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Analysis of Sex Offender Subgroups Using the Minnesota Multiphasic Personality Inventory- Second Edition- Restructured Form (MMPI-2-RF)

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by

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Analysis of Sex Offender Subgroups Using the Minnesota Multiphasic Personality Inventory- Second Edition- Restructured Form (MMPI-2-RF)
a Doctoral Research Project by Isabella Campanini

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Abstract

Analysis of Sex Offender Subgroups Using the Minnesota Multiphasic Personality Inventory – Second Edition - Restructured Form (MMPI-2-RF)

by
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The current study aimed to expand the existing literature on sex offenders with regards to personality and psychological dysfunction, by comparing specific subgroups of sex offenders using the Minnesota Multiphasic Personality Inventory-Second Edition- Restructured Form (MMPI-2-RF). Archival data from a sample of N = 244 adult male sex offenders was grouped based on four characteristic variables: offense type (contact vs. noncontact), relationship to the victim (familial vs. nonfamilial), victim age (younger vs. older), and the presence or absence of a personality disorder diagnosis or features. MANOVA and ANOVA results demonstrated that contact offenders scored significantly higher than noncontact offenders on scales THD and BXD, but not on RC4, RC8, JCP, and DISC-r. Findings pertaining to intrafamilial and extrafamilial offenders were largely contrary to the hypotheses with regards to RC4, RC8, RC2, and RC7. Mean scores produced by sex offenders with younger- vs. older-aged victims significantly differed on 10 of the 17 hypothesized scales: EID, BXD, RCd, RC3, RC4, RC7, RC8, RC9, DISC-r, and NEGE-r; offenders with older-aged victims scored higher than those with younger-aged victims. Sex offenders with personality disorder

diagnoses or features scored significantly higher than those without on 10 of the 40 scales included in the analyses: RC4, RC6, BXD, DISC-r, HLP, ANP, JCP, AGG, FML, and DSF. Additionally, this study included independent data collection of a community comparison sample that was compared to a subgroup of this overall sample of sex offenders determined previously to have within-normal-limits test profiles (VanSlyke, 2018). Findings demonstrated that this subgroup of sex offenders scored significantly higher on 31 of the 40 hypothesized scales. Implications, limitations, and future directions of these findings were discussed.

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Chapter 1: Introduction

John H. was a 25-year-old physical education teacher at Clearcreek Elementary and Springboro Intermediate School in Springboro, Ohio who was also a swim coach at the local YMCA. He began working as a substitute teacher, and was promoted to a full-time position after receiving positive references from several individuals in the school district, including the superintendent. In March 2019, he was accused of improper contact with a student and was eventually charged with 36 counts of gross sexual imposition involving 28 first-grade girls, after video evidence from inside the school gymnasium showed John inappropriately touching as many as 88 young girls over a three-month period. According to the Warren County prosecutor, John appeared to be well-liked among his students and came from a family of educators.

Frank M. was living in a Melbourne, Florida when he began posing as a 17-year-old on a social networking site. At the time, the 31-year-old was out on bond from a previous arrest in 2016 for 84 counts of possession of child pornography. He began communicating online with someone who he believed was age 14, and after a few days made arrangements to meet in order to engage in sex. Frank was actually communicating with an undercover law enforcement officer, and was arrested after arriving at a local convenience store where they had arranged to meet. Upon his arrest, law enforcement discovered evidence of another online relationship he had developed with an actual minor, which included sexually explicit photos and messages confirming they had engaged in sexual activity. In December 2018, Frank was sentenced to 30 years in federal prison for enticement of a minor to engage in sexual activity, as well as possession of child pornography.

Sex offending is a major societal concern in the United States. The 2018 National Crime Victimization Survey (NCVS) reported a total of 734,630 victims of rape or other form of sexual assault nationwide (Bureau of Justice, 2019). However, the NCVS does not include crimes committed against children under the age of 12 in their data, suggesting that national total of sexual assaults is greater when considering the prevalence of child sexual abuse (Bureau of Justice, 2019). An annual report by the Children's Bureau of the U.S. Department of Health and Human Services indicated there was evidence for 58,114 children being victims of sexual abuse in 2017, based on what was reported to law enforcement agencies (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, 2019). The U.S. Department of Justice reported 67% of all sexual assault victims in the U.S. reported to law enforcement were under the age of 18 (Bureau of Justice, 2000). Further age-breakdown indicated that 66% of victims under the age of 18 are between the ages of 12 and 17, and the remaining 34% are under the age of 12. Bureau of Justice (2000) noted that 14% of all sexual assault victims reported to law enforcement in the U.S. were younger than 6 years old. Although boys are likely victimized more often than the data suggests due to underreporting to law enforcement agencies, the majority of child sexual abuse cases involve female victims (Bureau of Justice, 2000). Ultimately, there is evidence to suggest that sexual offending against children is a widespread problem within society.

Legal definitions of sex offending are not standardized, and can vary between federal and state levels, as well as from state to state. According to the U.S. legal code, a sex offense is defined as " a criminal offense that has an element involving a sexual act or

sexual contact with another" and can be considered a specified offense against a minor when involving an individual under the age of 18 (34 USC § 20911, 2019). Sexual contact refers to "intentional touching, either directly or indirectly through the clothing, of the genitalia, anus, groin, breast, inner thigh or buttocks of any person with intent to abuse, humiliate, harass, degrade, or further arouse or gratify the sexual desire of any person" (18 USC § 2246, 2019). The term sexual act is given the same definition as sexual contact, except that it goes further to specify "the intentional touching, not through the clothing" of the sexual contact (10 USC § 920b, 2019). The term sex offender is then defined as "an individual who was convicted of a sex offense" (34 USC § 20911, 2019).

In the state of Florida, classifications of sex offenses include sexual battery, lewdness and lascivious offenses, sexual misconduct, and other obscene offenses, such as possession of child pornography. Sexual battery refers to "oral, anal, or vaginal penetration by, or in union with, the sexual organ of another or the anal or vaginal penetration of another by any other object" that is not done for a genuine medical purpose (Fla. Stat. § 794.011, 2019). The act of rape is considered sexual battery in the state of Florida. Lewd or lascivious conduct involves a person who "intentionally touches a person under 16 years of age in a lewd or lascivious manner; or solicits a person under 16 years of age to commit a lewd or lascivious act" (Fla. Stat. § 800.04, 2019). Molestation, exhibition, and battery are all considered lewd or lascivious offenses in Florida (Fla. Stat. § 800.04, 2019).

While legal definitions of sex offenders focus on the nature of the acts committed by these individuals, psychological research of sex offenders has examined factors such as personality characteristics and psychopathological disorders. The current study aimed

to contribute to the scholarly literature on sex offenders with a particular focus on comparing personality and psychopathology characteristics of specific subgroups of sex offenders using the Minnesota Multiphasic Personality Inventory- Second Edition-Restructured Form (MMPI-2-RF). Although the MMPI and its revised versions are widely used in research, including to study sex offenders, there is currently only one published empirical study utilizing the MMPI-2-RF with this population. This demonstrates a need for more research into sex offenders using this measure of personality and psychopathology.

Chapter 2: Review of the Literature

Theories of Sex Offending

In an effort to provide an understanding and explanation of why individuals engage in sexual offenses, several theories have been established and researched. Many theories originally developed to explain personality and other psychological dysfunction were later applied to account for the origins of sex offending behaviors. With time, and in response to criticism, theorists have moved towards developing multi-factorial and integrated theories, as opposed to single-factor theories, to explain sexual offending.

Some of the earliest etiological theories of sexual offending were built upon Freud's psychoanalytic theory of personality, which postulated that unresolved conflicts in an individual's early development result in sexual deviance later in life (Hammer & Glueck, 1957; Wolf & Alpert, 1991). Hammer and Glueck (1957) proposed a theory of sexual offending that identified psychodynamic factors that explain why individuals may engage in sexual offending behaviors. They suggested that when an individual exhibits certain psychodynamic patterns, such as fear of sexual contact with women, feelings of genital inadequacy, or castration anxiety, they are susceptible to engaging in sexually deviant behavior. Pedophiles were also theorized as having higher levels of anxiety and loneliness, being more immature, and therefore, seek children out because they are viewed as being at their same developmental level. These theorists also suggested that incest offenders have an incapacitating fear of interpersonal relationships, and emotionally and sexually engage with children within their family because they are viewed as less-threatening sexual objects. Furthermore, a lack of ego strength and impulse control, as well as a pervasively concrete orientation were also identified as

contributing to these offenders acting out in a sexually deviant manner (Hammer & Glueck, 1957).

More recent theories building on Freud's work emphasize that some individuals offend against children because they are fixated in their psychosexual development, whereas others who may be adequately developed psychosexually regress and engage in this deviant behavior when they experience stress (Groth et al., 1923; Lanyon, 1986). Others discuss an intense hatred of women in childhood as contributing to individuals having an overpowering need to assert their masculinity, and in turn, engaging in the rape of adult women (Flowers, 2006).

Attachment theory, dating back to Bowlby's studies in 1969 and 1973, has also been applied to understanding the origins of sexual offending. Based on the assertions of Bowlby (1969, 1973), it appears insecure attachments formed in childhood lead to problems in the development of relationships, resiliency and self-confidence in adulthood. Research has generally found histories of poor childhood attachments amongst sex offenders, suggesting insecure attachments, particularly anxious-ambivalent and avoidant attachment styles, were more commonly formed during childhood for sexual offenders (Marshall & Marshall, 2000). Adults who formed avoidant attachments are seen as having inadequate empathy skills and unsociability towards others later in their adult relationships later in life. This is theorized as either leading to acting outwardly aggressive towards others, as seen in many cases of rape, or detachment from others in sexual offending, more commonly seen with exhibitionistic or voyeuristic offenders (Schneck, Bowers, & Turkson, 2012). On the other hand, it is argued that sexual offenders with histories of anxious-ambivalent attachments experience high levels

of anxiety about themselves and intimacy with others, and therefore, are more likely to offend against children because they may be seen as less threatening than adults (Schneck et al., 2012). The underlying notion from these attachment theories is that weak attachments during childhood lead to underdeveloped coping skills, which ultimately impact how these individuals function later in life; for them, sexual offending behavior represents a way of coping with severe stress (Marshall & Marshall, 2000; Schneck et al., 2012).

Object-relations theory and social learning theory have also been applied to the understanding of sex offending (Stinson, Sales & Becker, 2008). Some theorists have made the argument that individuals can develop an inappropriate or abnormal sexual interest in children from being exposed to them in a sexualized manner during their development; this later leads to their sexual desire for children, despite societal views of such interests as deviant (Stinson et al., 2008). Others have developed theories to explain the development of sexually offensive behaviors based on Bandura's (1971) social learning theory. The abused-abuser hypothesis proposes that children who had experienced sexual abuse engage in this behavior later in life because they have learned deviant patterns of sexual arousal (Stinson et al., 2008). However, although there are many sex offenders who report being victims of sexual abuse as children, there is also a considerable amount of evidence to support that the majority of children who are sexually abused do not in fact go on to offend themselves (Stinson, Sales & Becker, 2008). Therefore, although this application of social learning theory provides an explanation for why some sex offenders engage in these behaviors, the abused-abuser appears to present a simplistic view of the etiology of sex offending, and furthermore, overlooks other

possible factors that may play a role in a victim becoming an abuser (Stinson et al., 2008).

Behavioral and cognitive theories have also been approaches to understanding the etiology of sexual offending. Many behavioral theories have primarily focused on how deviant sexual arousal is conditioned (Grady, 2009). Classical conditioning theorists have suggested that sexual offending is the result of a nonsexual stimulus, such as a child, being paired with sexual arousal, whereas operant conditioning theorists have proposed that the presence of sexual arousal as a behavioral response acts as a reward to the association with a nonsexual stimulus, which increases the chances of being aroused by such stimulus (Stinson et al., 2008). Cognitive theories have primarily been centered around cognitive distortions (Grady, 2009). Ward (2000) developed a theory that identified a number of cognitive distortions that play a role in sexual offending, including a view of children as sexual beings, believing one's sexuality is uncontrollable, and believing one is entitled to sexual gratification. Mihaildes et al. (2004) built upon Ward (2000) to explain the role of implicit cognitive distortions in sexual offending. These theorists argued that sex offenders are inclined to use cognitive distortions about sexual offending for a number of reasons, such as to preserve their self-esteem or protect themselves from social disapproval. The theory postulated that these distorted cognitions, paired with the offender's implicit motivation, play a role in their demonstrated sex offending behaviors (Mihailides et al., 2004).

Although there have been numerous single-factor theories to explain sexually deviant behavior, movement towards more multifactorial and integrated theories and models of sexual offending began to emerge in the literature in the 1980s. This shift in

theory development was largely in response to criticism that human behavior and cognition are complex and that single-factor theories were too simplistic to adequately account for them (Stinson et al., 2008). One of the first, and most influential, was Finkelhor's four preconditions model (Ward, 2006). This model identified four factors of child sexual abuse: motivation to commit the offense, overcoming external obstacles, and overcoming the child's resistance. The model argued that each of these preconditions must be satisfied by an offender in order for sexual abuse to occur (Finkelhor, 1984). Ultimately, Finkelhor's model suggested a connection between situational factors and psychological vulnerabilities of offenders that, in combination, lead to the sexual offending of children.

Following from Finkelhor, Marshall and Barbaree (1990) introduced a different integrated theory regarding sex offending that focused on biological factors, childhood development experiences and sociocultural norms; their theory was not limited to sex offenses against children. The theorists recognized that certain hormonal pathways, neural networks, and genetics are all biological factors that contribute to aggression and to an individual's ability to learn and develop patterns of behavior. Marshall and Barbaree (1990) also examined early childhood development and identified that certain vulnerability factors, such as low self-esteem and poor coping styles, are developed from negative experiences such as insecure attachment. The theorists argued that these factors, along with the biological components, could impact a major developmental experience for adolescent boys: discriminating between aggressive and sexual impulses, and learning to control these urges. They also implicated sociocultural factors, such as exposure to violent media, pornographic imagery, or interpersonal violence at home, in such co-

mingling of aggression and sexual behavior (Marshall & Barbaree, 1990). Ultimately, Marshall and Barbaree's (1990) integrated theory asserted that the combination of these vulnerability factors, biological factors, and sociocultural factors result in an interaction that can ultimately lead to an individual's inability to discriminate aggressive and sexual urges and learn and develop appropriate behavioral patterns, and lead to sexual offending.

Ward and Siegert (2002) introduced a pathways model as an integrative model that returned the focus to sexual offending against children. This model contended that sexual offenders will demonstrate intimacy and social deficits, sexual schemas, emotional dysregulation and cognitive distortions in some way. From these identified clusters, the researchers developed five pathways that explain the development of sexual offending behaviors. These pathways were identified as multiple dysfunctional mechanisms, deviant sexual scripts, intimacy deficits, emotional dysregulation, and antisocial cognitions. Ward and Siegert's pathway model incorporates aspects of several single-factor theories into one integrated model to explain sexual offending (Stinson et al., 2008; Ward, Polaschek, & Beech, 2006).

Types of Sex Offenses

Sex offenses can be categorized in a number of ways based on different factors. Such factors include whether or not the offense involved contact with the victim, if the sexual offender was or was not related to the victim, and the age of the victim. Much of the sex offender literature includes research focusing on similarities and differences based on such offense characteristics.

Contact vs. noncontact sex offenses.

One typology of sex offenses concerns whether or not physical contact was made between the offender and their victim. The sex offender literature describes contact offenses as ranging from acts such as inappropriate touching or fondling to rape. Alternatively, noncontact sex offenses include voyeurism, exhibitionism, as well as internet-based offenses such as possession of child pornography or attempts to sexually engage with children with contact made through the internet. Although contact and noncontact offenses are two distinctive classifications of sex offenses, many researchers have also examined a cross-over group of offenders who commit both noncontact and contact offenses (Elliot, Beech, & Mandeville-Norden, 2013; Long, Alison, & McManus, 2012).

Long et al. (2012) conducted a study of adult men who were convicted of sex offenses involving possessing indecent images of children. The sample consisted of 120 adult male offenders arrested between 2007 and 2011. Sixty of these offenders were considered dual offenders, meaning they had at least one conviction involving rape, indecent assault, or assault by other means of penetration, in addition to at least one conviction involving indecent images of children. The remaining 60 offenders were considered to be noncontact offenders as they had no history of allegations, convictions, or arrests for any of the noted contact offenses against children. Long et al. (2012) found that dual offenders possessed significantly fewer indecent images of children compared to noncontact offenders. However, the researchers also found that dual offenders had a greater proportion of images depicting nonpenetrative sexual activity between adults and children, as well as penetrative activity involving children or both children and adults.

Long et al. (2012) also concluded that offenders who engaged in grooming behavior, that is, preparatory steps involving gaining the child's trust, were significantly more likely to be dual offenders. Similarly, those who produced their own indecent photographic images of children were also significantly more likely to be dual offenders. These findings suggest that sex offenders who commit contact offenses in addition to noncontact offenses may be more predatory (Long et al., 2012).

