rehabilitation that the sample is at which is vital in order to understand a sample fully.

Finally, a major methodological issue when writing a systematic review is the comparability of assessment tools and in the case of personality there is a vast variety of tools each used for measuring similar concepts but in different ways. This makes them very difficult to compare statistically and consequently it is only possible to report similarities and discrepancies rather than numerical information. It is also important to note that there are often large methodological differences among studies and that there are very few longitudinal studies which means we are unsure if the results change over time.

Recommendations for future research

There is a definite requirement for more research to be done in this area. However, this research does need to be more specific than previous studies. For example, future research should pay particular attention to different offence types and the demographic and historical factors associated with each individual offender. There is an explicit need for more longitudinal and controlled studies in order to investigate treatment impact, risk and recidivism rates.

Once more specific evidence is collected it may be useful not only to apply this to treatment strategies but also to prevention work. Furthermore, it would be worthwhile examining standardised assessment tools and comparing them in terms of their applicability and comparability when used with adolescent sex offenders.

Conclusion and Implications for Practice

Examining the evidence presented here, it is clear that there are some specific personality profiles and typologies of adolescent sex offenders. However, due to vast methodological differences between studies it is inadvisable to rely on the specific findings of this systematic review. Nevertheless we can hope that future research will identify detailed personality profiles which will be beneficial in terms of the progression and development of adolescent sex offender treatment programmes. These profiles will help to inform the assessment, treatment and risk and recidivism rates for adolescent sex offending. In particular, these studies identify the diversity of adolescent sex offenders as a group and their wide range of characteristics including different types of offending behaviours, social and interpersonal skills, sexual

knowledge, cognitive functioning and personality profiles. An awareness of this variety of factors will help to advise professionals regarding a more individualised and holistic approach to treatment. This may help target specific and developmentally oriented difficulties and allow for more positive treatment results.

This review provides support for personality-based typologies and their utility within the field of assessment and treatment of adolescent sex offenders. Furthermore it encourages the use of personality-based typologies alongside investigations into more detailed developmental factors. This has been important in informing the empirical research study (Chapter 3) with an evidence-base and providing guidance regarding future research. In particular, this systematic literature encourages future research, such as that in Chapter 3, which attempts to address the methodological limitations outlined in previous studies, but also uses some similar measures and methodologies as previous studies in order that the results can be comparable. Prior to the empirical investigation though, in Chapter 2, the MACI, a measure used in several of the studies reviewed here (Oxnam & Vess, 2006; Worling, 2001) will be critiqued to examine its utility in research and practice.

CHAPTER 2

A Critique of a Psychometric Measure:

The Millon Adolescent Clinical Inventory (MACI, Millon, 1993)

Abstract

The aim of this chapter was to critically evaluate the Millon Adolescent Clinical Inventory (MACI, Millon, 1993). The MACI is frequently used by professionals and was specifically designed to identify and assess a wide range of psychological difficulties within the adolescent population. During the development of the MACI, Millon (1993) attempted to keep the tool's scales parallel to the axes of the DSM criteria in order to help inform professionals of existing psychological difficulties. The MACI is a self-report measure which consists of 31 scales assessed across three domains: Personality Patterns, Expressed Concerns and Clinical Syndromes which encompass twelve personality scales, eight expressed concerns scales, seven clinical syndrome scales, three modifying scales and a 2-item validity scale which identifies invalid test responses. According to McCann (1997), the MACI can be useful in many settings to evaluate the psychological status of adolescents and has been used in several studies with adolescent sex offenders (e.g., Oxnam & Vess, 2006).

The reliability of the MACI is reported to be good with alpha coefficients ranging from 0.73 to 0.91 on internal consistency. The test-retest stability is good over a 3-7 day period with stability coefficients ranging from 0.63 to 0.92, however a limitation of the MACI is the lack of research regarding stability over months or years. With regards to validity, correlations with other measures were generally supportive of the MACI. However, there were some more questionable relationships. For example, the Anxious Feelings Scale on the MACI did not correlate with the Beck Anxiety Scale (Beck & Steer, 1990) which raises concerns over the concurrent validity of this scale.

Overall, the MACI shows good reliability and validity across the majority of its scales. However there is a need for independent research to investigate its reliability and validity over different settings, ethnicities and across time periods as the validity and reliability data currently provided in the manual are not independent and are tested on limited samples. One further warning when using the MACI is the requirement for professionals to understand the theoretical underpinnings of the assessment in order to apply the results responsibly and usefully. For example, the MACI should not be used as a diagnostic tool but rather as part of the holistic investigation/assessment process. Finally, a major limitation of the MACI is the absence of scales measuring psychopathology and severe character disturbances which mean it may need to be supplemented with further assessment tools.

Introduction

Purpose and Background Information

In order to provide suitable treatment and management of adolescents, it is vital to gain a detailed understanding of their mental health. According to Teplin, Abram, McClelland, Dulcan and Mericle (2002), there is a prevalence of mental health problems among adolescents in the justice and care systems. In order to accurately measure and understand these difficulties, clinicians have been attempting to create specifically devised assessment tools. The Millon Adolescent Clinical Inventory (MACI; Millon, Millon & Davis, 1993) was specifically designed to identify and assess a wide range of psychological difficulties within the adolescent population.

Prior to the creation of the MACI, Millon's theories and discussions regarding personality and psychopathology had initially been outlined in his books Modern Psychopathology (Millon, 1969), Disorders of Personality (Millon, 1981) and Toward a New Personology (Millon, 1990). The explanations within these books were largely based on a biosocial learning theory, this being the idea that our biophysical make-up and our personal experiences co-exist to determine our individual personality styles and, in turn, how we relate to the world around us (Choca, 1999). Millon (1993) described personality as adhering to a combination of three bi-polarities: a) pleasure-pain b) active-passive c) self-other. He also proposed five styles of interpersonal engagement; detached, dependent, independent, ambivalent or discordant and that these were approached either actively or passively. Those who were more active would attempt to change their environment to suit their needs whereas passive individuals would be more likely to accept and adjust themselves to their

environment. Figure 3 demonstrates the ten personality prototypes proposed by Millon in 1969.

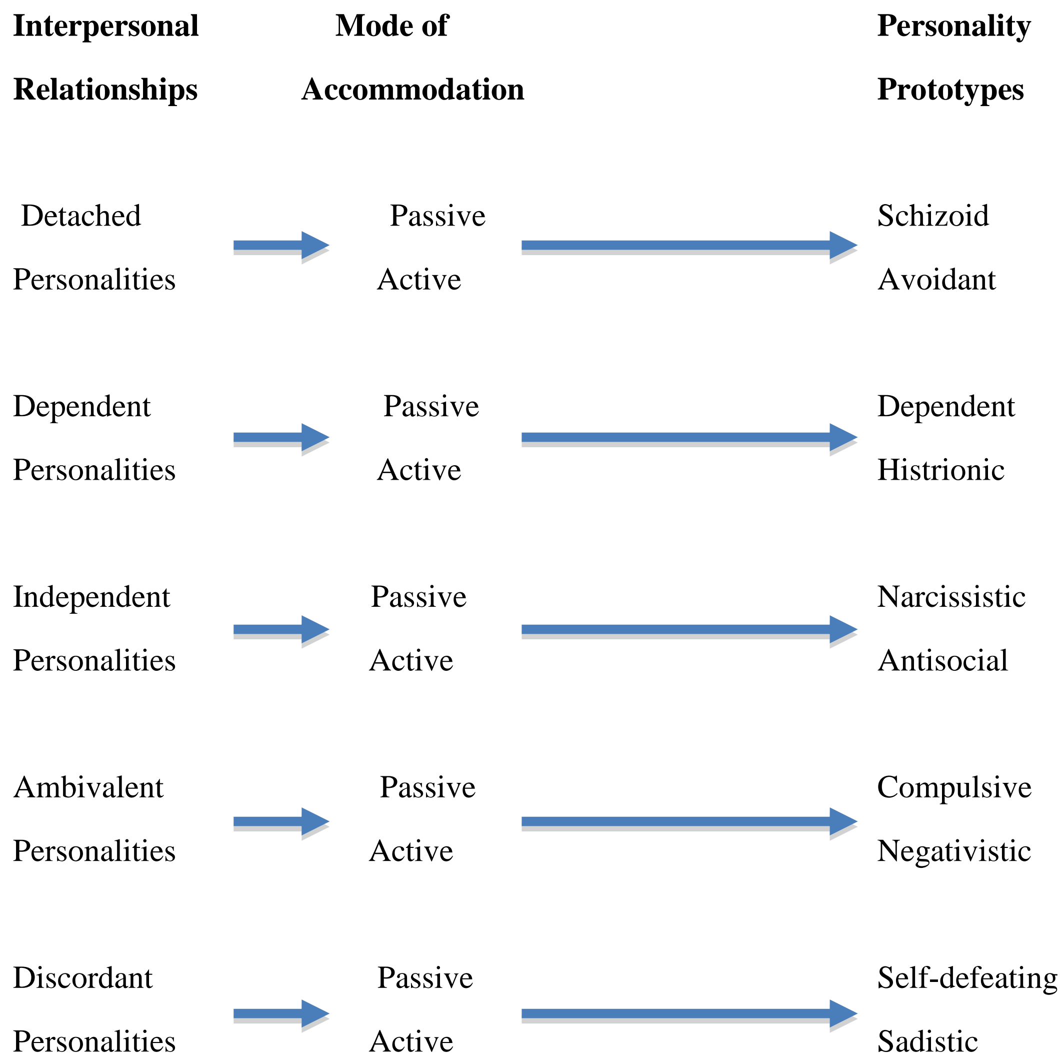

Figure 3. Millon's (1969) Personality Prototypes

Millon (1969) described that the combination of these various domains create personality patterns which have formed the foundation of the MACI assessment. In particular, Millon (1969) devised a classification system which includes groups of

disorders: personality disorder (e.g. avoidant, narcissistic, dependent), symptom disorder (e.g. anxiety, psychotic disorders) and pathological behaviour reactions. He also described that one must take into account the severity of the symptomatology (mild, borderline, marked, profound) and that as they become more acute they also become less distinct, with the final stage being complete personality dysfunction (Guevara & Strack, 1998).

Throughout the development of the MACI, Millon attempted to keep the tool's scales parallel to the axes of the DSM criteria. At points this led to Millon widening his theories in order to incorporate new scales. Currently the MACI remains in line with the DSM-IV (APA, 1994) as it measures clinical syndromes similar to Axis 1 diagnostic concerns and the more stable personality traits similar to those of Axis 2.

The MACI

The MACI (Millon, Millon & Davis, 1993) is a self-report assessment instrument designed to evaluate adolescent personality characteristics and clinical syndromes (McCann, 1997; Millon, 1993; Millon & Davis, 1993). This assessment tool was the replacement for the MAPI (Millon Adolescent Personality Inventory, 1982) which was divided into two scales: the MAPI-C(linical) and the MAPI-G(uidance). The MAPI-C section was created in order to help clinicians assess adolescents displaying emotional and behavioural difficulties whilst the MAPI-G was designed to identify adolescents who may require extra attention whilst in a school setting. However, it was deemed that the MAPI could be improved in several ways and the MACI was developed.

The MACI aimed to address some of the weaknesses which were identified in the MAPI such as broadening its clinical scope, strengthening it in terms of its connections with current theory and also to bring it closer in line to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; APA, 1994) classification system (McCann, 1997; Millon, 1993). The MACI is a 160-item self-report measure inventory which uses a true-false format. It consists of 31 scales assessed across three domains: Personality Patterns, Expressed Concerns and Clinical Syndromes which encompass twelve personality scales, eight expressed concerns scales, seven clinical syndrome scales, three modifying scales and a 2-item validity scale which identifies invalid test responses. The Personality Patterns scales consist of: 1) Introversive, 2A) Inhibited, 2B) Doleful, 3) Submissive, 4) Dramatising, 5) Egotistic, 6A) Unruly, 6B) Forceful, 7) Conforming, 8A) Oppositional, 8B) Self-Demeaning and 9) Borderline Tendency. The Expressed Concerns scales consist of: A) Identity Diffusion B) Self-Devaluation, C) Body Disapproval, D) Sexual Discomfort, E) Peer Insecurity, F) Social Insensitivity, G) Family Discord, H) Childhood Abuse. The Clinical Syndrome scales consist of: AA) Eating Dysfunctions, BB) Substance-Abuse Proneness, CC) Delinquent Predispositions, DD) Impulsive Propensity, EE) Anxious Feelings, FF) Depressive Affect and GG) Suicidal Tendency. Finally the three Modifying Indices, X) Disclosure, Y) Desirability and Z) Debasement are used both to understand the response tendencies of the adolescent and to allow for base rate adjustments if necessary. Whereas raw scores are the sum of selected items, base rates are the adjustments added to the raw scores in order to control for varying numbers of scale items and item overlap. More details of the scales can be found in Table 8.

Table 8

MACI Scales and Scale Descriptions

Scale	Name	Description and Number of Items
X	*Disclosure*	Assesses how open and self-revealing a client is when responding. (160 Items).
Y	*Desirability*	Assesses how desirable the client tries to appear in their responding tendencies (17 Items).
Z	*Debasement*	Assesses how much clients exaggerate their difficulties (16 Items).
VV	*Reliability*	Assesses for random responding and reliability of responses (2 Items).
1	*Introversive*	Measures indifference and lacking capacity to experience life as pleasurable or painful (44 Items).
2A	*Inhibited*	Measures shyness and those that are not comfortable in the company of others (37 Items).
2B	*Doleful*	Measures dejectedness and gloomy moods (24 Items).
3	*Submissive*	Measures lack of assertiveness and inability of assuming a leadership role (48 Items).
4	*Dramatising*	Measures talkative, charming and emotional expression (41 Items).
5	*Egotistic*	Self-centred, confident and narcissistic (39 Items).
6A	*Unruly*	Measures anti-social behaviour (39 Items).
6B	*Forceful*	Strong-willed, “tough-minded” and domineering (22 Items).
7	*Conforming*	Measures how conforming, respectful and rule-conscious individuals are (39 Items).
8A	*Oppositional*	Measures how irritable, unhappy and passive-aggressive individuals are (43 Items).
8B	*Self-Demeaning*	Inability to accept help and content to suffer (44 Items).
9	*Borderline Tendency*	Measures individual’s instability in affect, relationships and self-concept (21 Items).
A	*Identity Diffusion*	Assesses confusion of identity and their personal goals (32 Items).
B	*Self-Devaluation*	Measures low self-esteem and dissatisfaction with self-image (38 Items).
C	*Body Disapproval*	Dissatisfaction with body (17 Items).
D	*Sexual Discomfort*	Measures confusion regarding sexual thoughts and feelings (37 Items).
E	*Peer Insecurity*	Measures sadness or concern about rejection from peers (19 Items).
F	*Social Insensitivity*	Measures a lack of concern for others and a perceived to right for personal gain (39 Items).
G	*Family Discord*	Measures a lack of support from family members

		and detachment from parents (28 Items).
H	*Childhood Abuse*	Measures the extent of childhood abuse from others (28 Items).
AA	*Eating Dysfunctions*	Measures levels of anorexia or bulimia (20 Items).
BB	*Substance Abuse*	Measures frequency of alcohol or drug abuse (35 Items).
CC	*Delinquent Predisposition*	Measures inclination to break law or violate rights of others (34 Items).
DD	*Impulsive Propensity*	Measures poor control over impulses (24 Items).
EE	*Anxious Feelings*	Measures level of anxiety experienced by individuals (42 Items).
FF	*Depressive Affect*	Measures levels of depression in adolescents (33 Items).
GG	*Suicidal Tendency*	Those who have suicidal thoughts and plans (25 Items).

According to McCann (1997), the MACI can be used in several settings to evaluate the psychological status of adolescents, such as: inpatient and outpatient mental health clinics, residential treatment centres, correctional facilities and educational institutions. It is noted by clinicians working in these environments that adolescents can find it difficult to accurately report their difficulties verbally and a paper measure can often serve as a less confronting method of gaining important information from these youths. This measure not only aids clinicians in identifying existing difficulties and possible behaviours, it can also inform them regarding the management and treatment of these youths (Salekin, Lestico, Schrum & Mullins, 2005).

Critique of the MACI

The MACI will now be critiqued in terms of reliability and validity.

Reliability

Reliability is the consistency of a measurement, or the degree to which an instrument measures the same each time it is used under the same condition with the same participants. In short, it is the repeatability of your measurement. A measure is considered reliable if a person scores similarly on the same test more than once. It is important to remember that reliability is not measured, it is estimated, in that sources of error may occur particularly regarding certain measures of the MACI which are expected to alter over time and across situations.

Internal consistency

Millon (1993) investigated the internal consistency of the MACI scales by means of the Cronbach's alpha coefficient on two samples. The alpha coefficient was conceived by Cronbach (1951) and is equivalent to splitting the data in two, in every possible direction and taking an average of each of the correlation coefficients (Field, 2005). According to Kline (1999), an acceptable Cronbach alpha value is 0.7 to 0.8. However, it is important to note the number of items on the psychometric test and whether the assessment is uni-dimensional (Cortina, 1993) as this can affect the reliability of the alpha coefficient. The MACI assessment has 160 items on the scale, which suggests that in order to present with true internal reliability, it should have an alpha coefficient of 0.8 or above when looking at the full test (Cortina, 1993), however as there are a large number of items on the MACI a score of 0.7 value should suffice. Furthermore, the MACI is not a uni-dimensional scale and therefore the alpha coefficient value can be used as a measure of the internal reliability of the MACI.

Table 9 demonstrates the internal consistency alpha coefficients for each scale, which are reported in the MACI manual. The coefficient values range from 0.73 on the ‘Sexual Discomfort’ scale to 0.91 on the ‘Self-devaluation’ scale, the remainder are above 0.7 with the majority above 0.8. This suggests that the MACI has good internal consistency although perhaps one should remain somewhat cautious of those scales with the lower coefficient values. McCann (1997) draws attention to the fact that this high level of internal consistency was also achieved on a cross-validation sample and this further demonstrates the reliability of the MACI as a measure of adolescent personality and psychological difficulties.

Table 9

MACI Internal Consistency and Test Re-test Alpha Coefficients

Scale (No. of items)	**Internal Consistency Alpha Coefficient**	**Test Re-test Alpha Coefficient**
Personality Patterns		
1- Introversive (44)	0.83	0.63
2A- Inhibited (37)	0.86	0.70
2B- Doleful (24)	0.86	0.83
3- Submissive (48)	0.74	0.88
4- Dramatising (41)	0.82	0.70
5- Egotistic (39)	0.80	0.82
6A- Unruly (39)	0.84	0.79
6B- Forceful (22)	0.83	0.85
7- Conforming (39)	0.86	0.91
8A- Oppositional (43)	0.85	0.76
8B- Self-demeaning (44)	0.90	0.88

9- Borderline Tendency (21)	0.86	0.92
Expressed Concerns		
A- Identity Diffusion (32)	0.79	0.77
B- Self-devaluation (38)	0.91	0.85
C- Body Disapproval (17)	0.85	0.89
D- Sexual Discomfort (37)	0.73	0.74
E- Peer Insecurity (19)	0.75	0.57
F- Social Insensitivity (39)	0.79	0.83
G- Family Discord (28)	0.79	0.89
H- Childhood Abuse (24)	0.83	0.81
Clinical Syndromes		
AA- Eating Dysfunctions (20)	0.86	0.78
BB- Substance-abuse Proneness (35)	0.89	0.90
CC- Delinquent Predisposition (34)	0.77	0.80
DD- Impulsive Propensity (24)	0.79	0.78
EE- Anxious Feelings (42)	0.75	0.85
FF- Depressive Affect (33)	0.89	0.81
GG- Suicidal Tendency (25)	0.87	0.91

Test-retest reliability.

Test-retest reliability is the ability of a measure to gain similar scores over time, therefore assessing the stability of the test. It should therefore be noted that this measure of reliability may not be appropriate to measure those constructs which are recognised as stable over time (e.g. personality traits) and those which are situational (e.g. anxiety). The MACI manual describes in detail the test-retest reliability of the MACI. This was analysed on a sample of 47 adolescents from the original

development and cross-validation samples. Table 9 summarises the scores which were measured over three to seven days and range from 0.57 on the ‘Peer Insecurity’ scale to 0.92 on the ‘Borderline Tendency’ scale. McCann (1997) reports that the average score for the Personality Patterns scales is ‘a very respectable 0.81, while the average stability coefficients for the eight Expressed Concerns scales at 0.79 and the seven Clinical Syndromes scales at 0.83 are also very high’ (p.42). The Disclosure, Desirability and Debasement scales have stability coefficients of 0.86, 0.71 and 0.84, respectively.

These test-retest results indicate that the MACI is reliable over a short period of time, both with the stable factors and the more changeable scales. However, it is important to note that there is very little research conducted into the long-term test-retest reliability of the MACI. This area is in need of further research as the scores from the MACI assessments are often described in reports for adolescents which are often used for a time period well beyond seven days. There is little research to inform us of the reliability of using the MACI beyond this point as it has only been tested after 3-7 day retest period and consequently it is not clear how accurate the scale scores remain after years or even months. However, it should also be borne in mind that the clinical syndromes scales are situation-based items and are likely to oscillate over time (Strack, 1999). They should therefore be interpreted in accordance with the situation at that particular time period and that a test-retest reliability investigation may not be expected to be completely reliable given these expected oscillations.

Validity

Validity is the measurement of the strength of our conclusions, inferences or propositions. In other words, it investigates whether we are accurately measuring the construct that we are aiming to assess (Cook & Campbell, 1979). There are four commonly examined types of validity: concurrent, predictive, content and construct. Unfortunately there is no research available with regards to the predictive validity of the MACI and consequently this will not be discussed.

Concurrent validity

Concurrent validity assesses whether a test is valid in relation to other similar validated tests. Millon (1993) used five tests which measured similar constructs to several scales on the MACI, they are: the Beck Depression Inventory (BDI; Beck & Steer, 1987), Beck Hopelessness Scale (BHS; Beck & Steer, 1988), Beck Anxiety Inventory (BAI; Beck & Steer, 1990), Eating Disorder Inventory- 2 (EDI-2: Garner, 1991), the Problem Orientated Screening Inventory for Teenagers (POSIT; National Institute on Drug Abuse, 1991) and clinical judgement.

As would be expected, Scale 1 (Introversive) correlated with the Ineffectiveness (0.54) and Social Insecurity (0.49) subscales of the EDI-2 (Millon, 1993). It also correlates with the BDI (0.46) and the BHS (0.42) suggesting that it can be associated with depressive symptomatology. However surprisingly it did not correlate significantly with clinical judgements of introversive personality traits (Millon, 1993). These results inform us that the concurrent validity of this scale is acceptable, although it is questionable as to whether it is measuring the same traits as assessed by clinicians with regards to ‘introversion’.

Scale 2A (Inhibited) was significantly correlated with the Ineffectiveness subscale (0.41) of the EDI-2 but unexpectedly only minimally correlated with the BDI (0.21), BHS (0.19) or the BAI (0.08). However it has one of the stronger correlations with the clinician's rating of an inhibited personality profile (Millon, 1993). This suggests that the concurrent validity of this scale is somewhat questionable given that Scale 1 correlates with both the BDI and the BHS. As the individuals with elevated scores on this scale are described as being extremely sensitive to rejection and humiliation which causes difficulties in their ability to enjoy life and to experience pleasure (McCann, 1999), one might expect significant correlations between this scale and the BAI and BDI.

As expected, the Doleful Scale (2B) has modest correlations with the Mental Health concerns subscale (0.47) of the POSIT, two scales on the EDI-2 (Body Dissatisfaction and Ineffectiveness), the BDI (0.58) and the BHI (0.54). According to McCann (1997), these correlations indicate that this scale appears to measure long-standing depression and hopelessness rather than temporary states. These correlations suggest that this scale might be a valid tool for accurately assessing adolescents with a 'doleful' presentation who may also be suffering from depressive affect.

Scale 3 (Submissive) did not correlate significantly with the clinician's judgements of submissive personality traits, however, this scale was moderately supported by significant correlations with the maturity fears subscale (0.52) of the EDI-2 and a negative relationship with the family relations subscale (-0.44) of the POSIT. Individuals with elevated scores on the submissive scale are likely to be passive and submissive in interpersonal relationships which may result in their avoidance of social participation particularly with peers. Consequently these adolescents tend to be clingy and family relationships may be enmeshed and

dependent. It is therefore understandable why there are correlations with the maturity fears and family relations subscales and this supports the concurrent validity of this scale.

Scale 4 (Dramatising) had significant correlations with the clinician's judgements (0.15) and also had modest negative correlations with the Ineffectiveness (-0.54), Interpersonal Distrust (-0.41) and Social Insecurity (-0.47) subscales of the EDI-2. Individuals with elevations on this scale are described as sociable and needing a lot of stimulation in their lives. It is important for them to have numerous friendships, they may have a strong desire to be the centre of attention and they may also partake in frequent risk-taking or sensation-seeking behaviour (McCann, 1999). The negative correlations with interpersonal distrust, social insecurity and ineffectiveness therefore offer support for the concurrent validity of this scale.

Scale 5 (Egotistic) has modest significant correlations with the clinician's ratings (0.20) and with the Body Dissatisfaction (-0.78), Ineffectiveness (-0.74) and the Social Insecurity (-0.54) subscales of the EDI-2. As the main factors measured by this scale are admirable self-image, social conceit, confident purposefulness and self-assured independence (Davis, 1994), the negative correlations with the body dissatisfaction, ineffectiveness and social insecurity scales support the concurrent validity of this scale.

The Unruly scale (6A) correlated highly with the judgements of the clinicians (0.27) and with the substance use (0.41) and family relations scale (0.46) of the POSIT. It also correlated negatively with the maturity fears subscale (-0.48) of the EDI-2. Adolescents who are 'unruly' may have more observable, unsubtle traits which are more likely to be immediately recognisable to clinicians, hence the high

correlation between this scale and the clinician's judgements. These adolescents may use illegal substances due to their rejection of socially acceptable standards and may create difficulties in family relationships due to their difficulty observing rules or doing things expected of them (McCann, 1999). Consequently, these correlations offer support for the good concurrent validity of the Unruly scale of the MACI.

Scale 6B (Forceful) had a high correlation with the clinician's ratings (0.28), it also has modest correlations with the Substance Abuse (0.45) and Aggressive Behaviour (0.29) subscales of the POSIT and the maturity fears (0.32) subscale of the EDI-2. This scale is likely to be correlated with the substance abuse and maturity fears for similar reasons to the Unruly scale given that these adolescents have similar presentations. However, the addition of the correlation with the aggressive behaviour scale clarifies their more hostile and abrasive social behaviours. These correlations offer support for the concurrent validity of this scale.

Scale 7's (Conforming) base rates were moderately correlated with the clinician's ratings (0.25) and had a positive significant correlation with the Interoceptive Awareness subscale of the EDI-2 (0.45). It is also negatively correlated with the Ineffectiveness (-0.47) and the Impulse Regulation (-0.41) subscales of the EDI-2, the BDI (-0.62) and the BHI (-0.063), suggesting that there is an inverse relationship between this scale and depressive symptomatology. Although this inverse relationship with depressive symptomatology was not expected, it may reflect the emotionally constricted nature of these adolescents. One might also have expected a correlation between this scale and the BAI given that these individuals are noted to feel anxious when peers go against the conforming adolescent's fixed beliefs and ideas (McCann, 1999). Consequently, the concurrent validity of this scale is

questionable as it may be measuring different features to those described in the manual.

Scale 8A (Oppositional) had no relationship with the clinician's ratings (0.02) perhaps due to the difference between this construct and the oppositional-defiant disorder outlined in the DSM-IV. However, the concurrent validity of this scale is supported by its significant relationship with the Mental Health (0.50) and family relationship (0.48) scales of the POSIT and the Body Dissatisfaction (0.67), Ineffectiveness (0.64) and Impulse Regulation (0.63) subscales of the EDI-2.

Scale 8B (Self-Demeaning) has a modest significant relationship with the clinician's ratings (0.20) and significant correlations with Mental Health (0.44) and Social Skills problems (0.44) scales of the POSIT and the Body Dissatisfaction (0.74), Ineffectiveness (0.69), Interoceptive Awareness (0.58) and Impulse Regulation (0.62) subscales of the EDI-2. Individuals with elevations on this scale are generally self-effacing and self-loathing with poor self-esteem who tend to put other's needs ahead of their own (McCann, 1999). Consequently, correlations between this scale and social skills problems, ineffectiveness, interoceptive awareness and body dissatisfaction scales offer strong support for the concurrent validity of this scale.

The correlations between the Borderline Tendency scale (9) and the clinicians ratings are not reported in the manual, however there are significant correlations between this scale and the Social Skills (0.63) subscale of the POSIT, the Body Dissatisfaction (0.67), Ineffectiveness (0.60), Interoceptive Awareness (0.55) and Impulse Regulation (0.62) subscales of the EDI-2. Individuals with elevated scores on this scale are often experiencing significant emotional turmoil and instability (McCann, 1999) and one might therefore expect elevations on the BDI and the BAI

raising questions regarding the concurrent validity of this scale. However, this scale's concurrent validity was supported by correlations with the social skills, the ineffectiveness and the impulse regulation scales.

Scale A (Identity Diffusion) has a modest correlation with the clinician's rating (0.17) but correlated significantly with the BDI (0.60) and the BHI (0.63). Unsurprisingly this scale also correlates with the Body Dissatisfaction (0.57), the Ineffectiveness (0.60), the Interoceptive Awareness (0.55) and the Social Insecurity (0.58) subscales of the EDI-2. These correlations provide support for the concurrent validity of this scale as they support the description of an adolescent who exhibits confusion and uncertainty about who they are and what they want out of life.

Similarly modest correlations were found between the clinician's ratings and the Self- Devaluation, scale B (0.25) although, as expected, this scale also had high correlations with the Body Dissatisfaction (0.78) and the Ineffectiveness (0.81) scales of the EDI-2. Pinto and Grilo (2004) also discovered that this scale had a negative correlation with Rosenburg's (1979) Self Esteem scale (-0.68). These correlations offer support for this scale's good concurrent validity.

Scale C (Body Disapproval) was not significantly correlated with the clinician's ratings and these are not reported in the manual. However, as expected, it correlated highly with Body Dissatisfaction (0.86) and with the Drive for Thinness (0.68) scale of the EDI-2 suggesting high concurrent validity.

Scale D (Sexual Discomfort), Scale E (Peer Insecurity) and Scale F (Social Insensitivity) all have very modest correlations with the clinician's rating scores (coefficients unreported) and also very few correlations with other measures suggesting poor concurrent validity for these particular scales. However, it may also

be possible that the other scales employed were not adequate measures for establishing validity.

Scale F (Family Discord) again has a modest correlation with the clinicians judgements (0.25) but a moderately high correlation with the Aggressive Behaviour/ Delinquency subscale (0.32) of the POSIT as one might expect. This offers support for the concurrent validity of this scale.

The Childhood Abuse scale (H) had the highest correlation with the clinicians ratings of any MACI scale although it was a modest 0.43. Unfortunately there were no appropriate measures available and therefore concurrent validity cannot be investigated. However McCann (1999) states that this scale has been shown to be elevated even when the abuse occurred in the distant past, suggesting that this scale measures the adolescent's current thought content and perceptions of abuse, regardless of when the abuse occurred.

In terms of the Clinical Syndromes Scales, Scale AA (Eating Dysfunction) had no relationship with the clinician's ratings of eating disorders but did correlate highly with the Drive for Thinness (0.75), Body Dissatisfaction (0.88) and the Ineffectiveness (0.75) subscales of the EDI-2 as expected. This suggests support for the concurrent validity of this scale.

Scale BB (Substance Abuse Proneness) had moderate correlations with the clinician's ratings (0.52) and with the Substance Use or Abuse scale (0.64) of the POSIT as expected. This high level of concurrent validity suggests that this scale is a reliable and valid measure of substance abuse problems. This was also supported by Pinto and Grilo (2004) who found significant correlations between this scale and the

Adolescent Alcohol Involvement Survey (Mayer & Filstead, 1979) and the Drug Abuse Screening Test for Adolescents (Martino, Grilo & Fehon, 2000).

Scale CC (Delinquency Predisposition) had a significant correlation with the clinician's judgements (0.34) and a negative correlation with the Maturity Fears scale (-0.52) of the EDI-2. As expected, there were also correlations with the Substance Use or Abuse scale (0.44) and the Aggressive Behaviour/Delinquency scale (0.37) of the POSIT. This supports the concurrent validity of this scale.

Scale DD (Impulsive Propensity) had a significant, yet modest, correlation with the clinician's judgements (0.25). There was also a positive correlation between this scale and the Social Skills (0.54) and Aggressive Behaviour/Delinquency (0.34) subscales of the POSIT. As would be expected, there was also a correlation between this scale and the Impulse Regulation (0.38) subscale of the EDI-2 which provides support for the concurrent validity of this scale.

Scale EE (Anxious feelings) correlated significantly with the clinician's ratings (0.30) and the Maturity Fears (0.49) subscale of the EDI-2. Importantly, there was a small correlation between this scale and the BAI (0.10) which raises questions regarding the concurrent validity of this scale. McCann (1999) suggests that the aspects of anxiety measured by each of these tools are not represented in the other. The content of Scale EE suggests it measures cognitive worry as well as social fears and concerns.

Scale FF (Depressive Affect) had a moderate correlation with the clinician's ratings (0.31) and a high correlation with the Ineffectiveness scale (0.73) of the EDI-2. This scale also had a correlation of 0.59 with the BDI and the BHI confirming its concurrent validity. Furthermore Pinto and Grilo (2004) also found a correlation

between this scale and the BDI (0.63) and the Hopelessness Scale for Children (0.52) (Kazdin, Rodgers & Colbus, 1986).

Finally, Scale GG (Suicidal Tendency) had low correlations with the clinician's judgements (0.24); however, this may be explained by the adolescent's reluctance to admit these feelings in interview. As expected, this scale had high correlations with the Ineffectiveness scale (0.77) and the Social Insecurity (0.74) scale of the EDI-2 and significant correlations with the BDI (0.67) and BHI (0.65). Pinto and Grilo (2004) offer further support for the concurrent validity of this scale as they found a significant correlation between this scale and the Suicide Risk Scale (0.54) (Plutchik, van Praag & Conte, 1989).

In support of the MACI's ability to identify depressive symptoms, Hiatt and Cornell (1999) describe that an investigation into the concurrent validity of the MACI in regards to the Children's Depression Inventory (CDI; Kovacs, 1992) demonstrated that the Doleful and Depressive affect scales correlate significantly (0.67 and 0.77).

Content validity.

The content validity is the degree to which an experiment or measurement actually reflects the variable it has been designed to measure. With regards to the MACI, this can be explored by examining the relationship between different scales and the overlap of items. One would expect there to be relationships between similar scales such as Delinquency Predisposition and Impulsive Propensity, however a large overlap of items would suggest they are measuring the same features and therefore do not have content validity.

Scale 1 (Introversive) shares a significant number of items with scale 2A (Inhibited) and a moderate number of items with Scale 2B (Doleful) as one might expect. Scale 2A (Inhibited) has several items overlapping with other scales (1, 2B and 8B) which suggests that there may be concurrent elevations on these scales if 2A is elevated. Scale 2B (Doleful) has significant overlap with scale 8B (Self-demeaning), 8A (Oppositional) and 9 (Borderline Tendency) and correlates highly with these which suggests that the content validity of this scale may be jeopardised. Scale 3 (Submissive) correlates with scale 7 (Conforming) as expected and it also has overlapping items with scale 2B and 8B picking up on the depressive side of the scale. Scale 4 (Dramatising) correlates highly (0.83) with scale 5 (Egotistic) and there is an overlap of 18 items between these two scales which suggests they are measuring very similar features and raises questions regarding the content validity of this scale. Scale 5 (Egotistic) correlates negatively with scale 1 (-0.74), scale 2A (-0.69), scale 2B (-0.65), 8B (-0.64) and 9 (-0.59) and has little overlap with other scales suggesting good content validity. Scale 6A (Unruly) has positive correlations with scales 6B (Forceful, 0.75) and 8A (0.48) as one might expect and only moderate overlap with their items suggesting good content validity. Scale 7 (Conforming) is heavily influenced by other factors such as Submissive (0.74), Dramatising (0.46) and Egotistic (0.55) and therefore needs to be interpreted alongside other elevations, as its content validity is poor. Those adolescents who answer in a socially desirable way in order to present a positive impression of themselves, may also elevate this scale. Scale 9 (Borderline) is the only scale which does not include individualised items of its own, rather it uses a selection of items from other scales. It is most highly correlated with the Oppositional (0.67) and Self-demeaning (0.67) scales, which is also where it

takes the majority of its items. Due to high levels of item overlap for this scale it is likely that the content validity of this scale is low.