Long et al. (2012) also found the majority of offenders with both contact and noncontact sex offenses acquired indecent images of children that matched their choice of contact offense victims with regards to gender. All of the dual offenders with indecent images of boys offended against boys, and 91.7% of dual offenders who had indecent images of girls committed a contact offense against girls. The majority of those who obtained relatively equal amounts of indecent images of boys and girls were found to offend exclusively against girls (57.1%), a smaller proportion offended exclusively against boys (14.1%) and approximately 29% committed contact offenses against both boys and girls (Long et al., 2012). This suggests that the type of indecent images owned by dual offenders likely relate to their preference of contact sex offense victims.

Elliot et al. (2013) conducted a study of 526 contact offenders, 459 internet offenders, and a group of 143 individuals identified as mixed offenders who had prior convictions of both internet and contact sex offenses. Those who were considered contact offenders had committed a sex offense such as rape, assault or gross indecency against an individual aged 16 or younger with no history of an internet-based offense, whereas the internet offenders had a previous conviction of an internet-based offense such as possession or dissemination of pornographic images of children younger than 18 years

old but had no prior contact sex offenses. Elliot et al. (2013) utilized a number of self-report measures to assess a number of factors, including emotional self-management, victim empathy, and offense-supportive attitudes and fantasy. The researchers found that contact offenders demonstrated higher levels of externalized locus of control, attitudes supporting offending, as well as greater impulsivity and assertiveness compared to the two other groups of offenders. The results also demonstrated mixed offenders exhibited greater deficits in self-management compared to internet offenders (Elliot et al., 2013). Moreover, Elliot et al. (2013) also concluded that contact offenders demonstrated a greater tendency to engage in cognitive distortions about their victims compared to internet offenders and mixed offenders. Overall, these results demonstrate differences between those who solely commit contact sex offenses, those who commit internet-based offenses, and offenders who engage in both.

Faust, Bickart, Renaud, and Camp (2015) examined a sample of 428 men who had been convicted of either distribution or possession of child pornography and 210 men who had at least one conviction for a contact sexual offense against a child. The study's sample was derived from the general population of convicted male sex offenders released from federal custody in the U.S. between 2002 and 2005. Faust et al. (2015) aimed to determine whether or not these two groups of sex offenders differed with regards to various demographic and historical variables. The researchers found that contact offenders were significantly less likely have been employed or married prior to their arrest compared to child pornography offenders. Child pornography offenders were also significantly older than contact offenders at the time of their first arrest, with a difference of 10 years on average. With regards to both substance and sexual abuse, child

pornography offenders were significantly less likely to have a history of substance abuse or sexual abuse in childhood compared to contact offenders (Faust et al., 2015). Child pornography offenders were also more likely to have no prior criminal history compared to contact offenders. Faust et al. (2015) also noted contact offenders and child pornography offenders did not differ with regards to their previous history of mental health treatment. The results from this study demonstrate several differences among individuals who commit contact sex offenses against children and those who engage in distributing or possessing child pornography with regards to demographics and reported histories. Furthermore, the results also highlight mental health treatment as one area in which these two groups of offenders do not differ significantly.

Jung, Ennis, Stein, Choy, and Hook (2013) also studied differences in historical and demographic variables, including education, work, relationship, criminal, substance use, and mental health histories, between noncontact and contact sex offenders. However, the researchers further differentiated noncontact offenders by examining differences between a group of child pornography offenders and a group of offenders with a non-child pornography related noncontact sex offense, in addition to contact offenders. The sample was comprised of 50 offenders who accessed or distributed child pornography, 45 noncontact offenders who were convicted of either voyeurism or exhibitionism, and 101 offenders convicted of child molestation. Jung et al. (2013) found that child pornography offenders had significantly fewer suspensions and expulsions during their years in school and were also three to four times more likely to have obtained post-secondary education compared to both contact and noncontact offenders. In terms of employment, child pornography offenders were twice as likely to have been employed in skilled jobs

compared to the other two comparison groups. However, the researchers found that noncontact and contact offenders did not differ significantly with regards to these aspects of their employment and academic histories (Jung et al., 2013).

Jung et al. (2013) also found that child pornography offenders had significantly fewer children that both noncontact and contact offenders. Similar to the findings of Faust et al. (2015), there were no significant differences between the three groups of offenders regarding whether they previously engaged in mental health treatment. The researchers also found noncontact offenders were more likely to have used illicit drugs than child pornography offenders and contact offenders. More specifically, a significantly greater number of noncontact offenders had histories of cocaine use compared to the other two groups of offenders. However, the researchers also found that the three groups of offenders did not have significant differences in their alcohol, marijuana, or LSD use histories (Jung et al., 2013). With regards to criminal history, the researchers found that noncontact offenders had a significantly greater number of violent convictions than child pornography offenders. Contact and noncontact offenders did not differ with regards to their convictions for violent crime (Jung et al., 2013). Overall, these findings further demonstrate mental health as an area in which contact, noncontact, and child pornography offenders do not seem to differ. The results also demonstrate criminal, academic, work and substance use history as areas in which groups of sex offenders exhibit notable differences.

Overall, research into sex offenders with regards to the nature of their offense has provided evidence of notable differences between contact and noncontact offenders, in addition to aspects in which these offenders are similar. Sex offenders convicted for child

pornography appear to have fewer problems in their education and employment histories and fewer prior convictions than contact and even other types of noncontact offenders (Faust et al., 2015; Jung et al., 2013). Dual offenders who commit both internet-based and contact offenses appear to be more predatory and are more likely to engage in behaviors such as grooming compared to those who solely commit internet-based offenses (Long et al., 2012). The type of indecent images owned by dual offenders with regards to gender appear to be related to their preference of contact sex offense victims (Long et al., 2012). Offenders who commit contact offenses exclusively demonstrate higher levels of impulsivity, externalized locus of control and attitudes supporting offending behavior compared to mixed offenders who commit both internet and contact offenses or internet-based offenses exclusively (Elliot et al., 2013). Internet and mixed offenders also appear to differ from contact offenders with regards to their tendency to engage in cognitive distortions about their victims (Elliot et al., 2013). There appears to be mixed findings regarding differences in substance use histories, suggesting further research is needed to clarify differences amongst different groups of sex offenders in this area (Faust et al., 2015; Jung et al., 2013). Finally, mental health treatment appears to be one area in which sex offenders do not differ significantly. In summary, studying sex offenders based on the nature of their sex offense appears to provide useful information in the understanding of sex offenders.

Intrafamilial v. extrafamilial sex offenses.

Another characteristic to consider regarding sex offenses, particularly against children, is the nature of the relationship between the victim and offender. This is widely categorized in the sex offending literature as either intrafamilial, generally defined as sex

offenses that are perpetrated by a victim's family member, and extrafamilial, in which cases the offenders are not related to their victim (Fischer & McDonald, 1998; Gannon, Gilchrist, & Wade, 2008; Hilarski, 2008; Proulx, Perreault, & Ouimet, 1999). Intrafamilial offenders generally include blood relatives, such as parents or siblings, as well as family members through adoption or marriage, such as step-parents (Fischer & McDonald, 1998). The level of familiarity between the extrafamilial offender and victim can vary, as this category includes offenders who are complete strangers, acquaintances, professionals who work with their victims, and essentially any other offender who is not related to the victim (Proulx et al., 1999; Sullivan & Beech, 2004). Research has suggested that there are a number of differences between intrafamilial and extrafamilial sex offenses, including situational or preferential factors, levels of sexual deviance and sexual interest, the onset and duration of the abuse, the role of force or injury in the perpetrated abuse, and the sex of the victims (Fischer & McDonald, 1998).

One suggested differentiation in the literature between intrafamilial and extrafamilial sex offenses is whether they offend primarily based on situational or preferential factors. Preferential offenders are characterized as demonstrating a sexual preference for children, and situational offenders are described as offending against children based on their availability (Hilarski, 2008). However, intrafamilial offenders are suggested to be comparable to situational offenders in that they are often in an age-appropriate adult relationship while offending, and that the accessibility of the child may play a role in the sexual offending (Hilarski, 2008). On the other hand, extrafamilial offenders are suggested to be more comparable to preferential offenders, as they actively seek out children to engage with sexually, and therefore are conceptualized as being

driven by sexual preference (Hilarski, 2008). Groth, Hobson and Gary (1982) suggested that intrafamilial sex offenders were comparable to regressed offenders, who are conceptualized as primarily preferring age-appropriate sexual relationships, but engage in sexual acts with children in reaction to severely negative or adverse life events. The researchers also suggested the notion of a fixated offender, whose primary sexual preference is for children, in describing extrafamilial sex offenders (Groth et al., 1982).

Levels of sexual deviance and interest are another way in which sexual offending has been differentiated between intrafamilial and extrafamilial sex offenders. Seto, Lalumière and Kuban (1999) concluded that intrafamilial offenders who molested their child victims showed less sexual interest in children than extrafamilial offenders who committed the same offense. The researchers also demonstrated differences in levels of sexual interest within the group of intrafamilial offenders, as biological fathers demonstrated less sexual interest in children compared to offenders who victimized extended family members (Seto et al., 1999). In an attempt to explain why these intrafamilial offenders would sexually abuse their victims when demonstrating lower levels of sexual interest in children, the researchers postulated that these offenders may have modified their sexual behaviors to offend against children due to a lack of opportunity to engage in sexual behavior with adult partners (Seto et al., 1999). Moreover, Rice and Harris (2002) concluded from their study that intrafamilial offenders were less sexually deviant in comparison to extrafamilial offenders.

Research also suggests that extrafamilial and intrafamilial offenses differ with regards to the duration and number of separate incidents of the sexual abuse. Fischer and McDonald (1998) found that intrafamilial sex offenses occur over longer periods of time

and involve a greater number incidents compared to extrafamilial sex offenses. The researchers considered 1,101 cases and concluded that the majority of intrafamilial cases included multiple incidents of sexual abuse, compared to extrafamilial cases which largely consisted of a single incident. Furthermore, Fischer and McDonald also concluded that 73.2% of cases involving sexual abuse that occurred for more than one year were committed by intrafamilial offenders. Ventus, Antfolk, and Salo (2017) also found that victims of intrafamilial offenders experienced sexual abuse more frequently and over longer periods of time compared to victims of extrafamilial offenders. The researchers concluded that this was likely due to the age of onset of abuse, as intrafamilial victims were found to experience earlier onset of abuse than extrafamilial victims, and being victimized earlier likely led to these victims experiencing multiple incidents of abuse over longer periods of time (Ventus et al., 2017).

Research on the amount of force or injury in intrafamilial and extrafamilial sex offenses has produced somewhat contradictory findings. Rice and Harris (2002) concluded that intrafamilial offenders were less likely to have sexual intercourse with their victims, which is considered to be an act that involves a greater amount of force. Additionally, intrafamilial offenders also caused fewer injuries to their victims when compared to extrafamilial offenders (Rice and Harris, 2002). However, Ventus et al. (2017) concluded that with regards to force, contact and victim-offender relationships, intrafamilial and extrafamilial offenders did not significantly differ in their use of coercion and degree of force.

There is also some evidence to support differences in intrafamilial and extrafamilial sex offenses based on the sex of child victims. Although the majority of

child victims of sexual abuse are girls, there are instances when boys are victimized sexually. Sullivan, Beech, Craig and Gannon (2011) found that extrafamilial offenders, including those who were professionals working with the children they offended, were significantly more likely to have victimized both boys and girls, or boys exclusively, than intrafamilial offenders. Similarly, Sullivan and Beech (2004) also found significant differences between extrafamilial offenders who worked in settings with their victims and other extrafamilial and intrafamilial offenders with regards to the sex of their victims. The researchers found that 77% of the extrafamilial offenders who were professionals working with children were accused of sexually abusing boys exclusively, 22% of abusing only girls, and 5% offending against both boys and girls (Sullivan & Beech, 2004). The intrafamilial and other extrafamilial offenders who did not work with their victims had faced accusations of primarily sexually offending against girls (58%), with 21% being accused of perpetrating against boys only and another 21% being accused of abusing both boys and girls. (Sullivan & Beech, 2004). It appears that extrafamilial offenders, particularly those who are employed in settings with their victims, offend against male children at a significantly higher rate than intrafamilial offenders and other types extrafamilial offenders, suggesting that there may be differences within extrafamilial offenders as a larger group based on the relationship between the victim and the offender (Sullivan & Beech, 2004).

Victim age-based sex offenses.

Sexual offending patterns have also been studied with regards to the age of the victims. Some research in this area of the sex offender literature has explored differences among sexual offenders based on younger verses older victims. Other research has

explored consistency in the age-groups victimized by sex offenders, as well as inconsistency or crossover effects with regards to victim age.

Rice and Knight (2019) considered differences in low self-esteem and psychopathy in sexual offenders whose victims were either adults, children, or a mix of both age groups. Their study's sample consisted of 900 adult men who were convicted of repetitive or aggressive sexual offenses and were evaluated for civil commitment at a northeastern treatment center. The researchers found that sex offenders who victimized adults exclusively experienced higher feelings of rejection on a self-esteem scale than those who only offended against children (Rice and Knight, 2019). Sex offenders with mixed-age victims, as well as those with only adult victims, also reported higher levels of sibling jealousy and rivalry than those who victimized children. With regards to psychopathy, results indicated that sex offenders with adult victims had significantly higher levels of psychopathy in the interpersonal, affective, impulsivity and antisocial behavior domains of the Psychopathy Checklist – Revised (PCL-R) than those who only offended against children. Offenders with mixed-age victims had significantly higher ratings on the affective and antisocial facets of the PCL-R than those who only had child victims (Rice and Knight, 2019). These research findings suggest variation in self-esteem and level of psychopathy among sex offenders based on the age of their victims.

Guay, Proulx, Cusson, and Ouimet (2001) studied the stability of sex offenders' choice of victims based on age, using a sample of 178 male sex offenders with multiple victims who were imprisoned in Quebec, Canada. Sexual offenders were divided into three groups based on their victims' ages: 12 years and younger, aged 13 to 15 years, and 16 years or older. Guay et al. (2001) found that offenders who sexually abused victims in

the youngest age group demonstrated a constancy in their victim age choice over the sequence of these crimes. Similar findings were also demonstrated by the offenders whose victims were in the eldest age group. However, those who sexually offended against 13-15 year-old victims demonstrated less stability and were found to have a lower probability of choosing another victim within this age range. Based on these findings, the researchers concluded that sex offenders who either victimize children or adults exclusively tend to reoffend against victims within these age groups, but those who sexually offend against individuals between the ages of 13 and 15 years are less consistent in their choice of victims with respect to age (Guay et al., 2001).

Firestone, Dixon, Nunes, and Bradford (2005) conducted a comparison of 119 intrafamilial sex offenders convicted of contact offenses based on victim age. The offenders were divided into two groups based on whether their youngest victim was less than 6 years old, or between the ages of 12 and 16. The researchers examined psychological and phallometric variables that were identified as common within the sex offender literature, including psychiatric disturbance, psychopathy, and sexual functioning. Firestone et al. (2005) reported that the offenders with younger-aged victims exhibited poorer sexual functioning than those with older-aged victims. In these cases, individuals commit offenses against more than one type of victim, based on factors like age or gender. They also found that the offenders against younger children demonstrated significantly higher levels of psychiatric disturbance than those offenders whose victims were older, as measured by the Brief Psychiatric Rating Scale (BPRS). With regards to psychopathy, the researchers found no significant differences between the two groups of offenders. They concluded from these findings that although both groups of intrafamilial

offenders exhibited clinically significant difficulties with sexual functioning, as well as deviant sexual arousal, individuals who sexually offend against younger victims generally exemplify more disordered personalities overall.

Although sex offenders have often been characterized based solely on victim age preference, research has demonstrated evidence of a crossover effect (Heil, Ahlmeyer & Simons, 2003; Levenson, Becker, & Morin, 2008). Heil et al. (2003) conducted a study of 489 adult male sex offenders incarcerated in the Colorado Department of Corrections system, to examine crossover in their choice of age groups of their victims. Their results indicated that the majority of the offenders (70%) reported both adult and children victims, with 13% reporting only children and 18% only adults. Although these results demonstrate a considerable amount of victim age crossover among this forensic sample, it should be noted that the researchers grouped individuals aged 15 years and older as adults based on Colorado law authorizing 15 years old as the legal age of consent for sexual contact (Heil et al., 2003).

Other researchers have also investigated sexual offending with regards to victim age and gender crossover. Firestone et al.'s (2005) results demonstrated differences between offenders of younger versus older children in the gender of the victims, as well as the likelihood of multiple victims. They noted that those who offended against younger victims were more likely to have several victims, and were also more likely to have offended against a boy, than offenders whose victims were older. Levenson et al. (2008) found that as the age of the victims decreased, the ratio of offenders with victims of both genders increased. Using a sample of 362 adult male sex offenders who underwent sexually violent predator evaluations in the state of Florida they reported that for

offenders with victims aged 0 to 6 years, 58% offended against either boys or girls exclusively and 42% victimized both boys and girls. However, 18% of offenders who had victims aged 7 to 12 years and 17% of those whose victims were aged 13 to 17 years offended against both boys and girls. When an offender was found to have a victim aged 6 years or younger, the chances of that offender victimizing both boys and girls sexually was found to be more than 3 times greater than that of a sex offender whose victims were older (Levenson et al., 2008). Furthermore, factors that predicted victim age of 6 years or younger were also examined, and the results indicated that having a pedophilia diagnosis was predictive of an offender having younger victims. Levenson et al. (2008) concluded that although the majority of sex offenses were perpetrated against either boys or girls exclusively, sex offenders who victimize younger children are more likely to abuse both boys and girls, and those diagnosed with pedophilia were more likely to have victims aged 6 years or younger than offenders without such diagnosis.

Similar to crossover, polymorphism is another term used in the sex offender literature to describe inconsistency in factors involved in sex offenses, such as victim age (Stephens, Seto, Goodwill, & Cantor, 2018). Stephens et al. (2018) conducted a study examining polymorphism with regards to victim age, as well as gender and relationship to the offender, using a sample of 751 sex offenders who had been referred to a sexual behavioral clinic. Victim ages were classified in three groups based on stages of sexual development: pre-pubescent victims younger than 11 years, pubescent victims aged 11 to 14 years, and victims who were 15 or older, who were considered post-pubescent (Stephens et al., 2018). The most common form of polymorphism among the sex offenders was victim age, as 35% of the sample offended against victims from at least

two of the three identified age groups. The results also demonstrated that age polymorphism was associated with a greater number of victims (Stephens et al., 2018).

McKillop, Brown, Wortley and Smallbone (2015) examined the influence of victim age on situational and contextual characteristics of sex offenders' first instance of perpetrated sexual abuse, such as the nature and timing of the offense. The researchers' study of sex offenders was based on the premise of routine activities theory. This theory states that there must be an opportunity for crime to occur, whereby a motivated offender has access to a vulnerable victim in the absence of a capable guardian during the victim's and offender's everyday routines (McKillop et al., 2015). The study included self-reports from 100 adult men who were convicted of at least one direct contact sex offense against a victim aged 15 years or younger. McKillop et al. (2015) found that sex offenses occurred more often at certain times of the day depending on victim age. Younger children were more often sexually abused earlier in the day, whereas sexual abuse against middle-aged children was more likely to occur during the late-afternoon and early evening, and adolescents were commonly victimized overnight. With regards to nature of the sexual acts committed against the victims, the researchers found no significant differences based on victim age (McKillop et al., 2015).

Overall, research into sex offenders with regards to victim age has provided information into some differences in characteristics of perpetrators as well as the nature of their crimes. Sex offenders with child victims experience poorer sexual functioning and higher levels of psychiatric disturbance than those who offend against adults (Firestone et al., 2005). Furthermore, offenders who victimize younger children are also more likely to offend against both boys and girls (Firestone et al., 2005; Levenson et al.,

2008). Younger children also appear to be victimized during the day more often than older children and adolescents, who tend to be sexually offended against in the evening and overnight (McKillop et al., 2015). There have been mixed findings with regards to psychopathy, with some research indicating offenders who victimize adults have more psychopathic traits than those who offend against children, and others finding no significant differences (Rice & Knight, 2019). There is also evidence to support sex offenders consistently offend against a particular age-group of victims, however, some research has found that victim age polymorphism or crossover is also common amongst some offenders (Guay et al., 2001; Stephens et al., 2018). In summary, studying sex offenders based on the age of their victims appears to be a useful direction in research.

Psychopathological Characteristics of Sex Offenders

In addition to characteristics of the sex offense and victims, the psychopathology of sex offenders, particularly paraphilic and personality disorders, has also been the focus of research in the sex offender literature. The Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition (DSM-5) defines paraphilia as "intense and persistent sexual interest other than sexual interest in genital stimulation or preparatory fondling with phenotypically normal or physically mature, consenting human partners" (American Psychiatric Association, 2013, p. 685). Although there are a number of disorders included in the DSM-5 that are considered paraphilic, research on sex offending, particularly against children, tends to focus on voyeuristic, exhibitionistic, frotteuristic and pedophilic disorders (Bogaerts, Daalder, Vanheule, Desmet, & Leeuw, 2008; Leue, Borchard, and Hoyer, 2004; Raymond, Coleman, Ohlerking, Christenson, & Miner, 1999).

Raymond et al. (1999) examined the prevalence rates of psychiatric disorders, including the Diagnostic and Statistical Manual for Mental Disorders – Fourth Edition (DSM-IV) axis II (personality) disorders, among a sample of 42 pedophilic sex offenders participating in outpatient treatment. The researchers noted 33% of the sex offenders also met criteria for at least one paraphilic diagnosis. They found that 93% of the offenders met criteria for an axis I (clinical) disorder in addition to pedophilia, with anxiety and mood disorders being the most prevalent. Raymond et al. (1999) also found that 60% of the sex offenders met criteria for an axis II disorder, with obsessive-compulsive, antisocial, avoidant, narcissistic, and paranoid personality disorder being the most common. These findings demonstrate that comorbid psychiatric disorders, including paraphilic and personality disorders, appear to be common among pedophilic sex offenders.

Leue et al. (2004) studied the prevalence of mental disorders, including personality and paraphilic disorders, among sexual offenders in state forensic hospitals. Their sample was comprised of 55 adult men who met DSM-IV diagnostic criteria for either pedophilia or sexual sadism (n = 28) , or impulse control disorder (ICD; n= 25). Using structured clinical interviews, the researchers found no significant difference in the prevalence of cluster B personality disorders (i.e., antisocial, borderline, histrionic, and narcissistic personality disorder) among the two groups of sex offenders, as 47% of paraphilic disordered and 40% of ICD sex offenders met diagnostic criteria (Leue et al., 2004). However, both groups of sex offenders did differ significantly with regards to cluster C personality disorders (i.e., avoidant, dependent, and obsessive-compulsive personality disorder). Approximately twice as many offenders with a paraphilic disorder

diagnosis met diagnostic criteria for at least one cluster C personality disorder than those with diagnosed ICD (Leue et al., 2004). Furthermore, the most common personality disorders in the entire sample were antisocial (35%), avoidant (24%), and borderline personality disorder (15%), with the prevalence rates between the two groups of sex offenders being comparable (Leue et al., 2004). These findings demonstrate personality disorders, particularly antisocial, avoidant, and borderline personality disorder, are fairly common among sex offenders with paraphilic or ICD diagnoses.

Eher, Rettenberger, and Turner (2019) examined the prevalence of mental disorders, including paraphilic and personality disorders, in a sample of 1,346 Austrian contact sex offenders. The sample was comprised of 671 sex offenders who victimized children and 675 who victimized adults. The researchers used the Structured Clinical Interview for axis I Disorders (SCID I), and the version for axis II disorders (SCID II). The researchers found that 92.9% of sex offenders were diagnosed with a mental disorder. Personality disorders and paraphilic disorders were the most frequently diagnosed, with 53.6% meeting criteria for a personality disorder and 43.3% meeting criteria for a paraphilic disorder. They also noted 47.8% of sex offenders with personality disorder diagnoses meeting criteria for a cluster B personality disorder, with the most common being antisocial and borderline personality disorders (Eher et al., 2019).

With regards to the sex offenders who victimized children compared to those who victimized adults, the researchers noted the two groups of offenders differed substantially in prevalence rates of paraphilic and personality disorders (Eher et al., 2019). They noted that in general, sex offenders with child victims were more likely to be diagnosed with a paraphilic disorder, whereas sex offenders with adult victims were more likely to have a

personality disorder diagnosis. The most prevalent personality disorder among offenders with child victims was antisocial personality disorder (20.4%) and the most common amongst those with adult victims were antisocial (41.3%) and borderline personality disorders (36%) (Eher et al., 2019). These findings suggest that paraphilic and personality disorders are prevalent among sex offenders. However, it is important to note that the researchers classified victims aged 14 years and older as adults, which suggests it may be possible differences in the prevalence rates of these disorders may differ for these two groups of offenders if the victims were classified based on the legal age of adulthood in the United States of 18 years.

Bogaerts, Vanheule, and Declercq (2005) conducted a study examining personality disorders, adult attachment, and parental bonding in a sample of 84 sex offenders who molested children and 80 matched controls. Using the Parental Bonding Instrument (PBI), Adult Attachment Scale (AAS), and Assessment of the DSM-IV Personality Disorders (ADP-IV) the researchers first examined differences between the two groups. Bogaerts et al. (2005) found that compared to the controls, child molesters exhibited more personality disorders, particularly antisocial and schizoid personality disorders, as well as lower levels of care and higher levels of autonomy granted by parents being strong predictors of offending. Furthermore, the researchers conducted a secondary analysis focused exclusively on the group of child molesters and found that those with anxious-ambivalent attachments present with personality disorders 1.33 times more often than those who do not (Bogaerts et al., 2005). These findings suggest that sexual offenders who molest children may be characterized by antisocial and schizoid

personality disorders, and that sexual offenders with insecure attachments are more likely to present with personality disorders.

Bogaerts et al. (2008) examined DSM-IV-TR axis II personality disorders among a sample comprised of 36 paraphilic and 34 nonparaphilic sex offenders who molested children. Using the Assessment of DSM-IV Personality Disorders questionnaire (ADP-IV), the researchers found that paraphilic and nonparaphilic child molesters differed significantly with regards rates to the prevalence of borderline, histrionic, obsessive-compulsive and depressive personality disorders. Paraphilic offenders demonstrated significantly higher rates of these four personality disorders than the nonparaphilic offenders. The researchers also noted that of these four personality disorders, obsessive-compulsive disorder was the only one significantly related to paraphilic child molestation (Bogaerts et al., 2008). These findings suggest comorbidity between personality disorders and paraphilia among sex offenders who victimize children, and furthermore, that obsessive-compulsive tendencies likely play an underlying role in behavior among paraphilic sex offenders.

In summary, when accounting for psychopathology, particularly personality and paraphilic disorders, sex offenders appear to be a heterogenous group. Raymond et al.'s (1999) findings suggest comorbid mood, anxiety, paraphilic and personality disorders are common among pedophilic sex offenders. Leue et al. (2004) and Eher et al.'s (2019) findings suggest that there are differences in the prevalence rates of cluster B and cluster C personality disorders, but further research may be needed as their results were inconsistent with each other. Bogaerts et al. (2008) noted differences in prevalence rates of personality disorders between paraphilic and nonparaphilic sex offenders, with

paraphilic offenders demonstrating higher rates of borderline, histrionic, obsessive-compulsive and depressive personality disorders. Overall, these findings suggest that sex offenders as a group are heterogenous, with differences in the prevalence of paraphilic and personality disorders between subgroups of sex offenders.

Personality Assessment

Personality is a construct that refers to a broad range of stable characteristics, often referred to as traits, reflecting how an individual interact with others, behaves, and feels (Beutler et al., 2011). These characteristics encompass ways of thinking, emotional reactions, behaviors, temperaments, sense of self, and interpersonal styles. Personality assessment is a method of measuring these characteristics to provide a description of the distinctive patterns and tendencies of individuals (Beutler et al., 2011). Individuals can be differentiated from each other by their overall personality configurations, the presence or absence of specific traits and states, and the salience and intensity of these constituent features. Clinical personality assessment aims to address six domains of behavior that are relevant to clinical psychology: diagnoses or disorders, the etiology of disordered behavior, the prognosis of the problem, treatments that may impact the prognosis, the level of an individual's impaired functioning, and an individual's strengths and capacity to adapt (Beutler et al., 2011). It also involves the measurement of an individual's traits and states and distinguishing between functional and dysfunctional behavior and psychological features. Among objective measures of personality and psychopathology, the Minnesota Multiphasic Personality Inventory (MMPI) and its other versions (MMPI-2; MMPI-2-RF) are the most widely utilized (Friedman, Bolinskey, Levak, & Nichols, 2015). These measures are widely taught in clinical psychology graduate programs and

used by psychologists in a variety of settings (Friedman et al., 2015). The following sections of discuss the development of the MMPI and its subsequent revised versions.

MMPI Development

The original MMPI (Hathaway and McKinley, 1943) was developed to be a useful and reliable assessment tool for psychologists and psychiatrists working in hospitals, who were largely responsible for rendering psychiatric diagnoses (Graham, 2006). It consisted of 566 items with statements to which the examinee responds true or false. These items were comprised into a total of 13 scales: three validity scales and ten clinical scales. In order to create each of these scales, the test developers utilized an empirical criterion-keying method in which they administered the MMPI to two groups of participants: a clinical group of patients with a specific psychiatric diagnosis and a comparison group of individuals drawn from the surrounding community population (Friedman et al., 2015; Graham, 2006). Items that differentiated between the pairs of groups constituted the clinical scale named after the relevant clinical/diagnostic group. Following its release, research conducted on the MMPI eventually led to numerous new scales being developed and a large number of them being added to the MMPI. These included the Harris-Lingoes subscales for six of the ten clinical scales (Harris & Lingoes, 1955), content scales (Wiggins, 1966), and a multitude of supplementary scales (Barron, 1953; Gough, McClosky, & Meehl, 1951, 1952; Kleinmuntz, 1961; MacAndrew, 1965; Megargee, Cook, & Mendelsohn, 1967; Welsh, 1956). The MMPI rapidly became the most widely used measure in clinical assessment and research applications, both in the U.S. and worldwide (Dahlstrom, 1992).

MMPI-2 Development

Over time, several concerns were raised regarding the nature of the MMPI's items and the original standardization sample for the test (Graham, 2006). Specifically, some argued the standardization sample lacked representation of the general population in the U.S. due to the fact it was a convenience sample that largely consisted of Caucasian individuals with lower levels of education residing in or around Minneapolis, Minnesota. Additionally, concerns regarding the content and language utilized in many of the items were also raised. Based on these concerns, it was recommended that the MMPI undergo revisions, which included restandardization (Graham, 2006). Released in 1989, the MMPI-2 consists of a total of 567 true/false items and was considered to have a more representative and up-to-date standardization sample, in addition to improvements regarding the item content and development of new additional scales. The standardization sample consisted of a national, representative sample of 2,600 adults drawn from the general United States population. The MMPI-2 contains a total of eight validity scales, and retains the original ten clinical scales and 28 Harris-Lingoes subscales from the MMPI (Harris & Lingoes, 1955, 1968). It also includes 16 supplementary scales, with eight being newly added scales in addition to eight from the MMPI (Barron, 1953; Cook & Medley, 1954; Gough, McClosky, & Meehl, 1951, 1952; Hjemboe, Butcher, & Almagor, 1992; Keane, Malloy, & Fairbank, 1984; Kleinmuntz, 1961; MacAndrew, 1965; Megargee, Cook, & Mendelsohn, 1967; Peterson & Dahlstrom, 1992; Schlenger & Kulka, 1987; Weed, Butcher, McKenna, & Ben-Porath, 1992; Welsh, 1956). Additionally, the MMPI-2 contains several new scales, including 15 content scales (Butcher, Graham, Williams, & Ben-Porath, 1990), nine Restructured Clinical (RC)

scales (Tellegen et al., 2003), and five Psychopathology Five (PSY-5) scales (Harkness, McNulty, & Ben-Porath, 1995). Another important change to note with regards to the restandardization sample was that the raw score means for the clinical scales were generally higher than those of the original MMPI (Friedman et al., 2015). This led to the cutoff T-score marking a clinical elevation being lowered from 70 on the original MMPI to 65 on the MMPI-2. Moreover, the MMPI-2 employed the use of normalized T-scores, rather than linear T-scores used on the MMPI, in order for T-scores to be more easily and accurately compared across scales (Friedman et al., 2015).

MMPI-2-RF Development

The Minnesota Multiphasic Personality Inventory-Second Edition-Restructured Form (MMPI-2-RF; Tellegen & Ben-Porath, 2008/2011) is the newest version with a total of 338 true/false items selected from the MMPI-2 (Friedman et al., 2015). It is considered as an alternative to the MMPI-2 rather than a replacement for the test (Friedman et al., 2015). Although all the test items are derived from the MMPI-2, the MMPI-2-RF contains both new and revised scales. One notable difference from its predecessor is that the Restructured Clinical (RC) scales are the foundation of the MMPI-2-RF in place of the MMPI-2's clinical scales. The normative sample of the MMPI-2 were also used for the MMPI-2-RF, with the exception of 224 women who were excluded in order to achieve a balance in the number of men and women in the normative sample (Greene, 2011). Altogether, the MMPI-2-RF is comprised of 51 scales: nine RC scales, nine validity scales, 3 High-order Scales, 23 Specific Problem scales, 2 Interest scales, and 5 revised Personality Psychopathology PSY-5 scales. Descriptions of the characteristics measured by each scale are included in Table 1.

Table 1

MMPI-2-RF scales and their measured characteristics

Scale	Characteristics Measured
Validity Scales	
CNS (Cannot Say) raw score	Omitted or double-marked responses
VRIN-r (Variable Response Consistency-revised)	Random responding
TRIN-r (True Response Inconsistency-revised)	Fixed responding
F-r (Infrequent Responses- revised)	Infrequent responses in the general population
Fp-r (Infrequent Psychopathology Responses- revised)	Infrequent responses in psychiatric populations
Fs (Infrequent Somatic Responses-revised)	Infrequent somatic complaints in medical patients
FBS-r (Symptom Validity- revised)	Somatic and cognitive complaints associated with over-reporting when at high levels
RBS (Response Bias Scale)	Non-credible memory complaints
L-r (Uncommon Virtues- revised)	Moral attributes or activities rarely claimed
K-r (Adjustment Validity- revised)	Avowals of good psychological adjustment associated with under-reporting when at high levels
Higher-Order (H-O) Scales	
EID (Emotional/Internalizing Dysfunction)	Problems associated with affect and mood
THD (Thought Dysfunction)	Problems associated with disordered thinking
BXD (Behavioral/Externalizing Dysfunction)	Problems associated with under-controlled behavior
Restructured Clinical (RC) Scales	
RCd (Demoralization)	General dissatisfaction and unhappiness
RC1 (Somatic Complaints)	Diffuse physical health complaints
RC2 (Low Positive Emotions)	Lack of positive emotional responsiveness

(continues)

Table 1 (cont.)