With regards to the content validity of the Expressed Concerns Scales, Scale A (Identity Diffusion) correlates highly with Scales 1 (0.64), 2B (0.54), 8A (0.64), 8B (0.54), 9 (0.73), B (0.62) and GG (0.61) and correlates negatively with Scales 7 (-0.74), 4 (-0.57) and 5 (-0.62). This suggests that the Identity Diffusion Scale may play an important role in these other scales and thus may not have high levels of content validity. Scale B (Self-Devaluation) correlated highly with the majority of scales on the MACI suggesting that the MACI measures negative self-appraisal over several scales and consequently that the individualised role of this scale is questionable. Scale C (Body Disapproval) correlates highly with scale AA (Eating Dysfunction) as one would expect but it is a much shorter scale than others on the MACI. It is possible that these two scales are measuring the same features which might place their content validity in jeopardy. Scale D (Sexual Discomfort) has significant correlations with Scales 3 (0.58), 7 (0.60) and EE (0.59) as one might expect suggesting high levels of content validity. Scale E (Peer Insecurity) has a high positive correlation of 0.77 with Scale 2A and Scale 1 (0.61) which reflect item overlap as well as common themes shred by these MACI scales. Scale F (Social Insensitivity) correlates with Scale CC (Delinquent Predisposition) as would be expected and also with Scale 5 (0.59), 6A (0.67) and 6B (0.60). Again this suggested similar themes within these scales and raises questions regarding the individuality of the scales and consequently their content validity. Scale G (Family Discord) has few correlations with other MACI scales suggesting little overlap of items and good content validity. Finally, Scale H (Childhood Abuse) is surprisingly correlated with scale GG (Suicidal Tendency) at the 0.7 level alongside other MACI scales designed to measure themes of depression

and self-loathing. This suggests that Scale H is not only measuring whether a client has a history of Childhood abuse but also levels of depression and low mood which may place in questions the content validity of this scale.

In terms of the content validity of the Clinical Syndromes Scales, AA (Eating Dysfunctions) is very highly correlated with Scale C (Body Disproval, 0.9) as would be expected. Scale BB (Substance Abuse Proneness) is correlated with Unruly (0.72) and negatively correlated with the Anxious Feelings scale (-0.71). Scale CC (Delinquency Predisposition) is highly correlated with scales 6A (Unruly, 0.81), F (Social Insensitivity, 0.8) and negatively with EE (Anxious Feelings, -0.73). Scale DD (Impulsive Propensity) is positively correlated with Unruly (0.77) and Forceful (0.75) and negatively with Conforming (-0.70). Scale EE (Anxious Feelings) is positively correlated with the Submissive scale (0.74) whilst Scale FF (Depressive Affect) is highly correlated with a large number of scales of the MACI suggesting that depressive affect is measured by a large number of scales. Finally Scale GG (Suicidal Tendency) is highly correlated with Self-Devaluation (0.73), Childhood Abuse (0.7) and Depressive Affect (0.71).

Construct validity and factor analysis

Construct Validity is the degree to which an instrument measures the characteristic being investigated and the extent to which the conceptual definitions match the operational definitions. Factor analysis is particularly helpful when assessing construct validity as it investigates the different dimensions of a scale and identifies specifically what is being measured. For those scales with high levels of construct validity, the factor analysis would capture each of the necessary components of a scale in line with theory.

Within Scale 1, the Introversive scale, Davis (1994) identified four dimensions; existential aimlessness, anhedonic affect, social isolation and sexual indifference, which, according to McCann (1999) support the construct validity of Scale 1 as they are in line with current research. Scale 2A, the Inhibited scale has several items overlapping with other scales (Introversive, Doleful and Self-demeaning) which suggests that there may be concurrent elevations on these scales if 2A is elevated. There were also six dimensions identified by Davis (1994) supporting the construct validity of the scale: existential sadness, preferred detachment, self-conscious restraint, sexual aversion, rejection feelings and unattractive self-image, features often associated with an inhibited personality and therefore supportive of the construct validity of this scale.

The construct validity of scale 3 (submissive) was also supported by Davis (1994) who identified six content dimensions for this scale; deficient assertiveness, authority respect, pacific disposition, attachment anxiety, social correctness and guidance seeking. Davis (1994) also found support for scale 4, the dramatising scale, by identifying five content dimensions; convivial sociability, attention seeking, attractive self-image, optimistic outlook and behavioural disinhibition. Six factors were found to support the construct validity of scale 5, the egotistic scale; admirable self-image, social conceit, confident purposefulness, self-assured independence, empathic indifference and superiority feelings. These six factors represent many of the factors associated with narcissistic or egotistic personality disorder.

The construct validity of scale 6A (unruly) was supported by Davis (1994) who identified six factors; impulsive disobedience, socialised substance abuse, authority rejection, unlawful activity, callous manipulation and sexual absorption. Only three factors were found to define the characteristics of scale 6B, the forceful

scale and these were: intimidating abrasiveness, precipitous anger and empathetic deficiency suggesting that this scale measures only the major components of the forceful personality construct. Davis (1994) reports five subscales which represent scale 7 (conforming); interpersonal restraint, emotional rigidity, rule adherence, social conformity and responsible conscientiousness and five which support the construct validity of scale 8A, the oppositional scale; self-punitiveness, angry dominance, resentful discontent, social inconsiderateness and contrary conduct. Davis (1994) identified four content dimensions which support the construct validity of scale 8B, the self-demeaning scale and they are self-rumination, low self-valuation, undeserving self-image and hopeless outlook. Similar factors were found to support scale 9 (borderline tendency) but also included empty loneliness and suicidal impulsivity. No factor analyses have investigated the Expressed Concerns Scales or the Clinical Syndromes Scales and it is therefore difficult to assess the construct validity of these scales.

Romm, Brokian and Harvey (1999) conducted a factor analysis in order to examine the factor structure of the 27 clinical subscales of the MACI. Their sample was comprised of adolescents referred to a residential treatment facility and within this sample they were able to identify five main factors: defiant externalisers, intrapunitive ambivalent types, inadequate avoidants, self-deprecating and reactive abused types. This supports the construct validity of the MACI as it provides examples of well-fitting, identified dimensions which occurred in theoretically expected directions. Salekin (2002) also conducted a factor analysis with a sample of juvenile offenders (N=250) and identified two factor structures. Factor 1 of the clinical scales identified 'Depressed Mood' which was made up of the introversive, inhibited and doleful scales whereas factor 2 was 'Psychopathic Precursors' and was

associated with the forceful, unruly and dominant scales. The two factors identified within the Expressed Concerns scales were ‘Identity Confusion’ and ‘Social Sensitivity’ so there appears to be some possible overlap in their findings. It is also important to note that no item-level factor analysis has been performed and reported which would give a clearer understanding of the content and construct validity of the tool.

Conclusion

In general there appears to be a consensus within the literature that the MACI is both a reliable and a valid measure (Dyer, 1997; McCann, 1999; McCann & Dyer, 1996; Woodward, Goncalves & Millon, 1994). However, the current investigation of the validity and reliability of the MACI does raise some concerns. For example, there was a consistent lack of significant correlations between the scales and the clinical judgements, which places doubt on the concurrent validity of these scales. Furthermore, there was significant overlap between items in the scales which raises concerns about whether the scales are measuring an individual concept or what they describe. For example, the Anxious Feelings scale did not correlate with the BAI suggesting it may not have been measuring anxiety in the same way and may not be useful for estimating the presence of an anxiety disorder. Another example is the Self-devaluation scale, which correlates highly with the majority of scales on the MACI suggesting that the MACI measures negative self-appraisal over several scales rather than individually on one scale.

Although there are clearly some important concerns in need of discussion regarding the validity and reliability of the MACI, the current study also highlights

numerous encouraging findings as to the utility of this tool. The reliability of the scale is extremely encouraging with consistently high levels of internal consistency and test-retest reliability over short periods of time. Furthermore, there are generally good levels of concurrent and content validity. However, an investigation into the literature does raise some interesting issues and concerns that clinicians may need to be aware of in order to use and apply the results of a MACI assessment reliably and helpfully. Particularly interesting are the low correlations between the scales and the clinicians ratings. Although initially raising worries that the assessment tool and the clinicians may be measuring different entities, there is a suggestion that certain adolescents may feel more comfortable revealing their difficulties in a paper and pen exercise rather than in a face-to-face assessment. Millon (1993) also speculated that these low correlations may be due to limited contact between the clinicians and participants in the validation study which would impact the clinicians ability to provide an accurate rating. According to Handwerk, Larselere, Soper and Firman (1999), it is a common occurrence when assessing adolescents with psychological difficulties, that self-report and observer assessments yield different results.

An investigation into the studies focusing on the concurrent validity of the MACI identifies that a large number of the scales correlate with the Family relations scale from the POSIT. This suggests that adolescents may frequently see their families as unsupportive or problematic. There are also numerous correlations with the Body Dissatisfaction scale of the EDI-2, suggesting that this is a common problem for adolescents with psychological difficulties, consequently the correlations with these scales should not be seen as support for concurrent validity, rather an interesting pattern. However, it should also be noted that the majority of research has been conducted with similar samples and there is no evidence of similar results of the

validity and reliability of the MACI across different ethnicities. The normative sample used in the development of the MACI largely consisted of a White population, with 79% White American, 8% African American, 6% Hispanic, 3% Native American and 1% Asian with the remainder not being reported (McCann, 1999). The deficiency of research in this area needs to be addressed in order to confirm the utility of the MACI with a range of ethnicities, as the MACI is a limited tool otherwise. Furthermore, although the results from the studies and the factor analyses raise interesting concepts, clinicians should await replication of these results before attempting to report or apply them in clinical work (Salekin et al., 2005).

Specific concerns raised about the MACI have generally revolved around the use of base rate scores rather than raw scores and also regarding the significant item overlap between the scales. Base rates or "prevalence rates" were collected by Millon (1994) for each disorder, problem or characteristic during the development of the measure and the MACI uses these rates to transform the raw score into a more meaningful score. This is potentially problematic as the prevalence of these disorders or characteristics may vary over time, geographical location and across ethnicities. However, according to Romm et al., (1999) the item-weighted scoring of the MACI was developed in order to limit the effect of item overlap. Choca, Shanley and Van Denburg (1992) also report that the use of weighted raw scores is theoretically sound and may even prove advantageous in reducing the high interscale correlations. However, Salekin et al. (2005) advise clinicians to remain aware of the issue raised by the overlapping of items, such as an individual scoring highly on the Depressed scale may also elevate the Oppositional scale by scoring on the same items. It is therefore recommended to be aware of the individual items endorsed when a scale is elevated. This will also serve to better guide treatment and management of an individual.

Salekin et al. (2005) also raise the issue that the validity scales may not provide an accurate reflection of youth's distorted responding. For example, there is item overlap between the validity scales (Debasement, Desirability and Disclosure) and the clinical scales. They use the example of the Depression scale and the Debasement scale, in that those individuals scoring highly on the Depressive scale may also be scoring highly on the debasement scale, and to be aware that individuals scoring highly on the Debasement scale may well be suffering from some form of psychopathology. Concerns regarding the reliability scale are raised by several researchers as there are only two items within this scale (Salekin et al., 2005; McCann, 1999). There is the possibility that an individual may answer the entire test accurately apart from this pair of items, it is therefore suggested that Millon add items to this scale in order to increase its robustness.

A major limitation of the MACI is the absence of scales measuring the more severe forms of psychopathology and character disturbances. For example, there are no scales assessing formal thought disorder, paranoid thinking, or bipolar mood disturbances. With regards to thought disorder specifically, there are no scales measuring schizotypal or paranoid personality disorder, which may result in the clinician missing important factors regarding their patients psychological well-being. However, if clinicians were concerned they would be required to use supplementary assessment instruments and interviews in order to assess these issues more specifically.

One final, yet essential point regarding the MACI which is raised in each piece of research, is that this is not a tool intended to diagnose mental illness but rather to act as a guide for treatment and management of adolescents. Furthermore, it is more helpful to identify a pattern of elevated scales and ponder their relationship

rather than looking purely at individual scales, as this could detract from the general applicability of the results. Finally, there is clearly more research required in order to explore the specific item-based reliability of the MACI alongside replications of factor analyses and the improvement of our knowledge regarding its concurrent and construct validity across time and different ethnicities.

This Chapter highlights the MACI as a reasonably valid and reliable instrument for use for adolescents. It also highlights that it is widely used throughout the world and has been used for the use of forming personality-based typologies with adolescent sex offenders (Oxnam & Vess, 2006; Richardson et al., 2004). This provides support for use of the MACI with this population of offenders when looking at personality clusters. However, this chapter also highlights the importance of being aware of the psychometric measure’s limitations with regards to its reliability with different ethnicities and populations and over time.

CHAPTER 3

A Research Project Examining Personality Related Typologies of Community-Based Adolescent Sex Offenders.

Abstract

The last decade has seen a significant increase in the levels of concern regarding the sexual offences committed by young people. This concern has, in turn, encouraged researchers to further investigate this area with the aim of developing typologies which may broaden our understanding and help to advance treatment. The current study investigated whether personality typologies were present in a community-based sample of adolescents who have sexually offended. The sample was 83 young men, aged between 13 and 19 who had been referred for a community-based treatment group within the London area. Each of these young men were assessed for their suitability for group treatment at which point they completed the Millon Adolescent Clinical Inventory (Millon, 1993), the Weschler Abbreviated Scale of Intelligence (Weschler, 1999) and a clinical interview focussing on developmental and offence characteristics. A cluster analysis identified four personality groups within this sample: Submissive/Anxious, Antisocial/Delinquent, Undersocialised/Isolated and Disturbed/Oppositional. Each of these clusters demonstrate high levels of developmental difficulties, however the Disturbed group have experienced significantly more abuse, neglect and self-harm than the other clusters. The Antisocial/Delinquent cluster represents the largest group of offenders with 70% having a below average IQ, 70% having separated parents and several having histories of both sexual and violent offending. The findings indicated important differences between these groups, emphasised the high levels of developmental difficulties experienced by this cohort and illustrated important differences between adolescent sex offenders and adult sex offenders. The findings suggest future research should have a developmental focus with regards to identifying the best treatment fit for adolescent sexual offenders.

Introduction

Sexual offences are committed by a wide variety of adolescents from all racial, ethnic, religious, geographic and socioeconomic groups (Ryan et al., 2010). Adolescent sex offenders are also a heterogeneous group with regards to their offence and victim characteristics, interpersonal skills, cognitive functioning and psychopathology (Knight & Prentky, 1993). Previous research into the offending behaviour of adolescent sex offenders has identified that adolescents are responsible for approximately 20% of all rapes and between 30-50% of child molestations (Barbaree & Marshall, 2006). However, it is possible that an accurate picture of the extent of adolescent sex offending is not painted as we are only able to evaluate offences which are recorded, yet the age, nature of the offence and attributes of the victim may be obstacles to reporting sexual offences committed by young persons (Dent & Jowitt, 2003).

According to the Home Office (2000), approximately one in six of all sexual offences committed in England and Wales are committed by individuals under the age of 21. Such concerning statistics, amplified by probable underreporting of such offences, has recently resulted in adolescent sex offending being recognised as a serious and under researched area. Consequently, a number of recent investigations have focused on gaining a better understanding of the characteristics and behaviours of this group. In particular, they have focused on using the four main classification systems suggested by Prentky and Burgess (2000), which are: to aid apprehension of the offender through investigative profiling; to help guide decisions made by the prosecution and criminal justice system; to inform professionals regarding treatment and support; and finally to provide ideas regarding developmental experiences and personality traits which may have resulted in offending behaviour. This study will

concentrate specifically on the final two aspects, paying particular attention to various typologies which elucidate differences between offending subgroups.

Existing theories surrounding adolescent sex offenders are often based on work with adult sex offenders and seldom take into account the physical, emotional and social developmental factors which are unique to this younger age group. Consequently, professional interpretations of the definition of appropriate/inappropriate sexual behaviour between young people may differ between cultures and over time. Ethical issues with labelling the young person as a “sex offender” also exist with some choosing to label the behaviour rather than the individual. However, most agree that once the behaviour develops from an inappropriate sexual interest to a coercive or aggressive act accompanied by high levels of sexual arousal, it is appropriate to introduce labels such as adolescent sex offender or juvenile sex offender.

As previously discussed, adolescent sex offenders are a heterogeneous group of individuals (Bourke & Donohue, 1996; Knight & Prentky, 1993) with a variety of psychosocial and psychosexual disturbances such as low self-esteem, poor impulse control, reduced masculinity, deviant sexual interests and arousal, poor social skills, distorted cognitions and a lack of empathy (Hunter & Figueredo, 2000). It is possible that the development of such difficulties may be related to the experience of adverse developmental factors. For example, several studies have investigated the relationship between being sexually victimised as a child and going on to sexually offend against others (Burton, Miller & Shill, 2002; Burton & Smith-Darden, 2001; Widom, 1989). Widom (1989) reports that ‘abused and neglected children have significantly greater risk of becoming delinquents, criminals and violent criminals’ (p.3).

Further studies have identified that adolescent sex offenders are not only more likely to have undiagnosed learning difficulties (O'Callaghan, 1999), but also have a higher probability of coming from dysfunctional families with inadequate and unstable parents who may provide poor behavioural and sexual boundaries (Hickey, Vizard, McCrory & French, 2007). Parents of these troubled young people have often suffered childhood abuse themselves and demonstrate entrenched patterns of domestic violence; unsurprisingly, these are independent predictors of later sexual offending by male children (Skuse et al., 1998). Additionally, adolescent sex offenders commonly report experiences of sexual, physical and psychological abuse with 71% of children referred to specialist services reporting sexual victimisation (Vizard, Hickey, French & McCrory, 2007).

According to Kaufman, Hilliker and Daleiden (1996) sexual victimisation is related to more varied and severe sexual offending when compared with the sexual offending behaviour of those who have not been sexually victimised. For example, those who had been sexually abused were likely to pick younger aged and male victims, and were also more likely to start offending at a younger age as well as have more victims (Cooper, Murphy & Haynes, 1996). Veneziano, Veneziano and LeGrand (2000) investigated whether young sexual offenders relive their own sexual abuse through their choice of victim and the circumstances of the offence. Their study concluded with four main findings: that adolescent sex offenders offend against youths of a similar age to when they were sexually abused; if they were abused by a male they were more likely to select a male victim; if they were abused by a family member they would be more likely to abuse a relative; and that they engaged in similar abusive behaviours as had been forced upon them.