Scale	Characteristics Measured
RC3 (Cynicism)	Non-self-referential beliefs expressing distrust and a generally low opinion of others
RC4 (Antisocial Behavior)	Irresponsible behavior and rule breaking
RC6 (Ideas of Persecution)	Self-referential beliefs that others pose a threat
RC7 (Dysfunctional Negative Emotions)	Maladaptive anxiety, anger, and irritability
RC8 (Aberrant Experiences)	Unusual thoughts or perceptions
RC9 (Hypomanic Activation)	Over-activation, aggression, impulsivity, and grandiosity
Specific Problems (SP) Scales	
Somatic Scales	
MLS (Malaise)	Overall sense of physical debilitation, poor health
GIC (Gastrointestinal Complaints)	Nausea, recurring upset stomach, and poor appetite
HPC (Head Pain Complaints)	Head and neck pain
NUC (Neurological Complaints)	Dizziness, weakness, paralysis, loss of balance, etc.
COG (Cognitive Complaints)	Memory problems, difficulties concentrating
Internalizing Scales	
SUI (Suicidal/Death Ideation)	Reports of suicidal ideation and recent suicide attempts
HLP (Helplessness/Hopelessness)	Belief that problems cannot be solved or goals cannot be reached
SFD (Self-Doubt)	Lack of confidence, feelings of uselessness
NFC (Inefficacy)	Belief one is inefficacious and indecisive
STW (Stress/Worry)	Preoccupation with disappointments, difficulty with time pressure
AXY (Anxiety)	Pervasive anxiety, frights, frequent nightmares

(continues)

Table 1 (cont.)

Scale	Characteristics Measured
Internalizing Scales	
ANP (Anger Proneness)	Becoming easily angered, impatient with others
BRF (Behavior-Restricting Fears)	Fears that significantly inhibit normal activities
MSF (Multiple Specific Fears)	Fears of blood, fire, thunder, etc.
Externalizing Scales	
JCP (Juvenile Conduct Problems)	Difficulties at school and home, stealing
SUB (Substance Abuse)	Past and current misuse of alcohol and drugs
AGG (Aggression)	Physically aggressive, violent behavior
ACT (Activation)	Heightened excitation and energy level
Interpersonal Scales	
FML (Family Problems)	Conflictual family relationships
IPP (Interpersonal Passivity)	Being unassertive and submissive
SAV (Social Avoidance)	Avoiding or not enjoying social events
SHY (Shyness)	Bashful, prone to feel inhibited and anxious around others
DSF (Disaffiliativeness)	Disliking people and being around them
Interest Scales	
AES (Aesthetic-Literary Interests)	Literature, music, the theater
MEC (Mechanical-Physical Interests)	Fixing and building things, the outdoors, sports
Personality Psychopathology Five (PSY-5) Scales	
AGGR-r (Aggressiveness-revised)	Instrumental, goal-directed aggression
PSYC-r (Psychoticism-revised)	Disconnection from reality
DISC-r (Disconstraint-revised)	Under-controlled behavior
NEGE-r (Negative Emotionality/Neuroticism-revised)	Anxiety, insecurity, worry, and fear

(continues)

Table 1 (cont.)

Scale	Characteristics Measured
Personality Psychopathology Five (PSY-5) Scales	
INTR-r (Introversion-Low Positive Emotionality-revised)	Social disengagement and anhedonia

Note. Adapted from Ben-Porath & Tellegen, 2008/2011.

The MMPI-2-RF's validity scales were developed to measure consistency of examinee response patterns, response bias, minimization or exaggeration of problems, and levels of defensiveness, in order to ultimately determine suitability for interpretation of the test results (Friedman et al., 2015; Greene, 2011). The Variable Response Inconsistency Scale-revised (VRIN-r) is a measure of inconsistent or random responding and is composed of a total of 53 item pairs, 13 of which correspond to VRIN on the MMPI-2. The True Response Inconsistency Scale-revised (TRIN-r) measures patterns of responding dissimilarly to similar items and consists of 26 pairs of items, with only 5 being shared with the MMPI-2 TRIN scale (Friedman et al., 2015; Greene, 2011). For these item pairs, the scale score increases if the inconsistent response of "true" is provided for 15 items, and "false" for the remaining 11 (Greene, 2011).

The MMPI-2-RF also incorporates scales responsible for the detection of self-unfavorable reporting. Infrequent Responses (F-r) includes 32 items and is a measure of responses to items that are infrequently endorsed by the normative sample. It is considered a hybrid of the MMPI-2's scales F and FB, as F-r contains 21 items shared with both scales (Friedman et al., 2015; Greene, 2011). Infrequency Psychopathology-revised (Fp-r) assesses the respondent's tendency to endorse items infrequently endorsed

by a sample of psychiatric patients demonstrating severe psychopathology. Fp-r contains a total of 21 items, 17 of which are in common with the MMPI's Fp. Infrequent Somatic Responses-revised (Fs-r) is comprised of 16 items which were endorsed by fewer than 25% of multiple large samples of patients with medical concerns (Friedman et al., 2015). Therefore, Fs-r assesses for reports of somatic complaints that are not frequently experienced. Symptom Validity (FBS-r) contains 30 items from the original FBS scale, which had been added to the MMPI-2 in 2007 and constructed to identify malingering of injuries (Friedman et al., 2015). Response Bias Scale (RBS) is a new scale on the MMPI-2-RF comprised of 28 items, and serves as an additional measure of response bias. The MMPI-2-RF validity scales also include two scales designed to detect self-favorable reporting (Friedman et al., 2015). Uncommon Virtues (L-r) evaluates an individual's tendency to deny faults and present oneself in a favorable light. This scale consists of 14 items, 11 of which are shared with the MMPI-2's L scale. Adjustment Validity (K-r) contains 14 items including 12 that are shared with the MMPI-2's K scale. This scale serves as a measure of the respondent's self-reported adjustment, reflecting defensiveness at high score levels (Friedman et al., 2015).

The Higher-Order (H-O) scales were designed to measure three major aspects of psychopathology: general emotional distress and negative affect, dysfunctional thoughts, and acting out behaviors. Emotional/Internalizing Dysfunction (EID) is comprised of 41 items, 32 of which belong to RCd, RC2, or RC7, and assesses levels of emotional distress (Friedman et al., 2015; Greene, 2011). Thought Dysfunction (THD) is a measure of dysfunction in thinking processes and is comprised of 26 items. THD shares 13 of its items with RC6 and the other 13 with RC8 and also shares significant item overlap with

the PSYC-r scale (Friedman et al., 2015). Behavioral/Externalizing Dysfunction (BXD) is a measure of an individual's tendency to engage in acting-out behaviors. This scale is comprised of 23 items from RC4, RC9, DISC-r, and AGG-r scales (Friedman et al., 2015).

The Restructured Clinical (RC) scales were originally created for the MMPI-2 to address problems in discriminant validity resulting from substantial item overlap between clinical scales of the MMPI/MMPI-2 (Friedman et al., 2015; Graham, 2006; Greene, 2011). Demoralization (RCd) is comprised of 24 items that assesses the respondent's level of emotional discomfort and general distress. Somatic Complaints (RC1) is made up of 27 items; 20 from scale 1 of the MMPI-2 and 7 new items. RC1 measures preoccupations with physical functioning (Friedman et al., 2015). Low Positive Emotions (RC2) is comprised of 17 items that measures depressive features, and Cynicism (RC3) contains 15 items and measures negativistic attitudes (Greene, 2011). Antisocial Behavior (RC4) is made up of 22 items and measures nonconformity to social rules and norms. Ideas of Persecution (RC6) is a measure of suspiciousness towards others, and consists a total of 17 items. Dysfunctional Negative Emotions (RC7) contains 24 items that measure reported experiences of negative emotion, including anger, fear, and anxiety (Friedman et al., 2015). Aberrant Experiences (RC8) consists of 18 items, 10 of which are shared with scale 8 on the MMPI-2, and measures sensory, perceptual and cognitive disturbances. Lastly, Hypomanic Activation (RC9) is comprised of 28 items and shares nine of these with the MMPI-2's scale 9. RC9 serves as a measure of overenergized thoughts and behaviors (Friedman et al., 2015).

The Specific Problems (SP) scales are classified into four areas: Somatic/Cognitive, Internalizing, Externalizing, and Interpersonal. The five Somatic/Cognitive scales measure overall health functioning and preoccupation with a variety of health concerns. Malaise (MLS) is comprised of eight items that assesses the examinee's feeling of generally poor health, as well as physical debilitation. High MLS scores are related to complaints about health, including feelings of weakness and decreased levels of energy (Friedman et al., 2015). Gastrointestinal Complaints (GIC) contains five items with high scores being indicative of complaints of stomach problems, whereas Head Pain Complaints (HPC) is comprised of six items, with high scores on this particular scale indicates complaints of head pain. Neurological Complaints (NUC) contains 10 items, with elevated scores being indicative of vague reports of neurological problems. Cognitive Complaints (COG) is comprised of 10 items and high scores on this particular scale are reflective of reported cognitive complaints (Friedman et al., 2015).

The second grouping of SP scales on the MMPI-2-RF are nine scales known as the Internalizing scales, which assess an array of the respondent's internal psychological disturbance (Friedman et al., 2015). Suicidal/Death Ideation (SUI) is comprised of five items, with high scores relating to preoccupation with death and suicide. Helplessness/Hopelessness (HLP) consists of five items, with high scores on this scale reflecting the respondent's belief that the future will be unpleasant. Self-Doubt (SED) contains four items, with elevated scores reflecting reported feelings of inferiority and insecurity. Inefficacy (NFC) is comprised of nine items, with low scores reflecting a sense of self-reliance and high scores being reflective of passivity. Stress/Worry (STW) contains seven items, with higher scores being associated with higher levels of reported

worry and stress. Anxiety (AXY) consists of five items, with elevated scores on this scale demonstrating anxiousness. Anger Proneness (ANP) is comprised of seven items, and high scores on this scale reflect the respondent's tendency to hold grudges and be argumentative. Behavior-Restricting Fears (BRF) consists of nine items, with high scores on this scale reflecting the respondent's level of fear being high enough to restrict his or her activity. Finally, Multiple Specific Fears (MSF) contains nine items, and high scores are associated with the respondent being risk-aversive and having multiple fears.

The four Externalizing scales are a group of SP scales that examine the respondent's acting-out behaviors (Friedman et al., 2015). Juvenile Conduct Problems (JCP) contains six items, with high scores reflecting a history of problematic behavior in school. Substance Abuse (SUB) is comprised of seven items, with the respondent's admission of past or current substance use leading to higher scores on this scale. Aggression (AGG) consists of nine items, with high scores indicating reports of acting aggressively towards others (Friedman et al., 2015). Lastly, Activation (ACT) is comprised of seven items and elevated scores on this scale are reflective of heightened levels of energy and excitement.

The fourth cluster of SP scales are the Interpersonal scales, which consist of five scales measuring aspects of interpersonal functioning (Friedman et al., 2015). Family Problems (FML) contains 10 items, with high scores on this scale reflecting reports of past or current conflict within familial relationships. Interpersonal Passivity (IPP) is also comprised of 10 items, with high scores on this scale reflecting the respondent's reports of being unassertive. Social Avoidance (SAV) also consists of 10 items, and elevated scores on this scale depict a lack of enjoyment of social interactions or events. Shyness

(SHY) contains seven items, with elevated scores representing notable levels of reported shyness. Lastly, Disaffiliativeness (DSF) is comprised of six items, with high scores indicating reported dislike for being around others.

There are also two Interest scales included in the MMPI-2-RF: Aesthetic-Literary Interests (AES) and Mechanical-Physical Interests (MEC) (Friedman et al., 2015). AES consists of seven items, with high scores indicating reports of interest in literary or aesthetic jobs or activities. MEC consists of nine items, and elevated scores on this scale reflect interest in jobs or activities that are considered physical or mechanical.

Finally, the Personality Psychopathology Five-revised (PSY-5-r) scales are comprised of revised versions of the PSY-5 scales of the MMPI-2. Aggressiveness-revised (AGGR-r) consists of 18 items that assess for levels of assertiveness, aggressiveness, and antisocial behaviors. At higher score levels, these tendencies can be interpreted as domineering (Friedman et al., 2015). Psychoticism-revised (PSYC-r) is comprised of 26 items, 25 items from the MMPI-2's PSYC scale in addition to nine new items. High scores on this scale indicate experience of perceptual disturbances and unrealistic thinking (Friedman et al., 2015). Disconstraint-revised (DISC-r) consists of 13 items shared with the MMPI-2's DISC and seven new items. Elevated scores on this scale are related to low behavioral control. Negative Emotionality/Neuroticism-revised (NEGE-r) contains a total of 20 items, with 14 items in common with NEGE on the MMPI-2. High scores on this particular scale reflect emotional distress often related to worry and negative expectations (Friedman et al., 2015). Lastly, the Introversion/Low Positive Emotionality (INTR-r) scale is comprised of 20 items with high scores being

reflective of the respondent having positive emotional experiences less frequently than considered common.

Personality Assessment of Sex Offenders

Sex offenders are commonly evaluated with measures of personality prior to going to trial, and even after conviction, in order for professionals across correctional and treatment settings to gain an understanding of personality characteristics that may promote or inhibit repeat offending. Within the sex offender literature, the original MMPI appears to be the most widely used objective measure of personality, followed by the different versions of the Millon Clinical Multiaxial Inventory (MCMI), as well as the Personality Assessment Inventory (PAI) (Davis & Archer, 2010). The remainder of this review of the literature discusses research findings from studies that utilized the MMPI, MMPI-2, and MMPI-2-RF in the personality assessment of sex offenders.

MMPI Assessment of Sex Offenders

Armentrout and Hauer (1978) conducted a study comparing the MMPI profiles of 51 adult male sex offenders who completed the MMPI as part of an evaluation at an inpatient psychiatric facility. The offenders were divided into three groups: those who committed rape of an adult, those who committed rape of a child, and those who committed some other type of sex offense. The results demonstrated that overall, the three groups of offenders demonstrated similar score elevations on scale 4 (Psychopathic Deviate), but differed with regards to their elevations on scale 8 (Schizophrenia). Offenders who raped adult victims produced a 8-4 codetype profile with the highest mean scale 8 scores among the groups of offenders, whereas the offenders whose rape victims

were children formed 4-8 codetype profiles, suggesting differences in personality psychopathology (Armentrout & Hauer, 1978).

Anderson, Kunce, and Rich (1979) studied sex offender MMPI profiles in order to determine distinct personality types among this population. The researchers utilized MMPI data of 92 sex offenders who committed either rape, child molestation, or incest, and had either been referred for a pretrial evaluation or committed to a particular psychiatric hospital. The results revealed three MMPI profiles determined as personality types among the sex offenders: a profile with an extremely elevated scale 8 (Schizophrenia) score as well as an elevation on the F scale; another profile characterized by peaks on scales 4 (Psychopathic Deviate) and 9 (Hypomania), and another profile with high scores on the scales known as the neurotic triad (scales 1 (Hypochondriasis), 2 (Depression), and 3 (Hysteria)) in addition to a high scale 4 (Psychopathic Deviate). Furthermore, the researchers found the sex offenders in the first identified personality type demonstrated long-term socially maladjusted behavior, but were predominantly without any psychiatric diagnoses. Those in the second personality type were less likely to have previous sentences and less severe adjustment problems than the other two types. However, these offenders were more likely to have psychiatric diagnoses compared to those in the first type. The sex offenders with profiles reflecting the third personality type demonstrated fewer pathological symptoms in the hospital compared to the other two groups. These offenders were also most likely to have chronically poor social adjustment as evidenced by two-thirds of these offenders having a history of alcohol abuse and approximately half having served previous sentences (Anderson et al., 1979). Overall, the

MMPI profiles produced by the sex offenders were uniquely different from each other and suggested the MMPI is able to classify offenders into these personality types.

With a specific focus on examining personality differences between child molesters with and without prior sex offenses, McCreary (1975) studied a sample 33 offenders convicted of child molestation who were referred to a psychiatric clinic for an evaluation, which included the administration of the MMPI, prior to receiving their legal sentence. The sex offenders were divided into two groups based on the absence or presence of previous arrests for sexual offenses. The results indicated that the offenders without prior sex offenses produced significantly lower T-scores on scale 1 (Hypochondriasis), scale 3 (Hysteria), scale 8 (Schizophrenia), scale 4 (Psychopathic Deviate) and one of its subscales, Pd_2 (Authority Problems) than those who had prior sex offenses (McCreary, 1975). From these findings, McCreary (1975) suggested a relationship between the number of prior arrests and the severity of psychopathology. Specifically, chronic offenders showed greater impulsivity, confusion, alienation, authority conflicts, and psychosomatic complaints than those without prior arrests. McCreary qualified that the causal direction of the relationship between prior arrests and severity of disturbance could not be determined, as these results may either indicate that more disturbed individuals tend to reoffend or that longer prison terms may increase personality disturbance among repeat offenders.

Panton (1978) conducted a study assessing personality differences of three groups of sexual offenders using the MMPI. The sample consisted of 20 rapists who victimized girls aged 12 or younger, 30 rapists who victimized adult women, and 28 sex offenders who molested girls aged 12 or younger who were evaluated upon arrival to prison and did

not have any psychotic disorder diagnoses. The results demonstrated there were no significant differences between the two groups of rapists. However, there were significant differences found between the two groups of rapists and the group of child molesters. Panton (1978) noted the group of child molesters scored significantly higher on scales L (Lie), 3 (Hysteria), and the Pedophilic scale developed by Toobert et al. (1959) compared to the two groups of rapists. On the other hand, the two groups of rapists produced profiles with significantly higher scores on scales 6 (Paranoia), 8 (Schizophrenia), and 9 (Hypomania) in comparison to the child molesters. Furthermore, the results demonstrated that both groups of rapists produced profiles that were nearly indistinguishable from each other, with a 4-8 two-point codetype and with scales 6 (Paranoia) and 9 (Hypomania) also contributing to the profile's elevations. The researcher noted this profile pattern suggests that both groups demonstrate hostility, self-centeredness, a lack of concern about consequences, and a tendency to act-out impulsively and alienate themselves socially (Panton, 1978). The results also demonstrated the child molesters produced profiles with elevations on scales 4 (Psychopathic Deviate), 2 (Depression), 3 (Hysteria), and 7 (Psychasthenia), suggesting that they experience low self-esteem, feelings of self-doubt, insecurity, and inadequacy, in addition to self-alienation and inhibition of aggression. All three groups of sex offenders were found to produce profiles with the highest elevation being on scale 4 (Psychopathic Deviate), but further analysis of this scale's item responses indicated that the child molesters endorsed items associated with a history of family conflict and self-alienation, whereas the rapists endorsed items associated with social alienation and problems with authority. Overall, Panton (1978) concluded that the similarities between the rapists of young girls and those who raped

adult women suggest that individuals who commit rape may not choose victims based on their age, but rather convenience or availability at the time of the offense. Moreover, the findings with regards to the child molesters were suggestive of this subgroup of sex offenders may be more motivated by satisfying their sexual needs.

Rader (1977) conducted a study comparing the MMPI profiles of different criminal offenders. The sample was comprised of 129 men who were grouped based on their committed offense: rape (n = 47), physical assault (n = 46), or indecent exposure (n = 36). Using t-tests to compare K-corrected mean MMPI scale scores, the researcher found that the group of offenders who committed rape scored significantly higher on scales F (Infrequency), 1 (Hypochondriasis), 2 (Depression), 3 (Hysteria), 4 (Psychopathic Deviate), and 8 (Schizophrenia) than those offenders who committed indecent exposure. Offenders who committed rape also scored significantly higher on scales 4 (Psychopathic Deviate), 7 (Psychasthenia), and 8 (Schizophrenia) than those who committed physical assault. Rader (1977) noted comparisons of the mean scale scores belonging to physical assaulters and indecent exposers demonstrated no significant differences between the two groups offenders on any of the clinical or validity scales. Further analyses involved transforming K-corrected raw scores into T scores, followed by determining two-point codetypes for the profiles of each offender and the subgroups. The results indicated that the codetypes which occurred most commonly in the entire sample of offenders were 4-9/9-4, 4-8/8-4, and 4-3/3-4. The results also demonstrated that a 4-9 codetype was significantly more prevalent among those who committed physical assault than the other two groups of offenders, who did not significantly differ from each other with regards to the occurrence of this codetype (Rader, 1977). The researcher found that

those who committed indecent exposure produced profiles with a 4-8 modal codetype, whereas the profiles of the rapists had both 4-3 and 4-8 codetypes appear most often. Based on these findings, Rader (1977) concluded that the rapists produced MMPI profiles evident of greater psychological disturbance than those who committed physical assault or indecent exposure. The researcher suggested the offenders who committed rape demonstrated more suspicion towards others, denial, feelings of anger and hostility, somatic concerns, and depression compared to the indecent exposers. Rader (1977) also noted that the rapists tended to be more anxious, aggressive, hostile, and present with more bizarre mentation than those who committed physical assault. Additionally, all three groups of offenders were considered more deviant than individuals in the general population due to the fact that each group of offenders produced scale mean scores that were higher than the standard normative means (Rader, 1977).

Hall, Maiuro, Vitaliano, and Proctor (1986) conducted a study to differentiate sex offenders based on the characteristics of their offense using the MMPI. The sample was comprised of 406 men who had victimized a child sexually and were receiving inpatient sex offender treatment at a state hospital. In addition to the MMPI scores, data was collected from the offenders' hospital files and police reports regarding their sex offense. The offenders were grouped as having committed rape (n = 146) or a sex offense other than rape (n = 260). Most of the offenders victimized girls exclusively (n = 275), while 75 victimized boys exclusively, and a total of 56 offended against both boys and girls. Additionally, the majority of offenders were not related to their victims (n = 348), with 58 offenders being considered incest offenders. Hall et al. (1986) analyzed the mean scores of the three validity and 10 clinical MMPI scales and examined the most common

two-point codetypes amongst the groups of sex offenders. The results demonstrated that the most common codetypes for the total sample were 4-8/8-4 (n = 29), 7-8/8-7 (n = 26), 2-4/4-2 (n = 25), and 4-9/9-4 (n = 23). The most common scale elevations for the sample was scale 4 (Psychopathic Deviate) and scale 8 (Schizophrenia), with 44% of the sex offenders elevating these scales to a clinically significant level. Furthermore, when analyzing the mean MMPI scores based on the descriptive characteristics, the researchers found a significant difference between the groups of sex offenders was based on gender of their victim. This difference was for the scale 5 (Masculinity-Femininity) scores. Additionally, the results suggested a relationship between victim age and MMPI scores on three scales: F, 7 (Psychasthenia), and 8 (Schizophrenia); however, the researchers noted that the magnitudes of the correlations were small (Hall et al., 1986).

Erikson, Luxenberg, Walkbek, and Seely (1987) examined the MMPI profiles of men who were convicted of a sex offense and underwent an evaluation at a sex offender treatment facility prior to their sentencing. MMPI two-point codetypes were calculated and grouped based on a number of factors: victims being children or adults, whether the offenders had substance dependence, victim gender, whether or not the victim and offender were related, and whether offenders were recidivists or first-time offenders. A total of 403 sex offenders' MMPI profiles were included in the analyses. The results demonstrated significant differences of the prevalence of two-point codetypes between the offenders who victimized children and the offenders who victimized adult women (Erickson et al., 1987). The researchers found that sex offenders with child victims were more likely to produce MMPI profiles with 4-2/2-4 codetypes, whereas the sex offenders whose victims were adult women were significantly more likely to have profiles with 4-

9/9-4 codetypes. Erickson et al. (1987) found no significant differences in the frequency of codetypes between offenders who victimized females and those who victimized males. The results also demonstrated that 4-8/8-4 and 4-2/2-4 codetypes were more prevalent among offenders who were not related to their victims than those who were related to their victims who were children. The researchers noted these differences suggest that intrafamilial offenders demonstrate a lower level of disturbance compared to extrafamilial offenders (Erikson et al., 1987).

Erickson et al. (1987) also compared the frequencies of two-point codetypes amongst the sex offenders in this sample to prisoners in a study conducted by Panton (1972). The researchers found that profiles with an 4-8/8-4 codetype were significantly more common amongst sex offenders compared to the sample of prisoners. They also noted that the occurrence of 4-9/9-4 profiles in these two samples was comparable. The results also demonstrated that the offenders who molested children and who produced profiles with 4-2/2-4 and 4-8/8-4 codetypes were almost exclusively extrafamilial sex offenders. Moreover, the results indicated that the 4-3/3-4 codetypes were the most common for the biological fathers and the 4-7/7-4 codetypes were more common for the stepfathers (Erickson et al., 1987). The researchers further suggested that biological fathers who commit incest and produce 3-4 profiles can be characterized as demonstrating chronic feelings of anger, marital problems, overcontrolled hostility, and passivity, whereas those who produce profiles with a 4-3 codetype tend to engage in acting-out in a more overt manner (Erickson et al., 1987).

Lanyon and Lutz (1984) examined the utility of the MMPI in assessing denial and defensiveness of 90 men who had either been convicted or were facing charges of a sex

offense. The sample was derived from referrals for evaluations for competency to stand trial, insanity, or rehabilitation potential, and the majority of the sample (80%) had been charged with child molestation. The sample was divided into three groups based on their level of admission of guilt with regards to their sexually deviant behavior: full denial (n = 18), partial denial (n = 24), or no denial (n = 48). The researchers utilized the MMPI's three validity scales, ten clinical scales, and three derived validity indexes (L + K, F – K, and L + K - F) for their analyses. Lanyon and Lutz (1984) found that the partial- and full-denial groups did not differ significantly from each other but, when combined, showed a significant difference in scores from the no-denial group. Therefore, the researchers compared the no-denial group to the combined partial/full denial group for their further analyses. The results indicated that the MMPI did distinguish between those who admitted to their sexually violent behavior and those who denied their participation (Lanyon & Lutz, 1984). Those who did not engage in denial differed significantly did, partially or fully, on all of the validity and indexes. The groups also demonstrated significant differences in mean scores on scales 5 (Masculinity-Femininity), scale 8 (Schizophrenia), and scale 0 (Social Introversion). Overall, the researchers concluded that the results demonstrated evidence of the validity of the MMPI's validity scales and their utility in differentiating those who deny involvement in the sex offenses they are accused of and those who do not (Lanyon & Lutz, 1984).

Quinsey, Arnold and Pruesse (1980) compared MMPI profiles of 150 offenders who were referred to a maximum-security psychiatric facility for pre-trial evaluations. The offenders were divided into six groups based on the type of offense committed: murder or attempted murder of a girlfriend family member, murder or attempted murder

of a person not related to the offender, property offenses excluding armed robbery, rape of a female victim aged 15 years or older, a contact sex offense with a child victim aged 13 years or younger, or arson. The researchers also included demographic data in their analysis, which included prior incarceration, education level, age at time of admission, and admission diagnoses. The results demonstrated no significant differences between groups of offenders based on offense type (Quinsey et al., 1980).

Hall, Graham, and Shepherd (1991) examined three different methods of producing taxonomies of sex offenders using the MMPI. Their sample was comprised of 261 male sex offenders selected from a larger sample in a study conducted by Hall and Proctor (1987), all of whom were committed to a state hospital following a sex offense. The majority of the sex offenders in the sample had victims who were minors (n = 202); 49 of the offenders victimized adults, and 10 who had both adult and child victims. The first method was a comparison of the MMPI profiles of sex offenders with child victims versus adult victims. The second method was determining any two-point codetypes unique to those who sexually victimized children compared to those who victimized adults sexually. The third method examined in this study was to use a cluster analysis procedure to empirically derive typologies of sex offenders that were reliable and valid, which the researchers hypothesized would occur independently of the age of the offenders' victims (Hall et al., 1991). The results of the MMPI profile comparisons between adult and child sex offenders demonstrated a significant difference between these two groups. Specifically, the sex offenders with child victims and those with adult victims differed significantly on scales 1 (Hypochondriasis), 3 (Hysteria), and 9 (Hypomania). However, the researchers noted that these differences appeared to be

related to offender age and confirmed this when offender age was added as a covariate to the analyses (Hall et al., 1991). With regards to two-point codetypes, the researchers found the following to be the most commonly occurring in the sample: 4-5/5-4 (n = 37), 4-8/8-4 (n = 30), 4-9/9-4 (n = 20), 2-4/4-2 (n = 16), and 4-7/7-4 (n = 16). After further analyses, the researchers concluded that both groups of sex offenders were represented amongst these codetypes and that the codetypes occurred independent of the age of the victims (Hall et al., 1991).

Hall et al.'s cluster analyses revealed a two-cluster solution. The mean MMPI profile for the second cluster was found to be significantly more elevated than the first cluster. Additionally, elevations on scale 4 (Psychopathic Deviate) occurred more frequently in the first cluster, suggesting an antisocial and impulsive subtype of sex offenders with a tendency to have problems with sexual maladjustment and acting out (Hall et al., 1991). The second cluster had more elevations on scales 7 (Psychasthenia) and 8 (Schizophrenia), which the researchers suggested was indicative of a subtype of sex offenders with higher levels of psychiatric disturbance, and was noted to be similar to other typologies from previous research (Hall et al., 1991). However, cross-validation of the clusters showed they were not related to variables such as arrest history, IQ, or offenders age. Overall, Hall et al. (1991) argued that their results regarding the two-point codetypes and two clusters demonstrate that single mean codetypes on the MMPI may not be sufficient to categorize the sex offender population. The researchers also concluded that based on their findings, sex offenders who victimized children and those with adult victims may be similar (Hall et al., 1991).

Hall, Shepherd, and Mudrak (1992) later replicated Hall et al.'s (1991) clustering process with a sample of both sex offenders who victimized children and offenders who committed an offense than was not sexual. The sample was comprised of 114 male offenders grouped into four categories based on the nature of their offense: sex offenses against children (n = 22), violent non-sex offenses (n = 22), non-violent non-sex offenses (n = 46), and a group who committed a combination of these offenses (n = 24). The researchers identified two-point codetypes for each offender's profile before conducting further analyses. Hall et al.'s (1992) results demonstrated three distinctive clusters within the sample. The first cluster was characterized by MMPI profiles with scales 4 (Psychopathic Deviate) and 9 (Hypomania) having the highest scores, but without any of the clinical scales being clinically elevated. It was noted that no particular subgroup of offenders was more prevalent within this cluster. The second cluster was characterized by MMPI profiles with moderate elevations, and with substance abuse and sexual deviance being common problems among these offenders. It was noted that sex offenders with child victims and other non-sex offenders were included in this cluster. The third cluster was denoted as having the most elevated MMPI mean profile alongside high scores on F and low scores on K. The researchers noted that this profile configuration suggests these offenders exaggerate their problems as a cry for help (Hall et al., 1992). Similar to the findings of Hall et al. (1991), Hall et al. (1992) concluded there was no significant difference, based on any specific external variables, between the men who committed sex offenses against children and the other three groups of different offenders, but the clusters were found to be generally externally valid. Overall, these results provided evidence to

support child sex offender and non-sex offender within-group heterogeneity (Hall et al., 1992).

Shealy, Kalichman, Henderson, Szymanowski, and McKee (1991) conducted a cluster analysis to determine homogenous subgroups of sex offenders using the MMPI. The researchers utilized a sample of 90 male offenders who were convicted of sexual offending against female children aged 13 years or younger. The researchers identified four subgroups of these sex offenders that were further differentiated by affective, psychosocial history, and psychosexual data. Those falling into the first subgroup produced a mean profile common among individuals with antisocial personalities and impulsivity. This group was also identified as having the highest level of self-esteem compared to the other subgroups and were also less likely to report affective distress, sexual experiences considered atypical, and thought disturbance. Shealy et al.'s (1991) second identified subgroup was comprised of sex offenders whose MMPI profiles had a moderate elevation on scale 6 (Paranoia) and subclinical elevations on the neurotic triad scales and scale 4 (Psychopathic Deviate). This subgroup demonstrated a propensity to harbor feelings of resentment towards others, as well as being guarded, suspicious, and sensitive to the opinions of others. This subgroup also demonstrated a tendency to report lower levels of sexual and psychological disturbance. The third subgroup of sex offenders produced MMPI profiles with elevations on scales 4 (Psychopathic Deviate), 6 (Paranoia), and 8 (Schizophrenia). This profile pattern suggested these offenders experience high levels of hostility and anger, in addition to difficulties with judgment. The fourth subgroup was denoted as having profiles with elevated scores on scales F (Infrequency), 6 (Paranoia), 7 (Psychasthenia), and 9 (Hypomania). This subgroup

demonstrated a tendency to exaggerate psychopathology. Based on the combined findings from the cluster analysis and the psychosocial, psychosexual, and affective data, Shealy et al. (1991) concluded that the first two identified subgroups of sex offenders had less psychological disturbance than the latter two subgroups. Specifically, they noted that the third and fourth subgroups of sex offenders demonstrated more severe thought disturbance and abnormal sexual behavior. Overall, the researchers concluded from their findings that their four MMPI-based subgroups could be conceptualized as two general sex offender subgroups, consistent with Hall et al.'s (1991) findings (Shealy et al., 1991).