As previously identified, adolescent sex offenders are a diverse group varying in background demographics, offence behaviours and victims, it is therefore difficult to place them into a category that appropriately describes all of them. According to Gibson and Vandiver (2008) the need to identify typologies is imperative as they can be advantageous for recognising the offender's characteristics, identifying risk, correctly managing offenders and providing headway to creating specialist treatment plans. Currently, typologies for adolescent sex offenders exist using many different categories and characteristics such as offending behaviour, victim type, recidivism or psychological characteristics with results varying greatly. A number of these will now be discussed.

Offence Focused Typologies

In recent years the importance of focusing on differences between sub-groups of adolescent sex offenders has been noted (e.g., Ryan et al., 2010). The majority of this research into adolescent sexual offenders focuses on similar subgroups as adult sexual offenders, such as comparing those who offend against children with those who offend against peers and adults or the "child-molester" versus "the rapist" (Carpenter, Peed & Eastman, 1995; Hagan & Cho, 1996; Worling, 1995). Several researchers have set out to investigate the validity of such a classification method.

Using a meta-analysis of previous research, including 16,000 juvenile sex offenders from 140 samples, Graves (1997) was able to identify three different types of adolescent sexual offender. The 'paedophilic' group were at least 16 years old who had molested children at least 5 years younger than themselves. Graves (1997) identified these young people as generally lacking in confidence and as being socially isolated. The 'sexual assault' group incorporated those adolescents who offended against peers

or older females with some use of force. Finally the ‘undifferentiated’ group of offenders engaged in both hands-on and hands-off offences and according to Graves (1997) had the most severe psychological issues and dysfunctional family backgrounds.

Ford and Linney (1995) add support to these findings as their results suggest child molesters appear to have a different psychological makeup when compared to non-sex offenders and rapists. Similarly, several investigations have identified that social isolation and low self-esteem are associated with those offenders who have assaulted children (Carpenter et al., 1995; Saunders, Awad & White, 1986) while others have found no significant associations between these variables and child offenders (Ford & Linney, 1995; Worling, 1995). However, Van Wijk, Van Horn, Bullens, Bijleveld and Doreleijers (2005) provided slightly different findings in that no differences existed between rapists and violent offenders in their sample, but child molesters scored higher than both on neuroticism. It is possible that these differences in findings are a result of a number of factors, for example, the samples used in these studies represent adolescent sex offenders at varying stages of Criminal Justice System and they may therefore differ significantly with regards to the severity of the offences committed, their clinical requirements, their stage in treatment, characteristics of the individuals and the rate of attrition. Each of these factors could have a profound effect on the studies discussed above and may help to explain the differences observed.

Within Knight and Prentky’s (2000) adult classification scheme, child molesters were classified depending on their degree of paedophilic interest and their amount of contact with children. On the other hand rapists were generally classified by their motivation for offending such as ‘opportunistic’, ‘pervasively angry’, ‘sexual’ or ‘vindictive’. However, upon assessing 96 male adolescent sex offenders, they

produced a typology formed of six categories based on offence type and victim age. The first category was 'child molester' where the victims were young and chosen by the offender due to this specific feature whereas 'fondlers' had an age difference of less than 5 years between themselves and their victim. The 'rapist' category was formed of individuals who offended against older victims (peers or adults) and used force, threat or manipulation to facilitate their offending behaviour. The 'sexually reactive children' were those offenders under the age of 11 who committed sexual offences against children also under the age of 11. The 'paraphilic' offender category is comparable with O'Brien and Bera's (1989) 'sexual compulsive' group encompassing those adolescents committing 'hands-off' offences. Finally Prentky et al., (2000) devised an 'unclassifable' category for those individuals who did not correspond with the previous five groups. Such 'unclassified' categories can often suggest a problem with the model within the study, as it is unable to place each of the individuals within the sample into a specific group. These "unclassified" groups may be representative of a study which is not measuring the correct, or a broad enough variety of, variables. If different variables were measured, these individuals may have been classifiable. This raises doubts as to the validity of these studies as their choice of variables may not be suitably wide-ranging or accurate. However, it may also again highlight the heterogeneity of the adolescent sex offender cohort and the difficulty researchers experience when attempting to classify them.

Hunter et al., (2003) developed a typology comparing adolescent males who offended against children under the age of 12 years of age and those who offended against those over the age of 12. They reported that the child offenders had more psychosocial difficulties, were less aggressive and were more likely to offend against relatives. They also had higher levels of depression. Due to the shortage of significant

differences identified between these two groups, Worling (2001) questioned the judgement behind comparing offenders by victim age. Worling (2001) went on to indicate that victim ages and genders are often confounded as child molesters offend against females, males or both whereas the majority of victims of those who offend against peers or adults are female. Therefore a comparison of offenders by age simultaneously partially compares them by victim gender. There is a further complication with those adolescent offenders who offend against a variety of victims; adults, children, peers, male and females (Wieckowski, Hartsoe, Mayer & Shortz, 1998; Worling, 1995). However, Beckett (1999) highlights the importance of separating those who offend against children and those adolescents who offend against peers or adults stating that they should not be assessed simultaneously.

Several difficulties exist when adolescent sexual offenders are separated according to victim age in research, for example, it is likely that other similarities between participants within these different groups will be missed. Furthermore, there is not always a clear difference between offending against a peer or a child with adolescents and often insignificant age limits are put in place with the sole intention of forming two separate groups. It is also possible that some offenders have offended against a variety of different age groups and it is not always clear which group they are placed within. Although research into victim and offence type are clearly important and worthwhile, it appears these groupings may lead to removing significant information which may enrich our understanding of adolescent sex offenders.

Clinical Multi-Dimensional Typologies

O'Brien and Bera (1986) developed a non-statistical, experience-based classification system based on personality, victim age, family functioning, delinquency and sexual history and identified seven subgroups through their clinical experience working with this client-group. The 'naïve experimenter' was described as a sexually naïve adolescent who was likely to be aged between 11 and 14 whilst their victim was likely to be 2-6 years old. O'Brien and Bera (1986) found these individuals to have fairly healthy interpersonal skills and peer relationships but to lack in sexual knowledge and experience. Such offenders were recommended short-term, community-based intensive treatment with an educational component. The second group identified by O'Brien and Bera (1986) was the 'under-socialised child exploiter' who chose younger children as their victims and were generally older and wiser than the naïve experimenter. These individuals commonly lacked experience with appropriate peer relationships, were lonely and isolated and consequently relied on children to meet their interpersonal needs. According to O'Brien and Bera (1986), these adolescents were likely to have an overbearing and protective mother and a distant father.

The 'pseudosocialised child exploiter' was an older adolescent who sexually abused younger children (O'Brien & Bera, 1986). These individuals lacked insight and remorse about their offending behaviour and often saw their actions as an intimate exchange rather than abuse. This offending was likely to occur many times over an extended period of time and the offender would have attempted to keep their actions secret. According to O'Brien and Bera (1986) the 'sexual aggressive' offender was any age and picked any victim, they had a history of antisocial behaviour, low impulse control, behavioural difficulties at home and school and possible issues with drug or

alcohol abuse. Their act of violence was typically used to gain power over another, possibly due to their own experience of being a victim.

The ‘sexual compulsive’ adolescent generally presented with repetitive, obsessive ‘hands-off’ behaviours such as exhibitionism or voyeurism. The ‘disturbed impulsive’ was described as an individual who has serious psychological problems, possible learning difficulties, family dysfunction and probable substance abuse. Offences committed by this group may have been one-off occurrences or occurred numerous times and were likely to escalate in their severity. The final group identified by O’Brien and Bera (1986) was ‘group influenced’ who often committed offences alongside others perhaps due to peer pressure and in order to gain approval. However, some concerns should be noted with O’Brien and Bera’s (1986) model. There is little empirical support for this typology due to a lack of testing with a variety of samples although the experience of the researchers provides the model with face validity.

Flitton (1999) evaluated available adolescent sex offender literature and proposed four types of sex offender. The ‘opportunistic’ offender does not usually have a history of sexual offending but is curious, sexually reactive, impulsive and possibly influenced to offend by peers. The ‘pedophilic’ group offends against younger children by manipulating and coercing their victims possibly from a young age. This group of offenders are likely to be more isolated and have fewer social skills. The third group is comprised of individuals who commit a variety of offences against an assortment of victims. According to Flitton (1999), they are more likely to have experienced dysfunctional and abusive childhoods and their offending behaviour may represent attempts to express feeling of anger and distress. The final group is ‘paraphiliac’ encompassing individuals with deviant sexual interest where sexual offending has been reinforced through masturbation and fantasy.

These clinical typologies not only investigated offence characteristics, but also the characteristics of the offenders. These initial studies, particularly that of O'Brien and Bera (1986) raised the possibility of exploring the specific personality characteristics of adolescent sexual offenders with a view to informing the management, assessment and treatment of these young people. These studies highlighted the potential existence of subgroups of offenders, drawing particular attention to the possible differences between isolated offenders and aggressive offenders. Although these studies raise important questions worthy of further investigation, their results are not evidence-based and require empirical support.

Personality-Focused Typologies

According to several researchers, identifying specific personality variables in offenders is a 'more effective way of predicting future offending than other variables such as age and number of prior offences' (Oxnam & Vess, 2006, p.37). Hickey et al. (2007) state recidivism is more likely in the subgroup of adolescent sex offenders where emerging Personality Disorder is apparent. Consequently, they concur that attention from researchers should be focused on methods to identify these individuals and these cases should be a priority for early identification and treatment as they often lead to higher social and economic costs in later life. Along the same lines, a study of 141 young sexual abusers found that severe onset conduct disorder was present in 43% of the sample (Bladon, Vizard, French & Tranah, 2005) and these were identified as the young people most as risk of following chronic antisocial pathways.

By looking specifically at personality typologies one may also be able to identify groups of offenders who are likely to have psychopathic traits, which may in turn affect approaches to treatment and management of these cases. According to

Loper, Hoffschmidt and Ash (2001), youths with high PCL-R scores also scored highly on the Unruly scale, the Forceful scale, the Oppositional scale and antisocial and illegal behaviour scales such as Delinquent Predisposition and Substance Abuse of the MACI (Millon, 1993). These individuals were also less likely to score on the Submissive, Conforming and Anxious scales. Some findings suggest adolescent sex offenders have elevated scores on callous-unemotional personality traits when compared with non-sexual violent and non-violent adolescent offenders (Caputo, Frick & Brodsky, 1999).

Given the noted importance of investigating personality types and the abundance of research into personality typologies with adult sex offenders, it is surprising that adolescent-focused studies tend to focus on behaviour instead. However, Smith et al., (1987) performed a cluster analysis on four factor scores derived from 178 adolescent sex offender's Minnesota Multiphasic Personality Inventory (MMPI) scores. The four groups which best represented these youths were: Group 1. which was shy, emotionally over controlled and isolated; Group 2. which was described as narcissistic, disturbed, insecure and argumentative; Group 3. was found to be outgoing, honest, yet prone to violent outbursts; Group 4. was rated as impulsive, mistrustful and under socialised. These four groups were not found to be related to victim-selection characteristics such as age or gender, nor were there significant differences between offence characteristics, clinical presentation or historical variables.

Similarly, Worling (2001) specifically generated a typology of adolescent sexual offenders based on personality factors. He discovered four categories, the most common being 'antisocial/impulsive' who displayed impulsive personality traits and a 'delinquent' presentation. These individuals were most likely to have received criminal charges for their index sexual assault and also to have experienced physical discipline

from their parents. This group alongside the ‘unusual/isolated’ offenders were most likely to have been charged with a subsequent offence (sexual or non-sexual). They were also more likely to have separated parents. The final two groups were ‘confident/aggressive’ and ‘overcontrolled/reserved’ however, similarly to Smith et al’s. (1987) typology, there were no significant between-group differences with respect to victim age or gender. Importantly, Worling (2001) notes that adolescent sexual offenders are more ‘fluid’ regarding their sexual inclinations due to their shifting sexual development, and consequently it is possible that the “age and gender of the victim may be less a marker of sexual preference than is the case for adult offenders” (p.161).

Worling (2001) concludes that this study is similar to that of Smith et al., (1987) in that the Overcontrolled/Reserved group resembled Smith’s Group 1; the Unusual/Isolated group was similar to their Group 2; the Confident/Aggressive group was alike their Group 3 and the Antisocial/ Impulsive resembled group 4. Although there are undisputed similarities between their findings, Worling (2001) highlights the importance of replication of these results.

Richardson et al. (2004) conducted a cluster analysis and identified five prototypes of offender which were: Normal, Antisocial, Submissive, Dysthymic/Inhibited and Dysthymic/Negativistic, again, there were no significant relationships between group membership and offence type. Similarly, Oxnam and Vess (2006) used the Millon Adolescent Clinical Inventory (MACI), a personality measure of adolescents to identify clusters. They discovered three clusters: the antisocial/externalising group, the withdrawn, socially inadequate group and a normal group. The antisocial group were more likely to be aggressive, unemotional and experience difficulties with substance abuse. The inadequate group tended to suffer

from significant psychopathology, were negative and self-debasing and more likely to have a history of abuse. Finally, the ‘normal-range’ group had no significant elevations, however they generally scored higher on the sexual discomfort scale, suggesting their offending may be a reaction to confusing and uncomfortable sexual development.

The Association for the Treatment of Sexual Abusers supports “research efforts directed at creating a juvenile sex offender typology and linking offender classification with risk assessment” (1997, p.3). Specifically, the benefit of identifying subgroups of adolescent sex offenders based on personality traits allows the development of specific assessment and treatment for individuals based on their psychopathology rather than their age and offence-type. According to Vizard (1995), intervention needs to occur as early as possible in order to reduce escalation of the offending and therefore, specific research with adolescents is vital.

These studies not only provide support for the investigation into personality factors of adolescent sex offenders but also for the existence of subgroups of these offenders based solely on their personality assessment results. A general finding amongst these studies is the presence of similar type groups such as isolated, aggressive or impulsive offenders. They also tend to report a large number of developmentally difficult experiences for this cohort, particularly in those offenders who are more socially inadequate. These studies provide support for the current study not only in terms of replication but also an investigation into the existence of previously unidentified personality typologies in a UK community sample of adolescent sex offenders. In order to further create an original and useful study, this investigation attempts to discuss these UK community sample personality typologies

in practical terms with regards to the assessment, treatment and management of adolescent sex offenders.

Current Study

The purpose of the present study is to examine a community based sample of male adolescent sexual offenders aged 13-19 years looking in particular to determine whether they exhibit personality typologies based on their scores on the MACI. Although this has previously been examined by Oxnam and Vess (2006), the current study also assesses these sub-groups with regards to developmental and offence characteristics. In particular, this study will aim to investigate clusters of personality traits to identify clusters of similar individuals and to examine how these typologies relate to background and offence characteristics.

Method

Participants

The sample is comprised of individuals referred to a UK National Health Service community-based assessment and treatment facility for adolescent sexual offenders aged 11 to 21 and living in the Greater London area. During the ten-year period from 1997 to 2007, 184 adolescent males were referred to this service. However, only 83 aged between 13 and 19, had completed the MACI successfully and were therefore appropriate for inclusion in this study. Referrals were made by criminal justice agencies, health and social services with the intention of the young men to be assessed for and if appropriate to attend the treatment group. Most criminal justice referrals were made at the point of sentencing (39%) with fewer referred when considered for early release from custody (11%) or post sentence (28%).

Study participants included 83 young men with ages ranging from 13 to 19 with a mean age of 16.45 years (*SD*=1.9). The majority of the adolescents were British (80.7%, *n*=67), with a further 3.6% (*n*=3) from Nigeria and 3.6% (*n*=3) from Somalia whilst the remaining 12.1% (*n*=10) each originated from different international locations including South America and Asia. Intelligence testing was conducted with 72 of the participants using the Weschler Abbreviated Scale of Intelligence (WASI). The remaining 11 participants were not assessed for a variety of reasons such as refusal and time constraints. With regards to their full scale IQs, 65.3% (*n*=47) of participants scored 'below average', 25% (*n*=18) were 'average', and the remaining 9.7% (*n*=7) scored 'above average'. Whilst at school, 41% (*n*=34) of the sample reported having been bullied and 48.2% (*n*=40) reported difficulties with peer group friendships. Furthermore, 27.2% (*n*=23) of this sample described truanting school regularly and 9% reported self-harming deliberately.

During the period of assessment, 81.9% (*n*=68) of the young men were living with family while the remaining 18.1% (*n*=15) were residing in an institution. With regard to their parents, 81.9% (*n*=68) reported their parents to be separated or divorced and 33.7% (*n*=23) of these adolescent males reported having been in social care at some point during their lives. A history of abuse was common in this sample of adolescent sex offenders with 44.6% (*n*=37) reporting having been emotionally or physically neglected and 38.6% (*n*=32) having been physically abused. Of this 38.6%, 50% (*n*=16) reported being physically abused by their father and 34.4% (*n*=13) by their mother. Furthermore, 30.1% (*n*=12) reported having witnessed domestic violence within the family home. With regards to sexual abuse, 22.9% (*n*=19) reported having been a victim at some point in their life where 21.1% (*n*=4) this abuse was committed

by a parent, 57.8% (*n*=11) by someone else known to them and for 21.1% (*n*=4) by a stranger.

With regards to the sexual offending behaviour of the participants, 50.6% (*n*=42) of the sample offended against a peer or an adult, 33.7% (*n*=28) offended against a child (defined as those more than one year older than victims aged 11 or younger or at least five years older than victims aged 12-14), 7.2% (*n*=6) comprised of non-contact offenders (indecent exposure and child pornography) and for the remaining 8.5% (*n*=7) this information was not available. The most common index offences were indecent assault (56.1%, *n*=47) and rape (23.2%, *n*=19) with the remainder being comprised of buggery, exposure, gross indecency and the possession of child pornography. The majority of adolescents within this sample had one known victim (70.5% *n*=59), with 16.7% (*n*=14) having two known victims and 12.8% (*n*=10) having three or more known victims. A large percentage of the participants in this study offended solely against women (77.2%, *n*=64), however, 15.2% (*n*=13) offended against only males and 7.6% (*n*=6) had victims of both genders.

Procedure

Participants were recruited, as they were all referrals to an NHS treatment group for adolescent sex offenders in the London area. Not all were deemed appropriate for the treatment group but all had been charged or convicted of a sexual offence and were between the ages of 13 and 19 years. Data collection commenced in 2005 by a previous psychologist who was running the assessment and facilitation of the treatment group. Data was collected following the clinical assessments of the young people where they also completed the MACI and the WASI. Upon a change in staffing, data was collected by the current author following

a detailed handover. Data was stored on a computer-based database which was password encrypted and stored on a USB drive kept in a locked draw.

Unfortunately, given the prior data collection and a change in the research team, the choice of measured variables within this study was very limited. For example, offenders were categorised as either child offenders or peer/adult offenders with no option to further differentiate their victim choice or offending behaviour. The definition of a child offender is an adolescent who offends against a child under the age of 14 and where there is an age gap of 5 or more years. A peer/adult offender is an adolescent who offends against someone over the age of 14 or where there is an age gap of less than 5 years between the offender and the victim.

Ethics

Ethical approval for this research was gained through the UK National Health Service Research Ethics Committee prior to the commencement of this study and participants were asked to sign a consent form. Gaining ethical approval was challenging due to the sensitive nature of the sample and due to a change in requirements regarding consent forms. In order to adhere to ethical guidelines data was stored on an encrypted computer with passwords only available to the data collector. All data was anonymised upon addition to the database.

Measures

Clinical interview.

During the assessment period of each referral, a clinical interview was conducted with the purpose of collecting a comprehensive history of the young person.

In particular this interview focused on gathering important developmental details and demographic information regarding the young person. Furthermore, it gathered historical information such as drug and alcohol use, abuse and trauma, criminal history and any history or presence of psychological difficulties. The information gathered from these clinical interviews allowed the researchers to record the following variables: age of referral, age of index offence, living arrangements, parent's relationship, history of care, death in immediate family, victim of emotional/physical neglect, victim of physical abuse and by whom, witnessed domestic violence, victim of sexual abuse and by whom, victim of bullying at school, difficulties forming friendships with peers, deliberate self-harm, difficulty controlling aggression and school truancy. With regards to their offending behaviour, the variables collected were: age of victim (child or peer/adult), index offence, number of victims, gender of victim(s) and whether they used substances at the time of offending.

Millon Adolescent Clinical Inventory (MACI; Millon, 1993).

As discussed, the MACI is a 160-item, 31 scale, self report inventory designed for assessing personality characteristics, psychological problems and clinical syndromes in adolescents aged 13-19. This assessment tool was developed in consultation with psychiatrists, psychologists and other mental health professionals who work with adolescents and consequently reflects the issues most relevant to the behaviour and concerns of adolescents. According to Millon (1993), it is useful in the evaluation of "troubled adolescents", specifically aimed at aiding formulations, developing diagnoses and treatment plans. In particular, the "expressed concerns" section assesses the attitudes of young people regarding developmental difficulties

whereas the “personality patterns” and “clinical syndromes” identify areas of pathological thinking and behaviour.

The MACI consists of 31 scales: three validity scales (Disclosure, Desirability and Debasement), a Reliability scale, seven Clinical Syndromes scales (Eating Dysfunctions, Substance Abuse, Delinquency Predisposition, Impulsive Propensity, Anxious Feelings, Depressive Affect and Suicidal Tendency), 12 Personality Patterns scales (Introversive, Inhibited, Doleful, Submissive, Dramatising, Egotistic, Unruly, Forceful, Conforming, Oppositional, Self-Demeaning, Borderline Tendencies) and eight Expressed Concerns scales (Identity Diffusion, Self-Devaluation, Body Disapproval, Sexual Discomfort, Peer Insecurity, Social Insensitivity, Family Discord, Childhood Abuse).

The raw MACI scores are transformed to base rate scores from 0 to 115 for all scales. Base rate scores below 60 suggest no significant problems in the area measured, and between 60 and 74 suggest little or some evidence of the trait if closer to 74. However, scores between 75 and 84 indicate the clinically significant presence of a trait or problem, and scores of 85 to 115 suggest the characteristic is clinically prominent. Base rate scores rather than raw scores were used in the current study with those scores over 75 being marked as present and those under 75 being marked as absent. Each of the participants scored valid profiles and, therefore, all could be used within the study. All of the assessments were scored according to the manual. For those individuals who had difficulties with reading the questions were read aloud. This measure has good internal consistency and test-retest reliability (Millon, 1993). Alpha coefficients range from .73 to .87 for the Validity scales, .74 to .90 for the Personality Patterns scales, .75 to .89 for the Clinical Syndromes scales, and .73 to .91 for the

Expressed Concerns scales. Studies report the MACI as having respectable concurrent and predictive validity in non-forensic samples (e.g., Hart, 1993; Hiatt & Cornell, 1999; Millon, 1993; Millon, Green, & Meagher, 1982). However, the MACI needs to be subjected to more empirical investigation in juvenile justice settings to provide more detailed information on its forensic validity. The present study may offer novel information regarding the validity of the MACI when used with adolescent sex offenders. For a more detailed critique of this measure, see chapter 2 of this thesis.

Weschler Abbreviated Scale of Intelligence (WASI; Weschler, 1999).

The Weschler Abbreviated Scales of Intelligence (WASI) is a standardised tool of intellectual functioning for use with children and adults. The WASI consists of four subtests that are designed to measure an individual's ability to "think rationally, act purposefully, and deal effectively with their environment" (Weschler, 1999, p.1). An age-adjusted Intelligence Quotient (IQ) is calculated and then compared with the normal distribution of scores found within the general population. Fifty per cent of children and adults will have IQ scores between 90 and 109 (Weschler, 1999).

Statistical analysis

According to Aldenderfer and Blashfield (1984), cluster analysis is the 'classification of objects into meaningful sets' with the aim of developing a typology or testing a hypothesis (p.9). These clusters are formed by calculating the distance between observations by using an algorithm such as squared Euclidean distance. Hair and Black (2000) indicate that there are a number of algorithms available to

researchers and that these may influence the clustering results, they therefore advise using several different techniques to compare results in order to check their validity.

According to Hair and Black (2000) “In Ward’s method, the distance between two clusters is the sum of squares between the two clusters summed over all variables. In each stage of the clustering procedure, the within-cluster sum of squares is minimised over all partitions (the complete set of disjoint or separate clusters) obtainable by combining two clusters from the previous stage” (p. 180) and consequently this method tends to create clusters with a small number of individuals and clusters with similar numbers of observations. This method has been selected for this reason and that other, similar research has previously applied these same procedures making the studies comparable and consequently more applicable.

For this investigation, binary data depicting whether the personality characteristic was present or absent for each individual was entered into a hierarchical cluster analysis using Ward’s method and using the statistical programme PASW Version 18.0. The same procedure has been used by other studies investigating classifications within adolescent sexual offending samples (e.g. Oxnam & Vess, 2006; Richardson et al., 2004).

Results

To explore the data, an initial cluster analysis was conducted looking specifically at the personality variables of the MACI, in order to see if they cluster into groups. Binary data depicting if the trait was present or absent for the individual was entered into a hierarchical cluster analysis using Ward’s method and the squared Euclidean distance using the statistical Programme PASW Version 18.0. Although sample size generally poses no problem for a cluster analysis (Stevens, 1992), there is

an ongoing debate as to the recommended case-to-variable ratio. Stevens (1992) reports that anywhere from 2:1 to 20:1 have been reported as appropriate although lower ratios should be considered as potentially less reliable. The current study has a 3:1 case-to-variable ratio, which is satisfactory but possibly less reliable than those with higher case-to-variable ratios. Everitt, Landau, Leese and Stahl (2010) recommend a technique named 'best cut' where the dendrogram is cut and clusters form clear groups below the cutting level. Upon inspection of the clustering dendrogram (Appendix C), there was a choice between a 2-cluster solution and a 3-cluster solution when using the 'best cut' technique. The decision was made to use the 3-cluster solution as this provided more detail to the researchers and had clearer, more logical groups. Details of the variables within each cluster are provided in Table 10.

Table 10

MACI Scales within each Cluster

	Clusters	
Cluster 1	Cluster 2	Cluster 3
Delinquent	Disturbed	Isolated/Depressed
Body Disapproval	Family Discord	Introversive
Eating Dysfunctions	Childhood Abuse	Inhibited
Sexual Discomfort	Oppositional	Peer Insecurity
Forceful	Identity Diffusion	Self-devaluation
Social Insensitivity	Substance Abuse	Depressive Affect
Delinquent Predisposition	Borderline	Doleful
Unruly	Suicidal Tendencies	
Dramatising	Impulsive Propensity	
Egotistical		
Conforming		
Submissive		
Anxious Feelings		

This initial cluster analysis suggested important groupings of personality types, however in order to advance the exploration of this data, an investigation into whether the individual participants in this study also clustered into similar groups was

conducted. Consequently, a further cluster analysis was conducted using the same statistical methods as previously described. However, this analysis clustered the individual cases rather than personality scales, allowing further exploration of the data and a closer replication of similar studies (e.g., Richardson et al., 2004; Oxnam & Vess, 2006).

Given the low case-to-variable ratio, the cluster analysis was repeated using different clustering methods such as the Single linkage approach and the Average linkage approach in order to examine the stability of the cluster solution. These approaches produced similar results and provided support for a 4-cluster solution. Details of the variables within each cluster are provided below in Table 11. According to Milligan and Cooper (1985), there are no specific rules for cluster selection and optimal selection is most likely to occur when the researcher has a good knowledge of the data and adheres to stopping rules (e.g., stopping with a sufficient number of clusters). Similar previous studies discovered between three and five clusters (e.g. Oxnam & Vess, 2006; Worling, 2001) and had clear similarities with the four-cluster solution of this study. Following a comparison with this previous literature, the current study selected a four-cluster solution (Appendix D) as this allowed for a detailed investigation of the data. According to Romesburg (1984), the choice of where to cut the dendrogram is subjective, but allows researchers to investigate in as much or as little detail as they wish and advises basing the number of clusters on previous comparable research.

Table 11

MACI Scales within each Cluster when clustered by individual cases

Clusters			
Cluster 1 Submissive/Anxious N=15	Cluster 2 Antisocial/Delinquent N=39	Cluster 3 Under-socialised/ isolated N=20	Cluster 4 Disturbed/ Oppositional N=9
Submissive	Unruly	Introversive	Unruly
Egotistical	Childhood Abuse	Inhibited	Oppositional
Conforming	Delinquent Predisposition	Doleful	Self-demeaning
Sexual Discomfort	Impulsive Propensity	Self-demeaning	Identity Diffusion
Anxious Feelings	Depressive Affect	Self-devaluation	Borderline
		Peer Insecurity	Self-devaluation
		Anxious Feelings	Childhood Abuse
		Depressive Affect	Substance Abuse
			Impulsive Propensity
			Depressive Affect
			Suicidal Tendencies

In order to identify significant associations between cluster membership and the MACI personality scales, chi-square analyses with Bonferroni Corrections have been conducted, using an adjusted p-value of 0.05 with the cluster solution being the independent variable and MACI scales being the dependent variables (Table 12). In addition, in order to identify significant associations between cluster membership and a variety of variables shown in the literature to be important in juvenile sex offending, cluster validation was conducted by either one-way ANOVAs on continuous variables or chi-square analyses on categorical variables, with the cluster solution being the independent variable and all other variables being the dependent variables. The chi-square analyses for categorical variables are presented in Table 13. Summary tables for each cluster are presented in Tables 14, 15, 16 and 17.

Profile Clusters

Cluster 1- Submissive/ Anxious.

Cluster 1 (N= 15) has been labeled the Submissive/Anxious group as the significantly elevated personality scales within this cluster were submissive ($\chi^2(3)$= 42.63, p<.001), anxious feelings ($\chi^2(3)$= 27.06, p<.001), conforming, ($\chi^2(3)$= 45.53, p<.001) and sexual discomfort ($\chi^2(3)$= 13.97, p<.05). The average age individuals within this cluster committed their index sexual offence was 14.27 years (SD=2.01) whilst their average age of referral to our treatment service was 15.97 years (SD=1.9). Within this cluster, 80% (n=12) of participants within were born in the UK with the remaining 20% (n=3) originating from Spain, Nigeria and the USA. With regards to intelligence (IQ) level, 33.3% (n=5) of individuals within this cluster scored below average, a further 33.3% (n=5) scored within the average range and 13.3% (n=2) scored above average. Of this cluster, 93.3% (n=14) of individuals were living with family which was significantly more than those individuals in cluster 4 ($\chi^2(1)$ =7.17, p<.05). Only one individual reported a death within the immediate family and 46.7% (n=7) described their parents as being divorced or separated. Of the 15 participants forming this cluster, three (20%) had experienced a placement with local care agencies.

Table 12

Chi-square analyses with Bonferroni Corrections and Effect Sizes for MACI scales and Cluster solutions

Scale	**Cluster 1 Submissive/ Anxious** N=15	**Cluster 2 Antisocial/ Delinquent** N=39	**Cluster 3 Undersocialised/ Isolated** N=20	**Cluster 4 Disturbed/ Oppositional** N=9	$\aleph^2$	**Chi-square P (df=3)**	**Cramer's V**
Introversive							
Number of cases	0	0	**12**	2	37.68	<.001(3)	V= 0.67
%within cluster	0.0%	0.0%	**60.0%**	22.2%			
%within scale	0.0%	0.0%	**85.7%**	14.3%			
Inhibited							
Number of cases	0	3	**14**	2	34.71	<.001(3)	V=0.65
%within cluster	0.0%	7.7%	**70.0%**	22.2%			
%within scale	0.0%	15.8%	**73.7%**	10.5%			
Doleful							
Number of cases	0	8	**11**	5	17.17	<.05(3)	V=0.45
%within cluster	0.0%	20.5%	**55.0%**	55.6%			
%within scale	0.0%	33.3%	**45.8%**	20.8%			
Submissive							
Number of cases	**12**	1	4	0	42.63	<.001(3)	V=0.72
%within cluster	**80.0%**	2.6%	20.0%	0.0%			
%within scale	**70.6%**	5.9%	23.5%	0.0%			
Unruly							
Number of cases	0	**5**	0	**4**	14.93	<.05(3)	V=0.42
%within cluster	0.0%	**12.8%**	0.0%	**44.4%**			
%within scale	0.0%	**55.6%**	0.0%	**44.4%**			
Conforming							
Number of cases	**10**	1	0	0	45.53	<.001(3)	V=0.74
%within cluster	**66.7%**	2.6%	0.0%	0.0%			
%within scale	**90.9%**	9.1%	0.0%	0.0%			

Oppositional							
Number of cases	0	2	3	**8**	42.60	<.001(3)	V=0.72
%within cluster	0.0%	5.1%	15.0%	**88.9%**			
%within scale	0.0%	15.4%	23.1%	**61.5%**			
Self-demeaning							
Number of cases	0	1	**6**	**4**	18.66	<.001(3)	V=0.47
%within cluster	0.0%	2.6%	**30.0%**	**44.4%**			
%within scale	0.0%	9.1%	**54.5%**	**36.4%**			
Borderline							
Number of cases	0	0	2	**6**	39.37	<.001(3)	V=0.69
%within cluster	0.0%	0.0%	10.0%	**66.7%**			
%within scale	0.0%	0.0%	25.0%	**75.0%**			
Identity Diffusion							
Number of cases	0	1	2	**7**	42.14	<.001(3)	V=0.71
%within cluster	0.0%	2.6%	10.0%	**77.8%**			
%within scale	0.0%	10.0%	20.0%	**70.0%**			
Self-devaluation							
Number of cases	0	4	**10**	**6**	25.10	<.001(3)	V=0.55
%within cluster	0.0%	10.3%	**50.0%**	**66.7%**			
%within scale	0.0%	20.0%	**50.0%**	**30.0%**			
Sexual Discomfort							
Number of cases	**4**	1	0	0	13.97	<.05(3)	V=0.41
%within cluster	**26.7%**	2.6%	0.0%	0.0%			
%within scale	**80.0%**	20.0%	0.0%	0.0%			
Peer Insecurity							
Number of cases	0	3	**17**	2	47.71	<.001(3)	V=0.76
%within cluster	0.0%	7.7%	**85.0%**	22.2%			
%within scale	0.0%	13.6%	**77.3%**	9.1%			
Childhood abuse							
Number of cases	0	**6**	3	**6**	17.98	<001(3)	V=0.47
%within cluster	0.0%	**15.4%**	15.0%	**66.7%**			
%within scale	0.0%	**40.0%**	20.0%	**40.0%**			

Substance-Abuse proneness							
Number of cases	0	4	0	**7**	38.25	<.001(3)	V=0.68
%within cluster	0.0%	10.3%	0.0%	**77.8%**			
%within scale	0.0%	36.4%	0.0%	**63.6%**			
Impulsive propensity							
Number of cases	0	**8**	5	**8**	24.81	<.001(3)	V=0.55
%within cluster	0.0%	**20.5%**	25.0%	**88.9%**			
%within scale	0.0%	**38.1%**	23.8%	**38.1%**			
Anxious feelings							
Number of cases	**8**	0	**7**	0	27.06	<.001(3)	V=0.57
%within cluster	**53.3%**	0.0%	**35.0%**	0.0%			
%within scale	**53.3%**	0.0%	**46.7%**	0.0%			
Depressive affect							
Number of cases	3	**9**	**13**	**9**	25.63	<.001(3)	V=0.56
%within cluster	20.0%	**23.1%**	**65.0%**	**100.0%**			
%within scale	8.8%	**26.5%**	**26.5%**	**26.5%**			
Suicidal tendency							
Number of cases	0	0	3	**5**	28.21	<.001(3)	V=0.58
%within cluster	0.0%	0.0%	15.0%	**55.6%**			
%within scale	0.0%	0.0%	37.5%	**62.5%**			

With regards to difficult developmental experiences, 20% (n=3) of this cluster reported having been emotionally or physically neglected, and 13.3% (n=2) said they had been physically abused either by their mother (6.7%, n=1) or their father (6.7%, n=1). A further 20% (n=3) reported having witnessed domestic violence and 20% (n=3) described having been a victim of sexual abuse by either a parent (6.7%, n=1) or another person (13.3%, n=2). Almost half of this cluster (40%, n=6) reported having been bullied and having friendship difficulties, whilst one participant (6.7%, n=1) describes having deliberately self-harmed at some point. With regards to aggressive behaviour, 40% (n=6) of the sample described this as being a specific difficulty for them. Two of the 15 (13.3%) individuals in this sample said they had a history of truanting from school.