Kirkland and Bauer (1982) compared the MMPI profiles of men who had incestuous relations with their daughters or stepdaughters to the profiles of a group of matched control subjects. The sample was comprised of 10 incestuous fathers or stepfathers who were participating in a Department of Social Services-ran treatment program, and 12 men who had daughters from the community who were matched based on several factors including their age, race, and their daughter's age and did not have incestuous relations. The researchers gathered historical information about the fathers and stepfathers, as well as their incest cases, in addition to examining each individual MMPI profile and then obtaining mean scale scores for both groups. Their results demonstrated that 90% of the incest offenders' MMPI profiles had at least two scales that were clinically elevated, with T-scores of 70 or more, while the group of control subjects did not produce profiles with any clinical elevations (Kirkland & Bauer, 1982). The researchers also found that the incest offenders scored significantly higher on scale 4 (Psychopathic Deviate), scale 7 (Psychasthenia), and scale 8 (Schizophrenia) than the individuals in the non-offender control group. The researchers noted that clinically

elevated scores on these three MMPI scales are related to individuals who demonstrate chronic insecurity, social alienation, engage in behavior related with acting-out, and feelings of inadequacy with regards to masculinity and traditional sex roles. Furthermore, Kirkland and Bauer (1982) noted the elevations on scale 4 (Psychopathic Deviate) were reflective of the incest offenders likely having problems with impulse control, feelings of resentment towards authority, and nonconformity to norms, and that the elevations on scale 8 provided evidence these offenders are socially isolated, tend to avoid relationships, and lack social skills. Based on the elevations on scale 7, the incest offenders were noted as often experiencing traits of anxiety and apprehension, such as feelings of inferiority and insecurity, as well as obsessive thoughts (Kirkland & Bauer, 1982).

MMPI-2 Assessment of Sex Offenders

Similar to its predecessor, the MMPI-2 has also been implemented in research within the sex offender literature (Coxe & Holmes, 2009; Mann, Stenning, & Borman, 1992; Ridenour, Miller, Joy, & Dean, 1997; Tomak, Weschler, Ghahramanlou-Holloway, Virden, & Nademin, 2009). Considering the restandardization and changes made in the development of the MMPI-2, some researchers questioned whether conclusions regarding sex offender personality and psychopathology from using the MMPI would generalize to its revised version, which prompted a series of MMPI-2 studies.

Mann et al. (1992) studied the MMPI-2 profiles of sex offenders incarcerated in three different settings: military-based correctional facility, federal prison, and state prison. Their sample was comprised of 109 men who were convicted of sex offenses against children and enrolled in sex offender treatment programs within each setting. The

majority of sample was receiving treatment in a state prison (n = 60), while the remainder were in programs in a federal prison (n = 24) or a military-based correctional facility (n = 25). The researchers found that altogether, the three groups of sex offenders produced a mean MMPI-2 profile without any clinically elevated scale scores. Although Scale 4 (Psychopathic Deviate) was the highest scale elevation, followed by scale 0 (Social Introversion), Mann et al. (1992) noted that less than 17% (n = 18) of the sex offenders produced profiles with these elevations. The researchers also examined the prevalence of two-point codetypes and noted the four most commonly present were 2-4/4-2, 2-0/0-2, 3-4/4-3, and 4-0/0-4; yet less than 15% of the sample produced these codetype patterns. The researchers also compared the sex offenders' MMPI-2 profiles based on type of setting. The results indicated that sex offenders serving sentences in federal prison scored significantly higher on scale 5 (Masculinity-Femininity) compared to those in a military facility or state prison. The results also demonstrated scale 1 (Hypochondriasis) was the most common peak for the subgroup of sex offenders serving time in a state prison (Mann et al., 1992).

Ridenour et al. (1997) evaluated the MMPI-2's ability to differentiate a group of sex offenders from a group of controls. Their sample was comprised of 91 men who were convicted of child molestation and 90 men who were selected at random from the MMPI-2 standardization sample. Using MMPI-2 scales as predictors, the researchers conducted a stepwise discriminant analysis in order to obtain hit rates. The result indicated that the MMPI-2 correctly classified approximately 81% of total sample, with about 79% of the child molesters and roughly 83% of the control subjects being correctly categorized.

From this result, the researchers suggested the MMPI-2 appeared capable of discriminating between child molesters and control subjects (Ridenour et al., 1997).

Tomak et al. (2009) conducted a study comparing levels of psychopathology and personality profiles of sex offenders using the MMPI-2. The total sample of 152 sex offenders was divided into two groups. The first group consisted of 48 offenders who committed internet-based sex offenses ranging from receiving or distributing child pornography to engaging in conversations, planning meet-ups with minors or a combination of such offenses. The second group was comprised of 104 offenders convicted for contact sex offenses against children, including rape and pedophilia. The results demonstrated that internet sex offenders scored significantly lower than the contact sex offenders on four scales: L, F, scale 4 (Psychopathic Deviate), and scale 8 (Schizophrenia) (Tomak et al., 2009). With regards to codetypes, only three internet sex offenders produced each of the most frequently occurring codetypes: 3-1 and 4-3. Tomak et al. (2009) concluded that although a specific profile produced for internet offenders or contact offenders was lacking, there still appeared to be some notable differences between the two groups of sex offenders. The researchers additionally discussed the lack of significant elevations on internet sex offenders MMPI-2 profiles possibly being an indication of some difficulty differentiating them from individuals in the general population with the MMPI-2 (Tomak et al., 2009).

Coxe and Holmes (2009) compared low- and high-risk sex offenders based on a total of 26 diverse variables using the MMPI-2 along with the Static-99 risk assessment measure, Abel Assessment of Sexual Interest (AASI), and Raven's Matrices Progressive Matrices intelligence test in order to identify potential differences between the two

groups. The sample was comprised of 285 sex offenders who opted for a plea agreement and were on probation at the time of the study. Risk level for each sex offender was determined by obtained scores on the Static-99, with scores of zero to one indicating low risk and scores of four and higher demonstrating high risk (Coxe & Holmes, 2009). Using the Static-99, 10% of the offenders were identified as high risk (n = 29) and 44% were considered to be low risk (n = 125). The remaining 46% of the sex offenders (n = 131) were considered to be at a medium risk level, and therefore were not included in the comparisons. The researchers used standard multiple regression involving 26 independent variables, which included variables related to prior childhood sexual abuse, denial of the sex offense or sexual interest, number of previous criminal offenses, level of cognitive distortion, social desirability, and several personality and psychopathology measures on the MMPI-2. Coxe and Holmes' (2009) results demonstrated that offenders' number of previous felonies, age, score on the MMPI-2 Infrequency scale, and cognitive distortion score were the only variables that significantly predicted being classified as high risk. Focusing on the results of the MMPI-2 profiles, the high-risk group of sex offenders mean scores on three scales were elevated above a 65: scale 4 (Psychopathic Deviance), scale 6 (Paranoia), and scale 8 (Schizophrenia). None of the mean scale scores for the group of low-risk sex offenders were clinically elevated. From these results, the researchers suggested that the group of high-risk sex offenders demonstrated a higher level of chronic psychological maladjustment (Coxe & Holmes, 2009).

Overall, research using the MMPI-2 has demonstrated this particular measure's utility in identifying differences among sex offender subgroups. Ridenour et al. (1997) suggested the MMPI-2 is capable of distinguishing child molesters from individuals who

were controls. Mann et al. (1992) found personality differences between sex offenders based on the setting in which they were imprisoned. Tomak et al. (2009) noted differences between sex offenders based on whether they committed contact or internet-based sex offenses, and suggested contact offenders demonstrate greater psychopathology than internet-based sex offenders. Furthermore, internet-based sex offenders' presentations may be more comparable to individuals in the general population. Coxe and Holmes (2009) demonstrated that sex offenders who are at a high risk of reoffending present with higher levels of psychological disturbance compared to those identified as low risk. In summary, these findings demonstrated the usefulness of the MMPI-2 in studying sex offenders, support previous research regarding differences in personality characteristics among sex offenders based on the nature of their offense, and suggest differences among this population based on risk level and incarceration setting.

MMPI-2-RF Assessment of Sex Offenders

To date, there is only one published empirical study of sex offenders using the MMPI-2-RF. Tarescavage, Cappo, and Ben-Porath (2018) conducted a study utilizing the MMPI-2-RF with a sample of 304 convicted sex offenders who were referred for sex offender treatment and were additionally administered two risk assessment measures: the Static-99 and the Level of Service Inventory - Revised (LSI-R). The researchers aimed to assess the psychometrics of the MMPI-2-RF in a forensic sample in order to determine a reference point for the level of under-reporting of pathology among this population. Additionally, the researchers also aimed to evaluate the convergent validity of the MMPI-2-RF scales with two risk assessment measures commonly utilized in forensic evaluations. Tarescavage et al. (2018) examined the means and standard deviations of

scale scores of the sex offenders' MMPI-2-RF profiles and compared them to the mean scores of the test's normative sample (i.e., T score of 50). The researchers considered mean score differences to be clinically meaningful if there was a difference of 5 or more T score points between the groups. Their results showed sex offenders produced high scores on the scales measuring underreporting. The sex offenders' scores on the MMPI-2-RF's L-r scale (Uncommon Virtues) were considerably higher than the normative mean (T = 60), suggesting a tendency for these offenders to deny problematic behavior. However, scores on the K-r scale (Adjustment Validity) were only marginally higher than the normative mean (T = 53), which suggested sex offenders likely engage in more overt methods of impression management through underreporting of personal faults than covert strategies such as self-deception. The sex offenders also produced higher scores deemed clinically meaningful on scales F-r (T = 56), BXD (Behavioral/Externalizing Dysfunction; T = 56), RC1(Somatic Complaints; T = 55), RC4 (Antisocial Behavior; T = 60), RC6 (Ideas of Persecution; T = 58), NUC (Neurological Complaints; T =57), JCP (Juvenile Conduct Problems; T = 60), SAV (Social Avoidance; T = 55), MEC (Mechanical-Physical Interests; T =59), and DISC-r (Disconstraint-revised; T = 57) (Tarescavage et al., 2018). The results also demonstrated the sex offenders produced clinically meaningful lower scores on MSF (Multiple Specific Fears; T = 45) and AES (Aesthetic-Literary Interests; T = 42) than the normative sample.

Tarescavage et al. (2018) also examined the reliability of the MMPI-2-RF's substantive scales using Cronbach's alpha internal consistency, mean inter-item correlations, and standard error of measurement (SEM) and continued using the normative sample for comparisons. Ranges of the mean inter-item correlations for the

scales were noted as follows: Higher Order Scales ranged from .06 to .18, RC scales ranged from .07 to .26, Specific Problems scales ranged from .07 to .40, and PSY-5 scales ranged from .06 to .16 (Tarescavage et al., 2018). These correlations were overall comparable to the normative sample, with the exception of RC3 (Cynicism) and JCP (Juvenile Conduct Problems) being much higher and GIC (Gastrointestinal Complaints), MSF (Multiple Specific Fears), SUB (Substance Abuse), SHY (Shyness), AES (Aesthetic-Literary Interests), MEC (Mechanical-Physical Interests), and DISC-r (Disconstraint-revised) all being much lower. With regards to internal consistency, the results produced the following ranges of estimates: Higher Order scales ranged from .64 to .90, RC scales ranged from .60 to .88, Specific Problems scales ranged from .38 to .76, and PSY-5 scales ranged from .61 to .79 (Tarescavage et al., 2018). These estimates of internal consistency were comparable to those of the normative sample, with the exceptions of HLP (Helplessness), JCP (Juvenile Conduct Problems), AXY (Anxiety), and SUI (Suicidal Ideation) that had meaningfully higher estimates. The researchers also noted that the estimates for GIC (Gastrointestinal Complaints) and SUB (Substance Abuse) were both meaningfully lower than those of the normative sample. Lastly, the researchers determined the SEM for the MMPI-2-RF substantive scales. The following ranges, noted in T-score units, were found for the scales: Higher Order scales ranged from 3.6 to 6.1, RC scales ranged from 3.5 to 7.5, Specific Problems Scales ranged from 4.3 to 7.9, and PSY-5 scales ranged from 5.1 to 6.1. Tarescavage et al. (2018) noted that the normative sample's SEM values converged with those of the sex offenders.

With regards to the convergent validity of the measures, Tarescavage et al.'s results also demonstrated the Static-99 Total scores were meaningfully correlated with

scores of MMPI-2-RF scales belonging to the externalizing dysfunction domain. The researchers also noted the LSI-R total and subscale scores were associated with scale scores belonging to MMPI-2-RF domains measuring thought dysfunction, somatic/cognitive dysfunction, internalizing, and interpersonal problems. Overall, Tarescavage et al. (2018) concluded based on their findings that the MMPI-2-RF is a psychometrically reliable and valid measure that can be utilized in assessing sex offenders.

In a recent unpublished doctoral dissertation, VanSlyke (2018) examined the MMPI-2-RF profiles of a sample of 281 men who underwent a pre-trial evaluation for an alleged sex offense. The aim of this study was to distinguish subgroups or subtypes of sex offenders and personality characteristics using the MMPI-2-RF. VanSlyke (2018) hypothesized five different cluster types of sex offenders would emerge from the analyses based on personality and psychopathology characteristics. The first hypothesized cluster group was a within-normal-limits cluster which would be distinguished by MMPI-2-RF profiles reflective of little to no psychopathology. Second, the researcher anticipated a distinct cluster characterized by externalizing behavior with evidence of disconstraint. The third cluster hypothesized to emerge from the analyses was one reflective of ineffectiveness, based on previous studies that have identified clusters with scales that are associated with internalization (VanSlyke, 2018). Fourth, a severely psychologically disturbed cluster with several clinically elevated scale scores was expected to be found from the analyses. Lastly, the researcher hypothesized that the analyses would identify a new cluster not previously distinguished in previous research. This particular cluster was noted as possibly being a combination of different characteristics (VanSlyke, 2018).

Means and standard deviations for the sex offenders' MMPI-2-RF scale scores were initially calculated, followed by cluster analyses. The results of the analyses revealed three distinct clusters: one considered to be indicative of psychological disturbance, one considered to be a within-normal limits presentation, and another characterized as a well-adjusted presentation. The first cluster was noted as being the smallest (n = 46), but also as having the highest mean scale scores. The elevated scales included in this cluster were noted as being indicative of these sex offenders experiencing cognitive problems and emotional disturbance (VanSlyke, 2018). The second cluster was distinguished as having mean scores that were within normal limits for the majority of the scales. The researcher did note that some of the scores were at least a half standard deviation higher than the normative mean, which was suggestive of the presence of some psychological difficulties (VanSlyke, 2018). Lastly, the third cluster was the largest of the three clusters (n = 142) and encompassed 50.5% of the entire sample. This cluster was distinguished as having the lowest mean scores and had multiple scores that fell a minimum of half a standard deviation below the norm (VanSlyke, 2018).

After examining the sex offenders' demographic and historical data, the researcher noted several differences between the three clusters. The results indicated that the third cluster had a relatively smaller number of sex offenders who reported neglect or histories of sexual, physical, or emotional abuse, as well as less incidence of substance abuse. However, it was noted that this cluster had relatively more offenders who were related either biologically or through marriage to their victims than the other two clusters (VanSlyke, 2018). Moreover, the results demonstrated that within the first cluster, past and current substance abuse was prevalent, along with reports of a history of sexual

abuse. This cluster was also noted as having a relatively large proportion of sex offenders who reported a family history of substance abuse diagnoses or mental health problems, as well as a personal mental health treatment history. Overall, VanSlyke (2018) concluded the results support

Lustig's (2011) unpublished doctoral dissertation included both the MMPI-2-RF and the Millon Clinical Multiaxial Inventory-Third Edition (MCMI-III) to assess a sample of men who committed internet-based sex offenses. The study aimed to determine any differences in personality among this subgroup of sex offenders. Additionally, the researcher also conducted the study to gather information regarding how specific scales on these measures relate to each other. The sample was comprised of 30 adult male sex offenders who were on probation and attending sex offender treatment at an outpatient center when administered the testing. Eight scales were included in the study's analyses: scales A (Anxiety), SS (Thought Disorder), 2b (Depressive), and 6A (Antisocial) from the MCMI-III and scales AXY(Anxiety), RC2 (Low Positive Emotions), RC4 (Antisocial Behaviors), and RC8 (Aberrant Experiences) from the MMPI-2-RF. Lustig (2011) first hypothesized there would be significant positive correlations between scales RC2 (Low Positive Emotions) and 2b (Depressive), RC4 (Antisocial Behaviors) and 6A (Antisocial), RC8 (Aberrant Experiences) and SS (Thought Disorder), and between AXY (Anxiety) and A (Anxiety). The researcher also hypothesized the sex offenders would elevate each of the four MCMI-III scales, with Base Rate (BR) scores of 75 or higher, and each of the four MMPI-2-RF scales, with T scores of 65 or higher. The results demonstrated that there were statistically significant positive correlations between each of the pairs of MMPI-2-RF and MCMI-III scales as predicted, with the exception of RC2

(Low Positive Emotions) on the MMPI-2-RF and scale 2b (Depressive) on the MCMI-III, which were not significantly correlated. The ranges of the correlation coefficients ranged from .47 to .53 (Lustig, 2011). The researcher also found that the internet-based sex offenders did not clinically elevate any of the eight scales on the two measures as predicted.

Lustig (2011) also conducted exploratory analyses in an attempt to identify any possible unique patterns of personality characteristics among the internet-based sex offenders on either the MMPI-2-RF or MCMI-III. The results of the analyses demonstrated a lack of clinical elevations on any of the scales, with the highest elevations not reaching the clinical cutoff scores on either measure. Lustig concluded that sex offenders who commit internet-based offenses are likely to produce profiles on either of these measures that are comparable to the general population, and therefore may be considered a differentiated subgroup within the population of sex offenders.