In terms of previous offending, none of the sample had a history of previous sexual offending although 13.3% (n=2) had a history of violent offending. With regards to offending behaviour, 40% (n=6) offended against an adult or peer, 40% (n=6) offended against a child and the remaining 20% (n=3) of cases committed non-contact offences; this variable was not significantly associated with their cluster membership. Six of the 15 (40%) participants within this sample were convicted of rape, five (33.3%) of indecent assault, two (13.3%) of possession of illegal images, one (6.7%) of buggery and one (6.7%) of indecent exposure. The majority (66.7%, n=10) of offences were committed against females, however 13.3% (n=2) offended against males and 6.7% (n=1) offended against both sexes. Only one individual (6.7%) reported being under the influence of substances when offending whilst 26.7% (n=4) of the sample completely denied their index offence.

Table 13

Chi-square analyses with Bonferroni Corrections and Effect Sizes for Categorical Variables and Cluster solutions

Developmental Variables	Cluster 1 Submissive/ Anxious N=15	Cluster 2 Antisocial/ Delinquent N=39	Cluster 3 Under-socialised/ isolated N=20	Cluster 4 Disturbed/ Oppositional N=9	χ^2	Chi-square P (df=3)	Cramer's V
Living with Parent/s							
Number of cases	14	34	16	4	10.64	<.05(3)	V=0.36
%within cluster	93.3%	87.2%	80.0%	44.4%			
%within scale	16.9%	41.0%	23.5%	5.9%			
Emotionally/Physically neglected							
Number of cases	3	16	9	9	15.06	<.05(3)	V=0.43
%within cluster	20.0%	41.0%	45.0%	100.0%			
%within scale	8.1%	43.2%	43.2%	24.3%			
Deliberate self-harm							
Number of cases	1	2	1	4	14.08	<.05(3)	V=0.41
%within cluster	6.7%	5.1%	5.0%	44.4%			
%within scale	12.5%	25.0%	12.5%	50.0%			
Local Care							
Number of cases	3	13	5	7	9.76	<.05(3)	V=0.34
%within cluster	20.0%	33.3%	25.0%	77.8%			
%within scale	10.7%	46.4%	17.9%	25.0%			
Previous Sexual and Violent Offences							
Number of cases	0	1	0	2	10.38	<.05(3)	V=0.35
%within cluster	0.0%	2.6%	0.0%	22.2%			
%within scale	0.0%	33.3%	0.0%	66.7%			

Table 14

Cluster 1 Significant Variables

Variable	**Cluster significantly different from**	χ^2	**Chi-square P (df=3)**	**Cramer's V**
Submissive	N/A	42.63	<.001(3)	V= 0.72
Anxious Feelings	N/A	27.06	<.001(3)	V= 0.57
Conforming	N/A	45.53	<.001(3)	V=0.74
Sexual Discomfort	N/A	13.97	<.05(3)	V=0.41
Living with Family	More than Cluster 4	7.17	<.05(1)	V=0.55

Cluster 2- Antisocial/Delinquent.

Cluster 2 (N= 39) was named the Antisocial/Delinquent group as the significantly elevated personality scales within this cluster were Unruly ($\chi^2(3)= 14.93$, $p<.05$, Childhood Abuse ($\chi^2(3)= 17.98$, $p<.001$, Impulsive Propensity ($\chi^2(3)= 24.81$, $p<.001$) and Depressive Affect ($\chi^2(3)= 25.63$, $p<.001$). The average age that individuals within this cluster committed their index sexual offence was 15.15 years (SD=2.16) whilst their average age of referral to the treatment service was 16.43 years (SD=2.06). Seventy-seven percent (n=30) of participants within this cluster were born in the UK with the remaining 23% (n=9) originating from Africa, Asia and South America. With regards to intelligence (IQ), 69.2% (n=27) of individuals within this cluster scored below average, a further 20.5% (n=8) scored within the average range and 5.1% (n=2) scored above average. In this cluster, 87.2% (n=34) of individuals were living with family which was significantly more than those individuals in cluster 4 ($\chi^2(1)=8.10$, $p<.05$). Ten percent (n=4) of individuals within this cluster reported a death within the immediate family and

71.8% (n=28) described their parents as being divorced or separated. Of the 39 participants forming this cluster, 13 (33.3%) had experienced a placement with local care agencies.

With regards to difficult developmental experiences, 41% (n=16) of this cluster reported having been emotionally or physically neglected, and 43.6% (n=17) said they had been physically abused either by their mother (10.3%, n=4), their father (25.6%, n=10) or another person (7.7%, n=3), this is significantly more than those in cluster 1 ($\chi2(1)= 4.35$, $p<.05$) . A further 38.5% (n=15) reported having witnessed domestic violence and 28.2% (n=11) described having been a victim of sexual abuse by either a parent (5.1%, n=2), a stranger (10.3%, n=4) or another person know to them (12.8%, n=5). Around 35.9% (n=14) of this cluster reported having been bullied and 43.6% (n=17) described difficulties forming friendships, whilst two participants (5.1%, n=2) described having deliberately self-harmed at some point. With regards to aggressive behaviour, 56.4% (n=22) of the sample described this as being a specific difficulty for them. Fourteen of the 39 (35.9%) individuals in this sample said they had a history of truanting from school.

In terms of previous offending, 7.7% (n=3) of the sample had a history of previous sexual offending, 23.3% (n=9) had a history of violent offending and 2.6% (n=1) had a history of both sexual and violent offending. With regards to victim choice, 48.7% (n=19) offended against an adult or peer, 38.5% (n=15) offended against a child and the remainder committed non-contact offences; this variable was not significantly associated with cluster membership. Within this sample, 21 of the 39 (53.8%) participants were convicted of indecent assault, (20.5%, n=8) of rape, 10.3% (n=4) of USI, 5.1% (n=2) of indecent exposure, 5.1% (n=2) of gross indecency and 2.6% (n=1) of buggery. The majority (74.4%, n=29) of offences were committed against females, however 17.9% (n=7) offended against males and 5.1% (n=2) offended against both sexes. Around 20.5% (n=8) reported being under the influence of

substances when offending which is significantly less than those in cluster 4 ($\chi^2(1)= 4.33$, $p<.05$) and 41% (n=16) of this cluster completely denied their index offence.

Table 15

Cluster 2 Significant Variables

Variable	**Cluster significantly different from**	χ^2	**Chi-square P (df=3)**	**Cramer's V**
Unruly	N/A	14.93	<.05(3)	V=0.42
Childhood Abuse	N/A	17.98	<.001(3)	V=0.47
Impulsive Propensity	N/A	24.81	<.001(3)	V=0.55
Depressive Affect	N/A	25.63	<.001(3)	V=0.56
Living with Family	More than Cluster 4	8.1	<.05(1)	V=0.43
Substance Abuse	Less than Cluster 4	4.33	<.05(1)	V=0.41
Physical Abuse	More than Cluster 1	4.35	<.05(1)	V=0.28

Cluster 3 – Under-socialised/ Isolated.

Cluster 3 (N= 20) was named the Under-socialised/Isolated group as the significantly elevated personality scales within this cluster were Introversive ($\chi^2(3)= 37.68$, $p<.001$, Inhibited ($\chi^2(3)= 34.71$, $p<.001$), Doleful ($\chi^2(3)= 17.17$, $p<.05$), Self-demeaning ($\chi^2(3)= 18.66$, $p<.001$), Self-devaluation ($\chi^2(3)= 25.10$, $p<.001$), Peer Insecurity ($\chi^2(3)= 47.71$, $p<.001$), Anxious Feelings ($\chi^2(3)= 27.06$, $p<.001$) and Depressive Affect ($\chi^2(3)= 25.63$, $p<.001$).

The average age individuals within this cluster committed their index sexual offence was 14.85 years (SD=2.39) whilst their average age of referral to our treatment service was 16.79 years (SD=1.80). Eighty percent (n=16) of participants within this cluster were born in the UK with the remainder originating from China, Nigeria, Somalia and Zimbabwe. With

regards to intelligence (IQ), 50.0% (n=10) of individuals within this cluster scored below average, a further 25% (n=5) scored within the average range and 5% (n=1) scored above average. In this cluster, 80% (n=16) of individuals were living with family, 5% (n=1) had experienced a death within their immediate family and 35% (n=7) described their parents as being divorced or separated. Of the 20 participants forming this cluster, 5 (25%) had experienced a placement with local care agencies which was significantly less than cluster 4 ($\chi^2(1)= 7.13, p<.05$).

With regards to difficult developmental experiences, 65% (n=13) of this cluster reported having been emotionally or physically neglected, and 38% (n=5) said they had been physically abused either by their mother, their father (46%, n=6) or another person (16%, n=2). A further 20% (n=4) reported having witnessed domestic violence and 10% (n=2) described having been a victim of sexual abuse all by a stranger. Sixty percent (n=12) of this cluster reported having been bullied and 55% (n=11) described difficulties forming friendships, whilst one participant described having deliberately self-harmed at some point. With regards to aggressive behaviour, 40% (n=8) of the sample described this as being a specific difficulty for them. Two of the 20 (10%) individuals in this sample said they had a history of truanting from school.

In terms of previous offending, 15% (n=3) of the sample had a history of previous sexual offending, 5% (n=1) had a history of violent offending whilst 0% had a history of both sexual and violent offending. With regards to offending behaviour, 50% (n=10) offended against an adult or peer, 30% (n=6) offended against a child and the remaining 10% (n=2) committed non-contact offences; this variable was not significantly associated with cluster membership. Within this sample, 14 of the 20 (70.0%) participants were convicted of indecent assault, (10%, n=2) of rape, 5.0% (n=1) of underage sex, 10% (n=2) of indecent exposure and 5% (n=1) of possession of illegal images. The majority (90%, n=18) of offences were

committed against females and 5.0% (n=1) reported being under the influence of substances when offending.

Table 16

Cluster 3 Significant Variables

Variable	Cluster significantly different from	χ^2	Chi-square P (df=3)	Cramer's V
Introversive	N/A	37.68	<.001(3)	V=0.67
Inhibited	N/A	34.71	<.001(3)	V=0.65
Doleful	N/A	17.17	<.05(3)	V=0.45
Self-Demeaning	N/A	18.66	<.001(3)	V=0.47
Self-Devaluation	N/A	25.10	<.001(3)	V=0.55
Peer Insecurity	N/A	47.71	<.001(3)	V=0.76
Anxious Feelings	N/A	27.06	<.001(3)	V=0.57
Depressive Affect	N/A	25.63	<.001(3)	V=0.56
Local Care	Less than Cluster 4	7.13	<.05(1)	V=0.50

Cluster 4- Disturbed/Oppositional.

Cluster 4 (N= 9), the smallest cluster, has been labeled the Disturbed/Oppositional group as the significantly elevated personality scales within this cluster were Unruly ($\chi^2(3)= 14.93$, $p<.05$), Oppositional ($\chi^2(3)= 42.60$, $p<.001$), Self-demeaning ($\chi^2(3)= 18.66$, $p<.001$), Identity Diffusion ($\chi^2(3)= 42.14$, $p<.001$), Borderline ($\chi^2(3)= 39.37$, $p<.001$), Self-devaluation ($\chi^2(3)= 25.10$, $p<.001$), Childhood Abuse ($\chi^2(3)= 17.98$, $p<.001$), Substance Abuse ($\chi^2(3)= 38.25$, $p<.001$), Impulsive Propensity ($\chi^2(3)= 24.81$, $p<.001$), Depressive Affect ($\chi^2(3)= 25.63$, $p<.001$) and Suicidal Tendency ($\chi^2(3)= 28.21$, $p<.001$).

The mean age at which individuals within this cluster committed their index sexual offence was 14.78 years (SD=1.78) whilst their average age of referral to the treatment service was

16.56 years (SD=1.51). One hundred percent of participants within this cluster were born in the UK and with regards to intelligence (IQ), 71.4% (n=6) of individuals within this cluster scored below average and 28.6% (n=3) scored above average. Of this cluster, only 44.4% (n=4) of individuals were living with family which is significantly less than cluster 1 ($\chi^2(1)=7.17$, $p<.05$) and cluster 2 ($\chi^2(1)=8.1$, $p<.05$) and only one individual reported a death within the immediate family. Eighty-eight percent (n=8) described their parents as being divorced or separated and 77.8% (n=7) had experienced a placement with local care agencies which is significantly more than cluster 3 ($\chi^2(1)= 7.13$, $p<.05$), cluster 2 ($\chi^2(1)= 5.94$, $p<.05$) and cluster 1 ($\chi^2(1)= 7.73$, $p<.05$).

With regards to difficult developmental experiences, 100% (n=9) of this cluster reported having been emotionally or physically neglected which was significantly more than cluster 1 ($\chi^2(1)=14.40$, $p<.001$), cluster 2 ($\chi^2(1)=10.19$, $p<.001$) and cluster 3 ($\chi^2(1)=7.98$, $p<.05$). Significantly more people than cluster 1 ($\chi^2(1)=4.85$, $p<.05$) said they had been physically abused (55.6%, n=5) either by their mother (60.0%, n=3), their father (20.0%, n=1) or another (20%, n=1). A further 33.3% (n=3) reported having witnessed domestic violence and 33.3% (n=3) described having been a victim of sexual abuse by either a parent (33.3%, n=1) or another person (66.7%, n=2). Around 22.2% (n=2) reported having been bullied and 66.7% (n=6) reported having friendship difficulties, whilst 44.4% (n=4) described having deliberately self-harmed at some point which was significantly more than cluster 2 ($\chi^2(1)=10.36$, $p<.05$) and cluster 1 ($\chi^2(1)=4.87$, $p<.05$). With regards to aggressive behaviour, 88.9% (n=8) of the sample described this as being a specific difficulty for them which was again significantly more than cluster 1 ($\chi^{2(}1)=5.53$, $p<.05$) and cluster 3 ($\chi^2(1)=5.99$, $p<.05$). Four of the 9 (44.4%) individuals in this sample said they had a history of truanting from school.

In terms of previous offending, 22.2% (n=2) of the sample had a history of previous sexual and violent offending and 44.4% (n=4) had a history of just violent offending which was

significantly more than cluster 3 ($\chi^2(1)=6.77$, $p<.05$). With regards to victim choice, 77.8% (n=7) offended against an adult or peer and 11.1% (n=1) offended against a child and the remaining were unclear; this variable was not significantly associated with cluster membership. Six of the nine (66.7%) participants within this sample were convicted of indecent assault and 33.3% (n=3) were convicted of rape. The majority (55.6%, n=5) of offences were committed against females, however 22.2% (n=2) offended against males and 22.2% (n=2) offended against both sexes. Five of the nine (55.6%) individuals in this cluster reported being under the influence of substances when offending which was significantly more than cluster 1 ($\chi^2(1)=7.17$, $p<.05$), cluster 2 ($\chi^2(1)=4.33$, $p<.05$) and cluster 3 ($\chi^2(1)=9.67$, $p<.05$). Around 33.3% of the sample completely denied their index offence which is significantly more than cluster 2 ($\chi^2(1)=4.33$, $p<.05$).

Table 17

Cluster 4 Significant Variables

Variable	**Cluster significantly different from**	χ^2	**Chi-square P (df=3)**	**Cramer's V**
Unruly	N/A	14.93	.05(3)	V=0.42
Oppositional	N/A	42.60	.001(3)	V=0.72
Self-Demeaning	N/A	18.66	.001(3)	V=0.47
Identity Diffusion	N/A	42.14	<.001(3)	V=0.71
Borderline	N/A	39.37	<.001(3)	V=0.69
Self-Devaluation	N/A	25.10	.<001(3)	V=0.55
Childhood Abuse	N/A	17.98	<.001(3)	V=0.47
Substance Abuse	N/A	38.25	<.001(3)	V=0.68
Impulsive Propensity	N/A	24.81	<.001(3)	V=0.55
Depressive Affect	N/A	25.63	<.001(3)	V=0.56

Suicidal Tendency	N/A	28.21	<.001(3)	V=0.58
Living with Family	Less than Cluster 1	7.17	<.05(1)	V=0.55
	Less than Cluster 2	8.1	<.05(1)	V=0.43
Local Care	More than Cluster1	7.73	<.05(1)	V=0.57
	More than Cluster 2	5.94	<.05(1)	V=0.62
	More than Cluster 3	7.13	<.05(1)	V=0.50
Emotional/Physical Neglect	More than Cluster 1	14.40	<.001(1)	V=0.78
	More than Cluster 2	10.19	<.001(1)	V=0.48
	More than Cluster 3	7.98	<.05(1)	V=0.52
Physical Abuse	More than Cluster 1	4.85	<.05(1)	V=0.45
Self-harm	More than Cluster1	4.87	<.05(1)	V=0.45
	More than Cluster 2	10.36	<.05(1)	V=0.36
Aggressive Behaviour	More than Cluster 1	5.53	<.05(1)	V=0.48
	More than Cluster 3	5.99	<.05(1)	V=0.56
Previous Violent Offending	More than Cluster 3	6.77	<.05(1)	V=0.43
Substance Abuse	More than Cluster1	7.17	<.05(1)	V=0.56
	More than Cluster 2	4.33	<.05(1)	V=0.43
	More than Cluster 3	9.67	<.05(1)	V=0.62
Deny Offence	More than Cluster 2	4.33	<.05(1)	V=0.56

Discussion

This study aimed to conduct a cluster analysis of the personality variables derived from the MACI and this resulted in a three-group classification of community-based adolescent sex offenders: Delinquent, Disturbed and Isolated/Depressed. In order to investigate these clusters in more detail, a further cluster analysis was run, this time looking specifically at the

personality scale elevations for the individuals within this sample. On this occasion, the same statistical procedure resulted in a four-group typology: Submissive/Anxious, Antisocial/Delinquent, Undersocialised/Isolated and Disturbed/Oppositional. Although obvious similarities exist between these groupings, the additional cluster on the individual-based analysis provides further depth to the Isolated/Depressed cluster by producing both the Undersocialised/Isolated and the Submissive/Anxious groups.

The Submissive/Anxious cluster represents a group of individuals who are likely to produce elevated scores on the submissive, anxious, conforming, sexual discomfort and egotist scales of the MACI. According to McCann (1999), adolescents with elevated scores on the submissive scale are often "passive and submissive in interpersonal relationships… tending to be clingy and avoiding situations where they will have to assume more mature roles" (p.71). It is likely this closely relates to the elevations on the anxiety and conforming scales, where these individuals may feel uncomfortable in social situations and consequently act in socially desirable ways to avoid conflict. McCann (1999) also states that such individuals "beneath the surface of restraint and rigidity, may also have intense anxiety and ambivalence over the wish to assert his or her needs and wishes versus the need to conform and show self-restraint" (p.80). McCann (1999) continues by stating that these individuals, as a consequence of this ongoing internal battle, may experience periods of feeling oppositional and angry which is closely followed by guilt and the constraint of emotions.

As one might expect, the majority (93.3%) of the individuals forming the Submissive/Anxious cluster were living at home with family members. This was a larger percentage than any other cluster produced in this analysis. One fifth of this cluster reported having been a victim of some form of abuse (sexual, physical or neglect); this is similar to the 25% reported by Worling (1995) for adolescent sex offenders with female child, peer or adult victims. Almost half of this cluster described having experienced bullying which may be

related to their submissive and anxious profiles and possibly their identification of aggressive behaviour as a difficulty for them. As Coie, Dodge, Terry and Wright (1991) found, boys who were the victims of aggressive bullying become attuned to hostile interactions with peers and therefore frequently respond with inappropriate levels of aggression or “reactive aggression”. With regards to offending behaviour, this group of individuals had very little offending history, a variety of victims (younger, peer and older, male, female and both genders) and a diversity of offences. This highlights the insignificance of attempting to classify adolescent sexual offenders by their offence or by their victim as these details may not be the important markers of sexual preference and development that they are in adult offenders (Worling, 2001).

The second cluster, Antisocial/Delinquent, incorporates individuals who have elevations on the unruly, childhood abuse, delinquent predisposition, impulsive propensity and depressive affect scales of the MACI. According to McCann (1991) individuals with elevated scores on the unruly scale often reject social norms and choose to act in socially unacceptable ways, often being ‘oppositional, combative and uncooperative’ (p.75). Their behaviour may also be manipulative, impulsive and irresponsible and this often results from their view that others are untrustworthy and lacking in sincerity. McCann (1991) suggests that these individuals may ‘seek revenge for some perceived injustice’ and attempt to find other ‘manipulative or antisocial ways to avoid future problems’ (p.76). It is possible that, for some individuals the experience of childhood abuse may situate itself as the ‘injustice’ and the unruly and delinquent behaviours are attempts to gain revenge and to remove depressive feelings.

The Antisocial/Delinquent cluster was the largest group in this study with a high percentage of these individuals living at home with family members. However, a large proportion of this group also described their parents as being divorced or separated. Findings on the importance of living arrangements of adolescent sex offenders suggest that given the

high proportions of 'broken homes', they are more likely to live in a female-only household (Ikomi, Rodney & McCoy, 2009). It is possible that in households where there is only one adult provider, financial concerns are an important stressor thus the supervision of children may suffer. Furthermore, one third of the individuals in this cluster have been in a social care placement at some point in their childhood suggesting possible poor childhood attachment. In previous research, insecure attachment is reported to increase the likelihood of sexual offending by 'reducing empathic capacity, increasing emotional dysregulation and increasing the likelihood of a coercive interpersonal style' (Seto & Lalumiere, 2010, p. 530). I

It is possible that the Antisocial/Delinquent cluster of adolescent sex offenders are the most similar cluster, in terms of developmental experiences and personality features, to general (non-sexual) adolescent offenders. These individuals are reported by Letourneau and Mine (2003) to be caught up in a larger pattern of general offending, where the sexual aspect may play a relatively small part. This cluster is similar to these non-sexual offenders, not only in terms of their personality profiles but also in terms of the developmental experiences and demographic details where they often come from underprivileged and broken homes (Letourneau & Mine, 2003). The literature would suggest that such offenders are more likely to reoffend non-sexually than sexually (Caldwell, 2002, 2007; Righthand & Welch, 2001; Worling & Curwen, 2000; Worling & Langstrom, 2006).

It should also be noted that almost 70% of the Antisocial/Delinquent cluster had IQs below average which suggests not only cognitive impairment but also possible interpersonal and socio-emotional difficulties. In certain research studies, lower IQ has been reported to be associated with increased 'sexual acting out' and having a sexual abuse history (McCurry et al., 1998). Furthermore Cantor, Blanchard, Robichaud and Christensen (2005) reported that individuals with lower cognitive abilities may have poorer judgment or impulse control and thus may be more likely to commit sexual offences opportunistically. On the other hand,

individuals with lower cognitive abilities may experience more sexual rejection by peers and may, consequently, be more likely to try to rely upon children for intimacy or to engage in sexual coercion against peers or adults (Seto & Lalumiere, 2010).

Although childhood abuse is not a significantly elevated scale within this cluster, almost half of this group identified some form of abuse during their early developmental years. The majority of these individuals identified having been physically abused, with a similar number reporting having witnessed domestic violence. Previous research suggests that not only is witnessing family violence related to adolescent sex offending but also to contact offending in general. These individuals were also reported to have more callous and unemotional traits than other offenders (Caputo et al., 1999). Social learning theory informs our understanding of the origins of violent behaviour in that children can learn and imitate what they see and experience. Considerable evidence indicates that children who are exposed to domestic violence, as well as to violence in their community, are at much higher risk of becoming both perpetrators and victims of violence (Bell, 1995), it is possible this explains the high level of aggressive behaviour reported by the adolescents in this cluster.

With regards to the offending behaviour of the individuals in the Antisocial/Delinquent cluster, one quarter had a history of violent offending but very few had been convicted of a previous sexual offence. There was no significant difference with regards to the victim age. However, a higher percentage offended against females and the offence was more often indecent assault. One fifth of the adolescents in this cluster admitted to being under the influence of substances when the index offence occurred and almost half of the cluster completely denied committing their offence. According to Salter (2003) this is a method of avoiding personal involvement in the sexual abuse in order to lessen the severity of their actions. Some researchers have observed that once the young offender’s level of denial has

been reduced, they can begin to empathise with their victim and thus be motivated to make progress in treatment (Rich, 2009).

The third cluster, Undersocialised/Isolated, was formed from individuals with elevated scores on the introversive, inhibited, doleful, self-demeaning, self-devaluation, peer insecurity, anxious feelings and depressive affect personality scales. McCann (1999) states that individuals with a combination of elevated scores on the introversive, inhibited and doleful scales are likely to lack the capacity to 'experience the rewards and positive experiences that occur in life' (p.87). Furthermore, McCann (1999) describes these adolescents as detached and uninvolved with others where social withdrawal and isolation would be likely to be a dominant presentation. The combination of these elevations may also reflect that the adolescent is moderately or severely depressed which is supported by a high number of elevations on the depressive affect scale.

Half of the Undersocialised/Isolated cluster scored below average on the WASI IQ assessment and over half described being bullied, suggesting that school may have been a particularly difficult environment for these individuals. There was also a high number of individuals who have been victims of physical abuse, particularly from their parents which, according to Prinz (1988), 'may lower self-esteem and the sexual offence may be a way of restoring self-worth' (p.104). With regards to the offending behaviour of the Undersocialised/Isolated cluster a very small number had been convicted of previous offences. Concerning their index offence, half of the group offended against peers or adults and the majority of these offences were indecent assault against female victims.

The final and smallest of the clusters was Disturbed/Oppositional, where individuals had elevations on the unruly, oppositional, self-demeaning, identity diffusion, borderline, self-devaluation, childhood abuse, substance abuse, impulsive propensity, depressive affect and

suicidal tendency scale of the MACI. McCann (1999) reports that individuals with elevations on the oppositional scale are often 'confused about themselves and their future, and have difficulty controlling their mood' as a result they may 'manifest their resentment and oppositionality by spoiling the pleasures or enjoyment others feel through passive-aggressive and indirect hostile comments' (p.81). These experiences may also explain high scores on the identity diffusion and unruly scale alongside their tendency to suffer from low mood and consequently to identify with the depressive and suicidal items on the MACI.

The Disturbed/Oppositional cluster displayed highly troubled developmental pathways, with all of these individuals reporting emotional or physical neglect. A large proportion reported separated or divorced parents and a similarly high number experienced local care placements; this was significantly more than any other cluster. According to Marshall, Hudson and Hodkinson (1993) poor attachment does not only arise from poor parenting but also from disrupted care where those who have spent critical periods away from their parents are more likely to display delinquent and other problematic behaviours. Furthermore, attachment theorists have described that inadequate bonds with parents often lead to poor social relations where individuals are afraid or mistrustful of others but are also lacking in the necessary skills for productive social behaviour. This is supported by the high number of individuals in this cluster reporting friendship difficulties and truanting school. Alongside poor attachment, over half of this group had been physically abused mostly by their mother, one third had witnessed domestic violence and one third had been sexually abused. Almost half of the adolescents in this group had self-harmed and a large number reported aggressive behaviour as being a specific difficulty for them.

The offending history of the Disturbed/Oppositional cluster was significantly different to other clusters, as almost half of this cluster had a history of violent offending. The other offending characteristics were not significantly different to other clusters, with the majority of

the Disturbed/Oppositional cluster indecently assaulting female adults or peers. However, it is also noted that these juveniles have the highest levels of alcohol and drug abuse when committing their index offence, which suggests these juveniles may attempt to escape high levels of distress by using illicit substances.

These findings are somewhat consistent with previous studies of personality-based typologies of adolescent sexual offenders. Prior studies have identified between three and five clusters of personality types often including an antisocial/impulsive and an isolated/socially inadequate group. These are mirrored in cluster three (Undersocialised/Isolated) and cluster two (Antisocial/Delinquent) of the current study. In particular, the results of the current study are most closely related to those of Richardson et al., (2004) without the identification of the 'normal' group. Richardson et al.'s (2004) Antisocial group had elevations on the scales associated with Conduct Disorder related behaviours, disregard for social norms and impulsivity such as Delinquent Predisposition and Impulsive Propensity. Similar elevations were reported in cluster two, Antisocial/Delinquent, and cluster four of the current study.

Richardson et al.'s (2004) Submissive group compares closely to cluster one, Submissive/Anxious, of the current study where the adolescent 'is experiencing mood disturbance rather than presenting with a disruptive behaviour disorder' (p.294). Their Dysthymic/Inhibited group is the largest group in their study and represents adolescents who are socially withdrawn, isolated and who are likely to be moderately or severely depressed. This group has similarities to cluster three, Undersocialised/Isolated, of the current study. Richardson et al.'s final cluster, Dysthymic/Negativistic represents oppositional, unruly and dysthymic adolescents who are self-devaluating, prone to substance abuse and who score on the Borderline Tendency scale. This group has clear similarities to cluster four, Disturbed/Oppositional of the current study. Unfortunately, the similarities between these

studies can only be observed so far as the personality characteristics are concerned given that Richardson et al. did not investigate the offence or developmental factors of their sample.

Alongside the similarities between the current study and that of Richardson et al. (2004), there are also parallels with the studies of Smith et al. (1987) and Worling (2001). The Submissive/Anxious cluster is similar to the Immature group discovered by Smith et al. and the Overcontrolled/reserved group by Worling. Furthermore, the Undersocialised/Isolated group resembles Smith et al.'s Conduct Disordered and Worling's Unusual/Isolated clusters. The Disturbed/Oppositional cluster is similar to Worling's Antisocial/Impulsive group and the Antisocial/Delinquent resembles Smith et al.'s Socialised Delinquents and Worling's Confident/Aggressive group. Similarly to Smith et al.'s, Oxnam and Vess' (2006) and Worling's typologies, there were no significant between-group differences with respect to victim age, offence type or victim gender. It is likely this is related to adolescent sexual offenders being more 'fluid' regarding their sexual inclinations due to their shifting sexual development (Worling, 2001, p.161).

Implications for Treatment

At present, the majority of adolescent sexual offending treatment is conducted within group treatment programmes using a standard, one-size-fits-all approach based on cognitive-behavioural techniques (Davis & Leitenberg, 1987; Veneziano & Veneziano, 2002). However, in the UK at present there is very little community treatment available which is sustained over long periods of time and group work is generally only offered whilst in custody. Current research informs us that adolescent sexual offenders are a group of individuals with a wide variety of factors driving their sexual and general offending behaviour and the heterogeneity of this group should be borne in mind when providing assessment or treatment (e.g. Barbaree et

al., 1993; Hunter et al., 2003). Consequently their developmental history and offending behaviour need to be explored on an individual basis through the use of an initial thorough and structured clinical interview. This is a vital component in targeting treatment accurately, assessing risk and identifying the specific needs of the young person. The current study identifies the importance of developmental experiences of this cohort and specifically highlights common difficulties experienced by these young people such as witnessing domestic violence, being a victim of abuse and family breakdown which may act as important drivers to their sexual offending behaviours. Recent research (e.g. Borduin & Schaeffer, 2001) emphasises the benefits of intensive treatment models such as Multi-Systemic Therapy (MST), which are able to specifically target these developmental issues.

A critical assumption of MST is that caregivers are usually the main conduits of change and therefore MST interventions focus on empowering caregivers to gain the skills needed to be more effective with their children (Henggeler, Schoenwald, Borduin, Rowland & Cunningham, 2009). Rigorous evaluations with adolescent offenders have identified MST as successful in reducing youth antisocial behaviour, improving family and peer relations and the academic performance of adolescent sex offenders (Borduin & Schaeffer, 2001; Letourneau et al., 2009). This method was also found by (Borduin & Schaeffer, 2002) to have the largest effect sizes on recidivism in adolescent sex offenders. The results of this study point to the role of the family as a support system being a pivotal factor for this sample and therefore, an intervention such as MST which clinically targets parental attitudes and behaviours could be vital in providing these adolescents with necessary protective factors.

Given that MST is not widely available and is an expensive, intensive option, it is necessary to explore how the current study and recent research can inform existing adolescent sexual offending treatment groups. As no significant relationships between offence/victim characteristics and the MACI profiles of these adolescents were observed, there is a strong

argument to be made for treatment focused on clinical needs rather than offence-specific work. Whilst current treatment groups are generally based on offence characteristics, it could enhance their efficacy if groups were instead formed by personality type and clinical presentation. Consequently, the MACI tool, alongside clinical interviews is a vital instrument for practitioners at the assessment stage of working with adolescent sex offenders. Such a comprehensive assessment would not only aid the identification of the clinical needs of the adolescent, but would also assist practitioners in better targeting therapeutic interventions in response to clinical as well as forensic needs.

Although treatment generally focuses on restructuring the individual's knowledge and beliefs, it is important to consider these with regards to the external systems (e.g., wider society) which impact upon the development and maintenance of sexual offending behaviours. According to Conte (1986), attitudes supporting sexually abusive behaviour may be uncovered in the peer group, the community and the culture where the client has grown up. These may be more apparent in individuals originating from a significantly disadvantaged background. Similarly, it may be important to consider an individual's level of masculinity as, if elevated, this can often involve high levels of risk taking, dominance, aggressiveness and a demand for power over others (Ryan et al., 2010). Farr et al., (2004) compared the scores of hypermasculinity between adolescent sex offenders and non-offenders and discovered that sex offenders scored significantly higher on the 'sexual attitudes towards females' scale and the 'adversarial attitudes towards females and sexual minorities scale'. This suggests that further investigation into societal impact upon beliefs and opinions and high levels of hypermasculinity in adolescent sex offenders may be warranted and may be important treatment targets.

In light of the four-group personality typology identified in the current study, treatment groups may benefit from a more individualised approach where personality is taken into account when assigning individuals to treatment groups. For instance the Submissive/Anxious group of adolescents has been identified as individuals who often have a history of bullying or victimisation which has left them feeling uncomfortable in social situations yet often battling a desire to have their social needs met. Such adolescents may benefit from interventions addressing their low confidence and avoidance of interpersonal interactions. Worling (2001) suggests educating such individuals on basic interpersonal skills such as starting conversations, introducing one's self and asking each other questions. These techniques may also improve their self-esteem and confidence. Concentrating on future-focused interventions such as the Good Lives Model (Ward & Brown, 2004) would allow this cohort to explore legal and prosocial methods of meeting their needs. Ward and Gannon (2006) suggest that the Good Lives Model not only focuses on capability/strength enhancement and risk management but would also 'result in clinical practice that is deeply respectful of offenders' status as human beings but mindful of the fact that they have committed harmful actions against children and adults' (p.93).

With regards to the Antisocial/Delinquent group of adolescent sexual offenders, given the high levels of reported childhood abuse and local care placements, treatment aimed at victimization or history of trauma may be warranted even when a history of abuse is denied. With such high numbers of individuals reporting 'broken homes', MST would be a promising approach with interventions specifically targeting support systems, however, it may be recommended for community-based family therapists to aid with such cases alongside treatment if the MST option is not available. The high levels of general offending within this group suggests treatment aimed at both the alleviation of internalizing symptoms and at improving cooperation/reducing deviancy may be useful for juveniles in this group.

Furthermore, a large proportion of individuals within this group have below average IQs which suggests treatment should be measured and repetitive, focused on helping to improve problem-solving skills and over time working through denial.

The Undersocialised/Isolated group may require similar treatment to that of the Anxious/Submissive group with the focus being on improving social skills, self-worth and mood. As deficits in these areas are often identified as the drivers in offending behaviour, their risk of reoffending could be dramatically reduced with successful treatment. The Disturbed/Oppositional group is almost certainly the most challenging cohort with regards to treatment, given their troubled developmental pathways, the presence of psychopathological traits and high levels of substance misuse. According to Shi and Nicol (2007) adolescents who have suffered poor attachment, which this group often have, may require intensive treatment where they are provided with close and consistent supervision. They may also benefit from similar treatment to the Antisocial/Delinquent group such as anger management and trauma-specific cognitive-behavioural interventions (Cohen, Berliner & Mannarino, 2000).

Many researchers agree upon the importance of the relationship between an individual's level of risk and their treatment, which is discussed in detail in the Risk-Need-Responsivity model (Andrews, Bonta & Hoge, 1990; Andrews, Bonta & Wormith, 2006; Hoge & Andrews, 2003). They argue that the intensity of treatment should match the level of risk posed by the offender whilst taking into consideration their treatment needs and their likelihood of benefitting from treatment. The responsivity section of the model refers to the effectiveness of treatment with regards to the characteristics of the offender. Within the current study it is likely that the riskiest individuals are the Antisocial/Delinquent and the Disturbed/Oppositional groups. However, it is also probable that these groups would not benefit from treatment at the level the Anxious/Submissive and the Undersocialised/Isolated groups would. Both direct clinical experience and research indicates that treatment with

juveniles who have psychopathological traits is likely to be challenging and so it may need to be relatively long-term compared to treatment of juveniles without these characteristics (Forth, Kosson & Hare, 2003).