Chapter 3: Rationale and Hypotheses

The lack of published, empirical studies using the MMPI-2-RF within the sex offender literature warrants that further research is needed. Given the difference in its composition compared to its predecessors, the MMPI-2-RF could provide useful information regarding the personality and psychopathology of sex offenders based on characteristics of both the offenders and their committed offenses. The purpose of the current study was to examine differences in personality characteristics, using the MMPI-2-RF, among subgroups of male sexual offenders based on four offense-related features: the nature of their offense (contact or non-contact), their relationship to the victim (familial or non-familial), the age of their victim (younger or older), and the presence or absence of personality disorder or features. An additional aim for this study was to compare the MMPI-2-RF profiles of a subgroup of male sex offenders previously determined as having within-normal-limits profiles to those of a community comparison sample, in order to assess for similarities and differences between the groups with regards to personality characteristics. As mentioned earlier, there were no published studies that have utilized the MMPI-2-RF in an attempt to differentiate subgroups of sex offenders based on personality and psychopathology. VanSlyke's (2018) dissertation research identified three distinct clusters based on personality characteristics using the MMPI-2-RF; however, the current study had a different focus and methodology in terms of deriving subgroups based on extra-test, offense-related features and comparing them on MMPI-2-RF scores. Keeping in mind that the MMPI-2-RF has several new scales not included on the MMPI or MMPI-2, comparing subgroups using the newest version of the

MMPI could provide new information that could potentially offer implications for treatment.

Based on the findings of previous research using the MMPI, MMPI-2 and MMPI-2-RF to study sex offenders, the following hypotheses were proposed for this study:

1. Contact sex offenders were anticipated to score significantly higher on scales RC4, RC8, JCP, BXD, DISC-r, and THD than non-contact offenders. This was based on previous studies that have found contact offenders to score significantly higher on scale 4 (Psychopathic Deviate) and 8 (Schizophrenia) and demonstrate higher levels of impulsivity, antisocial behavior and attitudes, have more criminal history, behavioral problems in school and cognitive distortions compared to offenders who commit non-contact sex offenses (Bogaerts et al., 2005; Elliot et al., 2013; Faust et al., 2015; Jung et al., 2013, & Tomak et al., 2009). A significant effect was anticipated with regards to contact sex offenders obtaining higher mean scores on these scales.
2. Based on previous research findings, extrafamilial and intrafamilial sex offenders were anticipated not to differ significantly with regards to their mean scale scores on RC4 and RC8. However, extrafamilial sex offenders were predicted to have higher mean scale scores on RC2 compared to intrafamilial sex offenders, whereas intrafamilial offenders were predicted to have higher mean scale scores on RC7 (Erickson et al., 1987; Kirkland & Bauer, 1982).
3. A significant effect was anticipated with regards to sex offenders who victimized younger underage girls (aged 12 years or younger) producing

profiles indicative of greater psychological disturbance, based on findings of previous research (Firestone et al., 2005). This psychological disturbance was examined across the three H-O scales, nine RC scales, and the five PSY-5 scales.

4. A significant effect was anticipated for sex offenders who have a personality disorder diagnosis or features producing profiles with higher mean scale scores, based on previous findings regarding personality disorders and sex offending (Bogaerts et al., 2005; Bogaerts et al., 2008; Eher et al., 2019; Leue et al., 2004, Raymond et al., 1999). This was examined across the three H-O scales, nine RC scales, the 23 SP scales, and the five PSY-5 scales.
5. The MMPI-2-RF scale scores of the within-normal-limits subgroup of sex offenders and the community comparison sample were expected to be comparable, with few (if any) significant differences between them.

Chapter 4: Methods

Participants

The participants for this study consisted of a total sample of 244 adult men who had a documented allegation of a sex offense and completed a pre-trial evaluation at a forensic psychological outpatient practice located in central Florida. The sample was extracted from an archival database of test data derived from evaluations conducted from 2006 to 2018. The inclusion criteria for sample selection for this study consisted of (a) being at least 18 years of age, (b) having a documented sex offense, and (c) having a valid MMPI-2-RF profile based on standard test criteria. The MMPI-2-RF criteria included obtaining item response omissions (Cannot Say raw score) less than 15, VRIN-r T-score less than 80, and TRIN-r T-score less than 80, as reported in the test manual. Additionally, the criteria included obtaining an F-r T-score less than 120, L-r T-score less than 80, and K-r T-score less than 70, per the research criteria in test manual. The participants in this sample were between the ages of 18 and 75 (M = 36.40, SD = 13.30). In terms of ethnic background, 68.4% (n =167) identified as White/Caucasian, 12.7% (n = 31) as Hispanic, 8.6% (n = 21) as Black, 4.1% (n = 10) as Asian, 0.4% (n = 1) as Native American, 1.2% (n = 3) as other, and 4.5% (n = 11) whose ethnicity was not identified.

With regards to level of education and degrees earned, 25.0% (n = 61) received a high school diploma, 23.8% (n = 58) completed some college, 14.7% (n = 36) earned a 4-year degree, 9.0% (n = 22) earned a GED, 6.6% (n = 16) received a 2-year degree, and 4.9% (n = 12) earned a graduate degree, while 13.5% (n = 33) reported not earning any degrees and 2.5% (n = 6) whose education level or degrees earned were not reported. As

for employment status, 50.8% (*n* = 124) were employed, 17.6% (*n* = 43) were unemployed, 23.4% (*n* = 57) reported being unemployed due to arrest, 1.6% (*n* = 4) were disabled, 1.6% (*n* = 4) were retired, and 4.9% (*n* = 12) did not indicate their employment status. With regards to marital status, 42.2% (*n* = 103) of the sex offenders were single, 27.9% (*n* = 68) were married, 16.8% (*n* = 41) were divorced, 7.8% (*n* = 19) were separated, and 5.3% (*n* = 13) did not report information regarding their marital status. As for living situation, 26.6% (*n* = 65) reported living with their parents, 18.6% (*n* = 46) indicated living with a significant other, 17.6% (*n* = 43) reported living alone, 14.8% (*n* = 36) indicated they were incarcerated at the time of the evaluation, 4.5% (*n* = 11) indicated living with a roommate, and 17.6% (*n* = 43) did not provide information regarding their living situation. Further details concerning this sample are provided for the subgroups of sex offenders based on the four variables of interest for this study.

The sample included contact and non-contact offenders, offenders against younger underage victims (aged 12 years or younger) and older underage victims (aged 13-18), offenders diagnosed with a personality disorder or features as well as offenders who did not, and offenders who were related to their victim (family or step-family member) and those who were not related (strangers or acquaintances). Tables 2-5 provide information related to other pertinent information for the participants in each of the groups based on the variables of interest for this study.

With regards to contact and non-contact subgroups, the ages for contact offenders (*n* = 79) ranged from 18 to 75 (*M* = 36.73, *SD* = 14.00). As for non-contact offenders (*n* = 55), the ages ranged from 19 to 73 (*M* = 39.27, *SD* = 13.67). The ethnic distribution for both contact and non-contact offenders was predominantly Caucasian (*n* = 51, 64.6% and

n = 46, 83.6%, respectively), followed by Black (*n* = 10, 12.7% and *n* = 2, 3.6%, respectively), Hispanic (*n* = 11, 13.9% and *n* = 3, 5.5% respectively), with other ethnic groups represented in smaller numbers. Table 2 provides information regarding marital status, living situation, and legal history for these subgroups of sex offenders.

Table 2

Marital status, living situation, and legal history of contact and non-contact offenders

Variable	Contact (n = 79)		Non-contact (n = 55)	
	n	Percent	n	Percent
Marital Status				
Single	29	36.7%	27	49.1%
Married	29	36.7%	14	25.5%
Divorced	11	13.9%	10	18.2%
Separated	7	8.9%	3	5.5%
No marital status provided	3	3.8%	1	1.8%
Living Situation				
Alone	12	15.2%	13	23.6%
With significant other	15	19.0%	13	23.6%
With parents	20	25.3%	13	23.6%
With roommate	4	5.1%	3	5.5%
Incarcerated	18	22.8%	9	16.4%
No living situation provided	10	12.7%	4	7.3%
Legal History				
Violent	3	3.8%	5	9.1%
Nonviolent	11	13.9%	9	16.4%
Sex offense	2	2.5%	1	1.8%
Combination	18	22.8%	3	5.5%
None	40	50.6%	34	61.8%
No legal history provided	5	6.3%	3	5.5%

With regards to intrafamilial and extrafamilial offenders, the ages of intrafamilial offenders (*n* = 86) ranged from 18 to 75 (*M* = 40.58, *SD* = 12.32). As for extrafamilial offenders (*n* = 93), the ages ranged from 18 to 72 (*M* = 32.18, *SD* = 12.98). With regards

to the ethnic groups represented, both intrafamilial and extrafamilial offenders were predominantly Caucasian (n = 54, 62.8% and n = 65, 69.9%, respectively), followed by Black (n = 10, 11.6% and n = 5, 5.4%, respectively), Hispanic (n = 15, 17.4% and n = 10, 10.8% respectively), and other ethnic groups exhibited in smaller numbers. Table 3 presents information regarding marital status, living situation, and number of children for these subgroups of sex offenders.

Table 3

Marital status, living situation, and number of children of intrafamilial and extrafamilial participants

Variable	Intrafamilial (n = 86)		Extrafamilial (n = 93)	
	n	Percent	n	Percent
Marital Status				
Single	20	23.3%	49	52.7%
Married	29	33.7%	24	25.8%
Divorced	20	23.3%	10	10.8%
Separated	10	11.6%	6	6.5%
No marital status provided	7	8.1%	4	4.3%
Living Situation				
Alone	17	19.8%	13	14.0%
With significant other	18	20.9%	16	17.2%
With parents	16	18.6%	35	37.6%
With roommate	4	4.7%	2	2.2%
Incarcerated	8	9.3%	13	14.0%
No living situation provided	23	26.7%	14	15.1%
Number of Children				
1	26	30.2%	16	17.2%
2	17	19.8%	12	12.9%
3	19	22.1%	5	5.4%
4	9	10.5%	3	3.2%
5	3	3.5%	4	4.3%
6	1	1.2%	1	1.1%

(continues)

Table 3 (cont.)

Variable	Intrafamilial (n = 86)		Extrafamilial (n = 93)	
	n	Percent	n	Percent
Number of Children				
11	1	1.2%	0	0.0%
None	10	11.6%	42	45.2%
No information provided	0	0.0%	10	10.8%

With regards to sex offenders with either younger- or older-aged victims, the ages of those with younger-aged victims (n = 71) ranged from 18 to 75 (M = 38.48, SD = 12.96). The ages of those with older-aged victims (n = 95) ranged from 18 to 74 (M = 32.15, SD = 12.69). The ethnic distribution for offenders with younger-aged victims and those with older-aged victims was predominantly Caucasian (n = 46, 64.8% and n = 59, 62.1%, respectively), followed by Black (n = 7, 9.9% and n = 9, 9.5%, respectively), Hispanic (n = 10, 14.1% and n = 18, 18.9% respectively), with other ethnic groups represented in smaller numbers. Table 4 presents information regarding marital status, living situation, and number of children for both subgroups of sex offenders.

Table 4

Marital status, living situation, and number of children of offenders with younger- and older-aged victims

Variable	Younger-aged victims (n = 71)		Older-aged victims (n = 95)	
	n	Percent	n	Percent
Marital Status				
Single	21	29.6%	48	50.5%
Married	21	29.6%	26	27.4%
Divorced	18	25.4%	9	9.5%
Separated	6	8.5%	7	7.4%

(continues)

Table 4 (cont.)

Variable	Younger-aged victims (n = 71)		Older-aged victims (n = 95)	
	n	Percent	N	Percent
Marital Status				
No marital status provided	5	7.0%	5	5.3%
Living Situation				
Alone	16	22.5%	11	11.6%
With significant other	11	15.5%	18	19.0%
With parents	14	19.7%	36	37.9%
With roommate	1	1.4%	5	5.3%
Incarcerated	12	16.9%	10	10.5%
No living situation provided	17	23.9%	15	15.7%
Number of Children				
1	25	35.2%	16	16.8%
2	14	21.1%	12	12.6%
3	6	8.5%	10	10.5%
4	7	9.9%	6	6.3%
5	2	2.8%	4	4.2%
6	1	1.4%	1	1.1%
11	1	1.4%	0	0.0%
None	13	18.3%	38	40.0%
No information provided	1	1.4%	8	8.4%

With regards to sex offenders with or without personality disorders or features, the ages of those with personality disorders or features (n = 88) ranged from 18 to 67 (M = 34.85, SD = 12.71). The ages of those without personality disorders or features (n = 150) ranged from 18 to 75 (M = 37.34, SD = 13.70). The ethnic distribution for offenders with and those without personality disorders or features was predominantly Caucasian (n = 65, 73.9% and n = 101, 67.3%, respectively), followed by Black (n = 9, 10.2% and n = 11, 7.3%, respectively), Hispanic (n = 10, 11.4% and n = 21, 14.0% respectively), with other ethnic groups represented in smaller numbers. Table 5 presents information

regarding marital status, living situation, and legal history for both subgroups of sex offenders.

Table 5

Marital status, living situation, and legal history of offenders with or without personality disorders or features

Variable	With personality disorder or features (n = 88)		Without personality disorder or features (n = 150)	
	n	Percent	n	Percent
Marital Status				
Single	43	48.9%	59	39.3%
Married	21	23.9%	45	30.0%
Divorced	15	17.0%	25	16.7%
Separated	5	5.7%	13	8.7%
No marital status provided	4	4.5%	8	5.3%
Living Situation				
Alone	14	15.9%	29	19.3%
With significant other	15	17.0%	31	20.7%
With parents	20	22.7%	45	30.0%
With roommate	5	5.7%	6	4.0%
Incarcerated	18	20.5%	18	12.0%
No living situation provided	16	18.2%	21	14.0%
Legal History				
Nonviolent	22	25.0%	26	17.3%
Violent	6	6.8%	10	6.7%
Sex offense	2	2.3%	1	0.7%
Combination	19	21.6%	8	5.3%
None	38	43.2%	96	64.0%
No legal history provided	1	1.1%	9	6.0%

An additional subgroup of the sex offender sample included in this study was previously identified by Van Slyke (2017) as producing within-normal-limits profiles. The ages for this subgroup of offenders (n = 89) ranged from 18 to 75 (M = 33.0, SD = 12.9). The within-normal-limits sex offenders were predominantly Caucasian (n = 60,

67.4%), followed by Hispanic (*n* = 8, 9.0%), Black (*n* = 7, 7.9%), and smaller numbers of other ethnic groups that were represented.

This study also included a new comparison sample consisting of approximately 100 adult men from the local community. This sample was developed to roughly match the within-normal-limits subgroup of sex offenders in age and ethnicity. The inclusion criteria for individuals in this sample consisted of (a) being at least 21 years of age, (b) being a male residing in Brevard County, Florida and (c) having no prior sex offenses by self-report. The same MMPI-2-RF profile validity criteria (i.e., Cannot Say, VRIN-r, TRIN-r, F-r, L-r, and K-r scores) that was used for the sex offender sample was applied for the selection of the community sample. Two men from the community comparison sample produced MMPI-2-RF profiles that were not valid for interpretation, and therefore, were removed from the analysis. The ages for this comparison group (*n* = 75) ranged from 21 to 66 (*M* = 36.4, *SD* = 13.5) with the majority identifying their ethnicity as Caucasian (*n* = 61, 81.3%), followed by Black (*n* = 3, 4.0%), Hispanic (*n* = 3, 4.0%), Asian (*n* = 3, 4.0%), and smaller numbers of other ethnic groups that were represented. The within-normal-limits subgroup of sex offenders and community comparison group were somewhat comparable in terms of age. However, although the community comparison group and within-normal-limits subgroup were both comprised predominately of Caucasian men, the community comparison group had a much smaller proportion of other ethnic groups represented. Table 6 presents background information for the within-normal-limits subgroup of sex offenders and community comparison sample, including marital status, level of education completed, employment status, and number of children.

Table 6

Background information for within-normal-limits subgroup and community comparison sample

Variable	Within-normal-limits subgroup (N = 89)		Community comparison sample (N = 75)	
	n	Percent	n	Percent
Marital Status				
Single	49	55.0%	37	49.3%
Married	23	25.8%	33	44.0%
Separated or Divorced	15	16.9%	3	4.0%
Widowed	0	0.0%	1	1.3%
No marital status provided	2	2.3%	1	1.3%
Level of Education Completed				
High school diploma/GED	29	32.6%	1	1.3%
Some college	24	27.0%	8	10.7%
2 year degree	3	3.4%	3	4.0%
4 year degree	10	11.2%	25	33.3%
Some graduate school	0	0.0%	7	9.3%
Graduate degree	2	2.2%	30	40.0%
None	18	20.2%	0	0.0%
No level of education provided	3	3.4%	1	1.3%
Employment Status				
Employed	40	44.9%	62	82.7%
Unemployed	20	22.4%	9	12.0%
Unemployed due to arrest	20	22.4%	0	0.0%
Disabled	1	1.1%	0	0.0%
Retired	0	0.0%	3	4.0%
No employment status provided	8	9.0%	1	1.3%
Number of Children				
0	39	43.8%	44	58.7%
1	16	18.0%	12	16.0%
2	10	11.2%	12	16.0%
3	8	9.0%	5	6.7%
4	7	7.9%	1	1.3%
5	2	2.2%	0	0.0%
6	1	1.1%	0	0.0%

(continues)

Table 6 (cont.)