Client-centred and psychologically minded approaches have been advocated by several researchers when working with sex offenders (Craissati & Beech, 2003; Harkins & Beech, 2007a, 2007b) as they concentrate on changes within the person and their environment in order to reduce their chances of sexual reoffending. This is vital when working with adolescents given the 'fluidity' of their personality characteristics and their ongoing developmental changes. As the International Association for the Treatment of Sexual Offenders (Miner et al., 2006) state in their principles of care for adolescent sex offenders: 'juveniles are best understood in the context of their families and social environments' and 'treatment should account for the long-term positive development of youth as well as the short-term promotion of safety' (p.3).

Limitations and future research

Whilst the current study has a number of strengths, it does have several limitations which warrant discussion. Firstly, the sample used was limited to adolescent sexual offenders within the community and although this allows for a more focussed investigation, it also removes a selection of the sample which may have provided further depth and robustness to the typology. It is likely that those individuals serving custodial sentences would have had a more extensive forensic history, have committed more violent or serious sexual offences and be considered a higher risk, therefore, an important section of the adolescent sex offender cohort may be missing. This may explain why the current study identified two clusters of reserved/isolated

personalities rather than the two aggressive groups noted in Smith et al. (1987). Future research should attempt to include as wide a sample as possible in order to test whether personality typologies are unvarying across samples and over time.

A second limitation is that cluster analysis is an exploratory technique so no causal inferences may be made. Future research should examine the stability of the clusters formed and it may also prove useful to identify MACI score elevations found in clusters from this study and examine traits of those juveniles to determine whether they are consistent with results of the present study. With regards to making a judgment upon the number of clusters, Romesburg (1984) states that deciding where to cut the dendrogram is 'a tradeoff between the desire for detail (many classes) and the desire for generality and simplicity (few classes) and the decision is subjective' (p.31). This decision of where clusters exist lies with the researcher and may vary when using different techniques. The current study could have resulted in a two-cluster solution by cutting the dendrogram at the longest distances which is a recommended technique (Aldenderfer & Blashfield, 1984) however, this would have resulted in less descriptive data and would not have provided the detailed information available with four clusters. However, it is important to again highlight the subjective nature of these decisions given that the final choice regarding clusters lies with the researcher (Romesburg, 1984).

Furthermore, the MACI is a self-report measure and is therefore vulnerable to 'inaccuracy or distortion by a defensive, a socially desirable, or an exaggerated response set, the adolescent's poor insight into his difficulties, and biased perceptions of self and others' (Richardson et al., 2004, p.296). As Merrill (2003) states, children and young people tend to be poor informants particularly when reporting externalising symptoms. The MACI is also limited due to its restricted development sample. The

vast majority of this sample was formed of White Western participants which may cause inaccuracies in the current study given the multi-cultural city where it was conducted. Similarly, it is important to be aware of the use of a clinical interview to collect data, as the information gathered may not always be accurate. This drawback is further compounded by different researchers who may approach the interview with different knowledge or expectations and may interpret information differently.

A further limitation is the small sample size of cluster 4. This cluster presents with numerous significant personality factors and developmental variables and clearly fits within the Disturbed/ Oppositional group, however it is important to remain aware of the small number of individuals within this group. It is possible that a small sample size may have resulted in an over or under classification of the developmental variables and personality scales used within this study. Given the large number of developmental difficulties experienced by this group, one may have expected to observe significant results on the ‘family discord’, ‘delinquent predisposition’ and ‘peer insecurity’ scales of the MACI. These absent results may be a consequence of the small sample size of Cluster 4. Furthermore, Hunter et al., (2003) who identified a similar ‘disturbed’ cluster found they were significantly more likely to have offended against children. A similar result was not supported by Graves (1997) who described his group with severe psychological and developmental difficulties as having a mixture of offences and a variety of victims. However, in future research, a larger sample in Cluster 4 may produce enlightening results with regards to the offending behaviour of the individuals within this cluster.

Ideally we would have assessed a control group of adolescents to observe whether our results were generalisable to adolescent personality typologies or if they related specifically to adolescent sexual offenders. There is evidence that the

personality characteristics of adolescent sex offenders may vary over time and within treatment (Roberts, Schmitz, Pinto & Cain, 1990). Given the possible adaptability of personality at this age, it is also important to ask ourselves whether sexual offending alongside the experiences of an arrest and being convicted may have affected changes in personality or whether these personality traits were present during the development of the sexually abusive behaviour. Consequently, future research should ideally be longitudinal and look at recidivism in an attempt to identify those personality types best suited to certain treatment interventions. A possible future study direction is to compare MACI scores obtained at post-treatment with those from pre-treatment, as this may provide evidence of personality stability or demonstrate the impact of treatment on personality factors.

CHAPTER 4

The Discussion

Discussion

The main aim of this thesis was to examine the personality profiles of adolescent sexual offenders, looking specifically at recent previous research into this area, current measurements and tools for assessing personality in adolescents and attempting to identify the presence and relevance of personality profiles within this population. Chapter 1, the systematic literature review, provided support for the existence of replicable personality profiles in the adolescent sex offender population. This chapter reported several similar subtypes of offenders repeated in a number of different studies, largely the socially inadequate and the delinquent/antisocial subtypes of adolescent sex offenders were repeatedly identified. This provided support for the research study (Chapter 3) by stating that there is not one sole category of personality type in this population, that they are a heterogeneous group and that more investigation into this area is required.

Within this literature review chapter, a few of the studies demonstrated a relationship between personality profile and offence characteristics, however there was only limited support for a 'child molester' profile which was more likely to present with inhibited and depressed characteristics. These findings supported our decision to investigate the relationship between personality profile and victim type in Chapter 3, however our findings did not support any relationship between the two. Chapter 1 also indicated that inpatient adolescent sex offenders were more likely to produce psychopathic and clinical elevations, whereas outpatients were more likely to be 'antisocial' and 'socially inadequate' (Oxnam & Vess, 2006) and provide less evidence of psychopathy (Hunter & Figueredo, 2000). Such findings prompted us to be aware that the community sample used in Chapter 3 would increase the likelihood of observing these subtypes and working with individuals who had been or were currently

receiving some form of treatment and were less likely to have committed numerous, or serious offences. In terms of differences between sexual offenders and non-sexual offenders, Chapter 1 also highlighted a wide variety of findings and numerous different studies with varying samples. Ideally, Chapter 3 could have been expanded with the use of a non-sexual offender comparison group, however this was unavailable due to ethical constraints and time limits.

In order to produce a useful and current piece of research in this area it was vital to use a psychometric tool which has been applied in previous similar research so that the results could be comparable. Also it was important to use a measure which was widely used by professionals working with this population and had acceptable levels of reliability and validity. The sample used in the research completed the MACI and in order to gain an informed and comprehensive understanding of this tool Chapter 2 concentrated on a critique of this measure.

Chapter 2 identified generally high levels of reliability and validity in the MACI as a measure of psychological difficulties and personality characteristics in adolescents. However, it also drew attention to several limitations of the psychometric tool such as the lack of research using independent samples and of testing reliability and validity over time, across different ethnicities and in different settings. Although this chapter highlighted that the MACI is one of the most advanced measures of personality for use with adolescents it also advises caution when interpreting the MACI results and the requirement for clinical interviews and complimentary assessment tools to verify any findings. This investigation helped to inform the results in Chapter 3.

Chapter 3 consisted of a research study investigating the personality profiles of adolescent sex offenders. Following Chapter 1 and 2 it was decided that given the support and requirement for research in this area and the reliability and validity of the MACI, the study would employ a cluster analysis using the MACI, offence characteristics and developmental factors to determine possible adolescent sex offender profiles. The results highlighted four main profiles; Submissive/Anxious, Antisocial/Delinquent, Undersocialised/Isolated and the Disturbed/Oppositional groups. Clear links were made between these groups and similar groups discovered in previous typology research with adolescent sex offenders (e.g. Oxnam & Vess, 2006; Worling, 2001). This chapter also emphasised the importance of investigating developmental factors such as the adolescent's experience of abuse, divorced/separated parents, social care placements and difficulties forming friendships given the important role such factors can play in the process leading to adolescent sexual offending.

Finally, it is worth commenting on two broad issues highlighted in the thesis that are key to this area of research. This thesis strongly supports the finding that diversity exists in the population of adolescent sexual offenders and this supports the need for differential treatment and supervision, and our responsibility to test various interventions and to compare treatment outcomes. Furthermore, the evidence provided in this thesis suggests that interventions should not be limited to focussing on sexual problems and that given the significance of other developmental factors with relation to adolescent sex offending, treatment plans should be more holistic and systemic in nature. Secondly, this thesis supports typology-based research as a method of building our conceptual and empirical foundation for understanding the factors and characteristics associated with the onset and maintenance of maladaptive sexual and non-sexual behaviour in adolescents.

Implications for Clinical Practice

Whereas the majority of current adolescent sex offender treatment programmes are provided on a one-size-fits-all basis, this thesis provides supports for different subtypes of offender who may benefit from treatment focused on the individual needs of the young men. For instance, it could be beneficial to focus on the more general delinquent tendencies of the antisocial subtype, given the increased likelihood that they will reoffend non-sexually (Worling, 2001; Hendriks & Bijleveld, 2008). Different options for treatment pathways are discussed in Chapter 3 in more detail.

The findings from this thesis also contribute to the developmental-contextual understanding of adolescent sexual offending, which supports the notion that sexual offending behaviours should be treated as secondary to developmental deficits in treatment. This, in turn, supports the more holistic and developmental approaches to treatment where difficulties such as psychosocial deficits or delinquent lifestyle are targeted given their importance as drivers to offending. In turn, this supports the idea of a more systemic approach, where families and services are involved in the treatment rather than a purely one-sided expert role. This would result in a "mutual exploration of what will help youth develop into healthy successful adults", providing a more holistic intervention (Ryan et al., 2010, p.259). Importantly, such approaches are reported as more successful and sustainable when conducted within the community (Henggeler et al., 2009). However, treatment strategies should also include some sexual offence-specific components such as the offence cycle in order to target any problems related to sexual fantasies, interests or arousal (Hunter & Becker, 1994; Rich, 2003).

Limitations

Limitations are discussed at the end of each chapter, however, it is important to reinforce their importance with regard to the final conclusions of this thesis. The limitations section in Chapter 1, the systematic literature review, raised concerns regarding possible biases where the more accessible research articles may have guided our evidence base. For example it is possible that any studies with little or no evidence of typologies would be less likely to be published than those with novel, attention-grabbing results. There is a further methodological issue in that the majority of studies differ in terms of their definitions or statistical procedures and are consequently not entirely comparable, so although similarities may appear to exist between studies these should be treated with caution.

Chapter 2, the critique of the MACI highlighted concerns regarding some aspects of the reliability and validity of this measure. Particularly important with regards to this thesis is the warning that MACI results should be treated as a guide regarding personality difficulties rather than a formal diagnosis and that use of this psychometric should be accompanied by a detailed clinical interview. Chapter 2 also raised important issues regarding the validity and reliability of the MACI over different samples, across long time periods and with different ethnicities. The normative data used to test the reliability and validity of the MACI was restricted and it is not, therefore, possible to ensure its reliability over periods longer than 3-5 days, with samples other than clinical inpatients and with ethnicities other than white American adolescents.

Chapter 3 identified several limitations within the research study which suggest that further research may need to be carried out to attempt replication of our findings

and their implications. The subtypes of adolescents identified by this research should be viewed as informative models as opposed to concrete and discrete categories. This is due to the lack of empirical strength of the statistical methods employed and the level of diversity of this population where not all individuals would fit neatly into a specific subtype. These findings should not be misapplied in a "one-size fits all" fashion, as this could be damaging to the adolescent's treatment and management rather than helpful.

A further limitation of this study was the lack of control or comparison group which narrowed the utility of the results. A comparison with a non-sexual offending or a non-offending sample of adolescents may have highlighted important differences between the groups and helped inform our understanding of adolescent sexual offenders. Furthermore, the sample used was purely community based which may have removed the more serious or repeat offenders from this study. On the other hand, this also allowed us to concentrate and inform our understanding of this specific sample and focus on enlightening our knowledge of community based assessment, treatment and management.

Future Research

Future studies should investigate the relationship between cluster type and the impact of treatment, by measuring any changes in the MACI results from before treatment to post treatment. This would not only identify the effects of treatment on cluster membership but also provide evidence of personality stability or demonstrate the impact of treatment on personality factors. Most importantly, future research should focus on the 'what works' approach to treatment where findings such as

personality clusters of adolescents are utilised within a clinical settings. For example, treatment could be individualised to focus on the requirements of each of the offender subtypes and the results measured immediately and longitudinally. Such work would also require the replication of the current typology research in order to ensure their reliability across different settings, ethnic groups and specific age groups. It may also be interesting for these results to be compared with control groups and sample of non-sexual offenders.

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Appendices

Appendix A

Quality Assessment Form

Question	Y	N	U	Comments
Selection bias				
Is the case definition explicit?				
Are the participants selected at random? Are they representative?				
Is the description and distribution of demographic/background factors clear and comprehensive?				
Are there any confounding variables? Have these been accounted for? How comparable are the cases?				
Was the eligibility criteria for participants specified?				
Performance and detection bias				
Were the results assessed in the same way across participants?				
Were the assessments standardised?				
Were the assessment instruments comparable to instruments used in other studies?				
Attribution bias				

Were those who withdrew from the experiment counted in the results?				
Were the missing values dealt with?				
Were those who completed the assessment as those who didn't?				
Was an appropriate statistical test used?				

Appendix B

Data Extraction Sheet

General Information

Date of data extraction

Author

Article Title

Source (reference)

Notes

Specific Information

Study characteristics

Re-verification of study eligibility

Correct population

Assessment

Study design

Population characteristics and exposure conditions

1. Target population

2. Inclusion criteria

3. Exclusion criteria

4. Recruitment procedures (participation rates)

5. Characteristics of participants

   Age

   Ethnicity

   SES

   Gender

   Geographical region

   Other info

6. Number of participants

Measurement

1. Who carried out the assessment?

2. What was the measurement tool?

3. Is the tool validated? If so, how?

4. Drop out rates and reasons for drop out

5. Notes

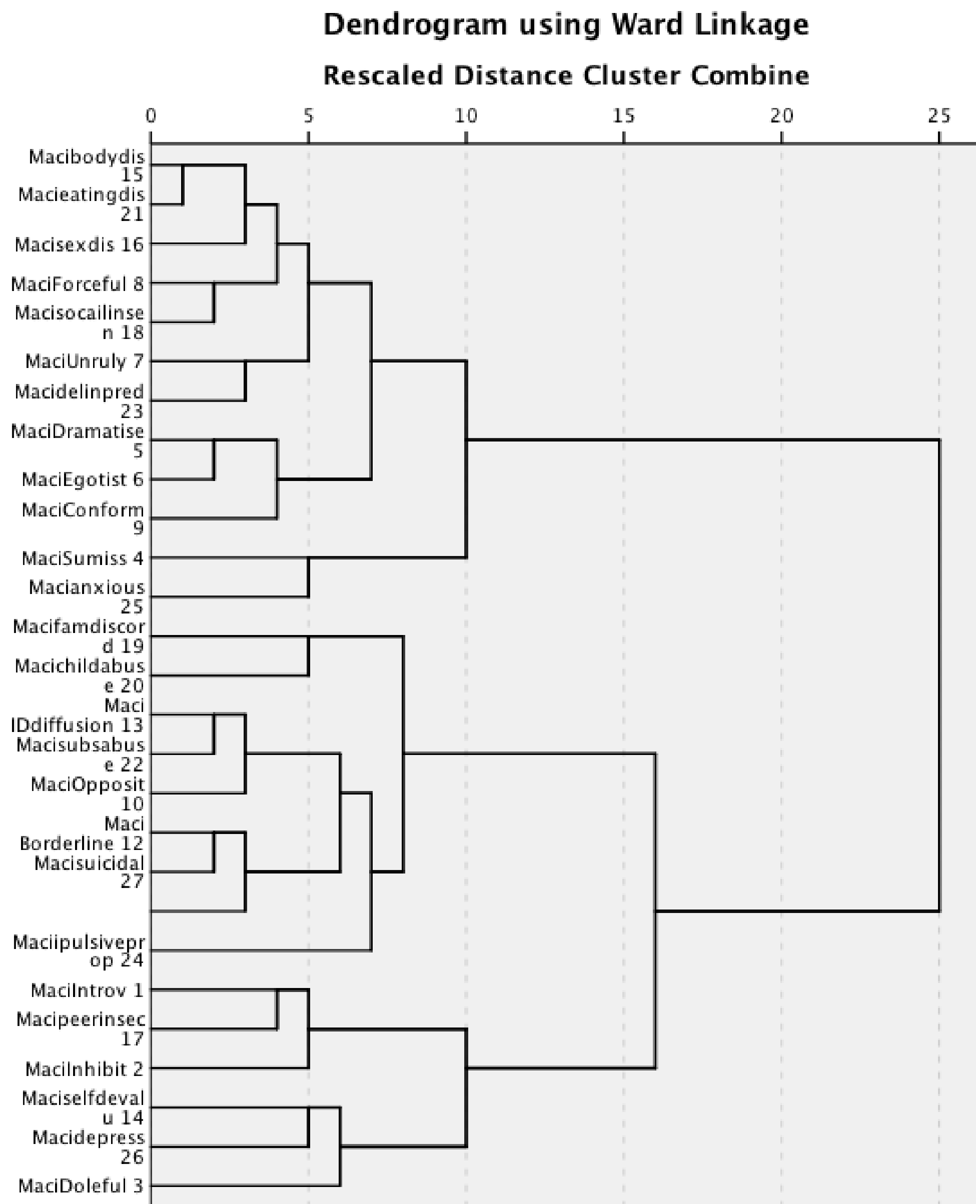
Analysis

1. Stats used
2. Does the stats adjust for confounding?
3. Missing data?
4. Discrete data (events, total numbers, p-value)
5. Continuous data (mean, SE, SD, numbers, p-value)
6. effect measures
7. quality assessment score
8. Notes

Results and Discussion

Appendix C

Dendrogram 1



Appendix D

Dendrogram 2