Variable	Within-normal-limits subgroup (N = 89)		Community comparison sample (N = 75)	
	n	Percent	n	Percent
9	0	0.0%	1	1.3%
No number children information provided	6	6.7%	0	0.0%

Instruments

The Minnesota Multiphasic Personality Inventory – Second Edition – Restructured Form (MMPI-2-RF) was the only instrument utilized in this study. Of the MMPI-2-RF's 50 scales, 42 excluding 2 interest scales and 6 validity scales, were the focus of this study's analyses. The MMPI-2-RF is considered a psychometrically well-established test of personality, as evidenced by its test score reliability and validity. With regards to the entire normative sample, the MMPI-2-RF Technical Manual reported information pertaining to the test-retest reliability of the MMPI-2-RF (Tellegen & Ben-Porath, 2008/2011). Pearson's correlation coefficients ranged from .40 to .84 for the validity scales, .64 to .91 for the high-order (H-O) and restructured clinical (RC) scales, .54 to .85 for the somatic/cognitive and internalizing scales, .60 to .92 for the externalizing, interpersonal and interest scales, and .76 to .93 for the personality psychopathology five (PSY-5) scales, demonstrating that the stability of these test scores over time is considered adequate. The MMPI-2-RF Manual also reported information regarding internal consistency reliability, focusing on the men in the normative sample (Tellegen & Ben-Porath, 2008/2011). Cronbach's alpha coefficients for this group ranged from .37 to .69 for the validity scales, .63 to .87 for the H-O and RC scales, .39 to .72 for

the somatic/cognitive and internalizing scales, .51 to .78 for the externalizing, interpersonal and interest scales, and .69 to .77 for the PSY-5 scales, indicating that the items comprising each of these scales are adequately intercorrelated with each other.

Information on the test score validity of the MMPI-2-RF validity scales and their respective functions is also reported in the MMPI-2-RF Technical Manual (Tellegen & Ben-Porath, 2008/2011). VRIN-r and TRIN-r scales exhibited adequate sensitivity to inconsistent responding and were found to be comparable to their respective counterparts on the MMPI-2. Scales F-r, Fp-r, Fs and FBS-r were also reported to be comparable indicators of over-reporting of problems to the F, Fp, and FBS scales of the MMPI-2. Moreover, L-r and K-r function as indicators of under-reporting, and were both determined to be effective in detecting such response patterns similarly to their MMPI-2 counterparts, L and K. Construct validity was established through external correlates of the MMPI-2-RF substantive scales in community outpatient mental health, psychiatric inpatient, Veterans Administration, disability claimant, criminal defendant samples and college student samples (Tellegen & Ben-Porath, 2008/2011). Overall, meaningful replicated correlates were established for the MMPI-2-RF scales with these samples, demonstrating that these scales measure their respective construct adequately. Correlations between the MMPI-2-RF the MMPI-2 substantive scales were also included in the MMPI-2-RF Technical Manual, and provided evidence that MMPI-2-RF scales were adequately associated with similar measures on the MMPI-2 (Tellegen & Ben Portath, 2008/2011).

Sellbom, Bagby, Kushner, Quilty and Ayearst (2012) researched the diagnostic construct validity of the MMPI-2-RF by examining the pattern of scale score differences

in a sample of patients diagnosed with major depression, bipolar disorder or schizophrenia. The researchers concluded that the profiles of MMPI-2-RF scale elevations were consistent with evidence from recent psychopathology research, thus providing support for the diagnostic construct validity of the MMPI-2-RF. Further support for both the reliability and validity of the MMPI-2-RF test scores has been demonstrated across a variety of different populations, including bariatric surgery candidates (Tarescavage, Wygant, Boutacoff & Ben-Porath, 2013), spinal surgery candidates (Marek, Block & Ben-Porath, 2015), and in disability and criminal forensic settings (Wygant et al., 2010). Ultimately, the MMPI-2-RF has been established and widely supported as a reliable and valid measure of personality and psychopathology.

Procedure

The study commenced after receiving approval from both the Florida Institute of Technology Institutional Review Board (IRB), as well as the Doctoral Research Project (DRP) committee. This entailed obtaining access to the database from the chair of the current study, extracting the participant data, and then developing subgroups based on the variables of interest: (a) the nature of the sex offense, (b) the relationship of the victim and offender, (c) the presence or absence of a personality disorder or features, and (d) the age of the victims. Another subgroup of this overall sample was previously identified by VanSlyke (2018) as having formed a within-normal-limits profile cluster (N = 93) which was used as a comparison group to a community sample.

Independent data collection was initiated to collect a similarly-sized community sample for comparison to the within-normal-limits sex offender subgroup. Participants for the community sample were recruited in Brevard County, FL largely through word of

mouth. Individual testing sessions were scheduled at each participant's convenience. These testing sessions took place via the video conferencing platform, Zoom. Testing commenced after consent was obtained electronically via DocuSign, and participants were informed that all data collected from them, including their test responses, was confidential and de-identified. While stay-at-home restrictions remained in place due to the COVID-19 outbreak, telepractice methods were followed using Pearson Assessment's Q-global platform, and in compliance with the test publisher's guidelines for remote testing. Three research assistants aided the principal investigator in proctoring participant testing sessions using Zoom.

Data Analyses

Preliminary analyses consisted of generating descriptive statistics to describe the total sample's and each subgroup's demographic features, and obtaining means and standard deviations of their MMPI-2-RF scores. The primary analyses for this study included a series of four one-way multivariate analyses of variance (MANOVAs), to determine significant effects for each of the four subgroup variables of interest. This was followed by univariate analyses to identify specific MMPI-2-RF scale scores that were significantly different between pairs of groups for each of the four subgroup analyses. Data analyses also involved conducting MANOVAs followed by univariate ANOVAs to compare scores of the subgroup of sex offenders who produced within-normal-limits profiles with those of the community comparison group**.**

Chapter 6: Results

Preliminary analyses included deriving means and standard deviations of MMPI-2-RF scale scores for the total sex offender sample, as well as for subgroups sex offenders based each of the four variables of interest. Table 7 presents information regarding the descriptive statistics of MMPI-2-RF scale scores for the entire sex offender sample.

Table 7

MMPI-2-RF scale score means and standard deviations for the sex offender sample

Scale	M	SD
Validity Scales		
VRIN-r (Variable Response Consistency-revised)	50.4	10.1
TRIN-r (True Response Inconsistency-revised)	**55.6**	6.1
F-r (Infrequent Responses- revised)	**56.1**	16.3
Fp-r (Infrequent Psychopathology Responses- revised)	50.7	11.6
Fs (Infrequent Somatic Responses- revised)	52.5	12.7
FBS-r (Symptom Validity- revised)	53.6	11.2
RBS (Response Bias Scale)	53.5	12.5
L-r (Uncommon Virtues- revised)	54.5	9.8
K-r (Adjustment Validity- revised)	49.7	10.4
Higher-Order (H-O) Scales		
EID (Emotional/Internalizing Dysfunction)	51.5	12.0
THD (Thought Dysfunction)	53.7	11.9
BXD (Behavioral/Externalizing Dysfunction)	53.9	9.2
Restructured Clinical (RC) Scales		
RCd (Demoralization)	53.0	11.6
RC1 (Somatic Complaints)	52.8	10.6
RC2 (Low Positive Emotions)	50.6	11.7
RC3 (Cynicism)	51.8	12.3
RC4 (Antisocial Behavior)	**55.5**	9.8
RC6 (Ideas of Persecution)	**57.9**	12.8

(continues)

Table 7 (cont.)

Scale	M	SD
Restructured Clinical Scales		
RC7 (Dysfunctional Negative Emotions)	49.0	11.0
RC8 (Aberrant Experiences)	52.7	12.4
RC9 (Hypomanic Activation)	48.3	10.0
Specific Problems (SP) Scales		
Somatic Scales		
MLS (Malaise)	52.3	10.2
GIC (Gastrointestinal Complaints)	51.4	10.4
HPC (Head Pain Complaints)	51.1	9.8
NUC (Neurological Complaints)	54.0	11.8
COG (Cognitive Complaints)	52.6	12.3
Internalizing Scales		
SUI (Suicidal/Death Ideation)	50.4	12.9
HLP (Helplessness/Hopelessness)	50.9	12.2
SFD (Self-Doubt)	51.9	11.9
NFC (Inefficacy)	51.3	11.0
STW (Stress/Worry)	53.7	10.3
AXY (Anxiety)	52.6	13.3
ANP (Anger Proneness)	48.2	10.1
BRF (Behavior-Restricting Fears)	49.0	9.4
MSF (Multiple Specific Fears)	46.4	7.3
Externalizing Scales		
JCP (Juvenile Conduct Problems)	**55.5**	11.8
SUB (Substance Abuse)	50.8	10.7
AGG (Aggression)	47.8	9.9
ACT (Activation)	48.3	10.8
Interpersonal Scales		
FML (Family Problems)	46.9	9.3
IPP (Interpersonal Passivity)	47.2	8.9
SAV (Social Avoidance)	52.6	11.6
SHY (Shyness)	47.8	9.8

(continues)

Table 7 (cont.)

Scale	M	SD
Interpersonal Scales		
DSF (Disaffiliativeness)	50.0	11.2
Interest Scales		
AES (Aesthetic-Literary Interests)	42.3	8.2
MEC (Mechanical-Physical Interests)	**57.7**	9.8
Personality Psychopathology Five (PSY-5) Scales		
AGGR-r (Aggressiveness-revised)	51.7	9.2
PSYC-r (Psychoticism-revised)	52.5	12.0
DISC-r (Disconstraint-revised)	55.3	9.4
NEGE-r (Negative Emotionality/Neuroticism-revised)	51.8	10.3
INTR-r (Introversion-Low Positive Emotionality-revised)	52.3	11.9

Note. Bolded scores reflect mean scale scores ≥ 0.5 SD above the normative mean (i.e., T ≥ 55).

Table 8 provides the descriptive statistics of MMPI-2-RF scores produced by contact and noncontact sex offenders.

Table 8

Means and standard deviations of MMPI-2-RF scale scores for contact and non-contact sex offenders

	Contact offenders (n = 79)		Non-contact offenders (n = 55)	
Scale	M	SD	M	SD
Validity Scales				
VRIN-r (Variable Response Consistency- revised)	51.8	10.15	47.8	8.1
TRIN-r (True Response Inconsistency- revised)	**56.1**	5.66	**56.1**	6.3

(continues)

Table 8 (cont.)

Scale	Contact offenders (n = 79) M	Contact offenders (n = 79) SD	Non-contact offenders (n = 55) M	Non-contact offenders (n = 55) SD
Validity Scales				
F-r (Infrequent Responses- revised)	**55.5**	14.58	**57.2**	19.3
Fp-r (Infrequent Psychopathology Responses- revised)	50.5	11.21	51.3	13.3
Fs (Infrequent Somatic Responses- revised)	53.7	13.72	53.0	12.8
FBS-r (Symptom Validity- revised)	52.9	11.32	**55.4**	11.8
RBS (Response Bias Scale)	52.1	11.9	**55.0**	12.4
L-r (Uncommon Virtues- revised)	54.2	9.5	52.2	8.1
K-r (Adjustment Validity- revised)	49.2	10.2	49.9	10.6
Higher-Order (H-O) Scales				
EID (Emotional/Internalizing Dysfunction)	50.0	11.0	54.1	12.6
THD (Thought Dysfunction)	**55.0**	13.2	50.1	11.6
BXD (Behavioral/Externalizing Dysfunction)	**55.6**	8.9	51.9	8.4
Restructured Clinical (RC) Scales				
RCd (Demoralization)	52.2	10.0	54.5	12.7
RC1 (Somatic Complaints)	52.5	10.5	53.5	13.1
RC2 (Low Positive Emotions)	48.7	10.8	53.6	13.7
RC3 (Cynicism)	51.4	11.6	49.4	11.0
RC4 (Antisocial Behavior)	**57.5**	9.2	54.4	9.5
RC6 (Ideas of Persecution)	**58.9**	13.4	54.6	11.8
RC7 (Dysfunctional Negative Emotions)	49.0	10.8	50.0	12.1
RC8 (Aberrant Experiences)	53.7	13.4	51.0	12.0
RC9 (Hypomanic Activation)	49.7	9.7	45.8	10.2
Specific Problems (SP) Scales				
<u>Somatic Scales</u>				
MLS (Malaise)	50.2	8.6	**55.6**	11.5

(continues)

Table 8 (cont.)

Scale	Contact offenders (n = 79) M	Contact offenders (n = 79) SD	Non-contact offenders (n = 55) M	Non-contact offenders (n = 55) SD
Somatic Scales				
GIC (Gastrointestinal Complaints)	51.3	10.7	51.3	10.9
HPC (Head Pain Complaints)	50.2	8.6	52.5	11.4
NUC (Neurological Complaints)	54.5	12.6	54.3	14.0
COG (Cognitive Complaints)	51.7	12.1	54.0	12.1
Internalizing Scales				
SUI (Suicidal/Death Ideation)	48.4	9.9	52.6	16.1
HLP (Helplessness/Hopelessness)	49.9	11.5	52.3	13.0
SFD (Self-Doubt)	51.0	11.2	53.9	12.9
NFC (Inefficacy)	50.2	9.9	53.3	10.7
STW (Stress/Worry)	52.0	8.5	**55.2**	11.0
AXY (Anxiety)	52.3	13.5	**55.1**	15.6
ANP (Anger Proneness)	48.9	10.5	48.1	10.4
BRF (Behavior-Restricting Fears)	49.5	9.5	48.5	9.8
MSF (Multiple Specific Fears)	46.5	8.0	46.8	8.1
Externalizing Scales				
JCP (Juvenile Conduct Problems)	**57.2**	12.0	54.8	12.6
SUB (Substance Abuse)	50.0	8.6	51.0	12.0
AGG (Aggression)	50.4	10.5	44.8	8.6
ACT (Activation)	48.8	11.3	46.1	10.1
Interpersonal Scales				
FML (Family Problems)	48.6	10.3	47.0	10.2
IPP (Interpersonal Passivity)	46.2	8.2	49.3	10.7
SAV (Social Avoidance)	50.6	11.0	**56.5**	13.1
SHY (Shyness)	46.2	8.5	50.2	11.7
DSF (Disaffiliativeness)	48.6	9.2	52.5	14.5
Interest Scales				
AES (Aesthetic-Literary Interests)	42.2	7.9	42.4	8.7
MEC (Mechanical-Physical Interests)	**59.5**	9.2	**55.6**	9.7

(continues)

Table 8 (cont.)

Scale	Contact offenders (n = 79) M	Contact offenders (n = 79) SD	Non-contact offenders (n = 55) M	Non-contact offenders (n = 55) SD
Personality Psychopathology Five (PSY-5) Scales				
AGGR-r (Aggressiveness-revised)	53.7	9.1	48.8	8.9
PSYC-r (Psychoticism-revised)	53.2	13.3	49.9	11.8
DISC-r (Disconstraint-revised)	**56.8**	9.0	53.8	8.6
NEGE-r (Negative Emotionality/Neuroticism-revised)	51.4	9.7	53.3	11.5
INTR-r (Introversion-Low Positive Emotionality-revised)	50.5	10.6	**55.9**	13.7

Note. Bolded scores reflect mean scale scores ≥ 0.5 SD and ≤ 1 SD above the normative mean (i.e., T = 55-59). Underlined bolded scores reflect mean scale scores ≥ 1 SD above the normative mean (i.e., T ≥ 60).

A one-way multivariate analysis of variance (MANOVA) was conducted to test the hypothesis that there would be mean score differences between contact and noncontact offenders on the following MMPI-2-RF scales: RC4, RC8, JCP, BXD, DISC-r, and THD. A non-statistically significant MANOVA effect was obtained, Wilks' Lambda = 0.91, $F(1, 132) = 2.15$, p = 0.52. The multivariate effect size was estimated at 0.09, which indicates that 9% of the variance in these MMPI-2-RF scale scores was accounted for by whether the offenders committed contact or noncontact offenses.

Prior to conducting a series of follow-up ANOVAs, the homogeneity of variance assumption was tested for all six MMPI-2-RF scales. Based on a series of Levene's *F* tests, the homogeneity of variance assumption was considered satisfied for all six MMPI-2-RF scales. Results of the one-way ANOVAs for each of the six MMPI-2-RF scales showed only two statistically significant differences, with contact offenders scoring

higher than noncontact offenders on the THD scale, $F(1, 132) = 4.859$, $p = 0.03$, and the BXD scale, $F(1, 132) = 6.002$, $p = 0.02$.

Table 9 provides descriptive statistics of the MMPI-2-RF scale scores for intrafamilial and extrafamilial offenders.

Table 9

Means and standard deviations of MMPI-2-RF scale scores for intrafamilial and extrafamilial sex offenders

	Intrafamilial (n = 104)		Extrafamilial (n = 106)	
Scale	M	SD	M	SD
Validity Scales				
VRIN-r (Variable Response Consistency- revised)	48.9	10.2	51.9	9.9
TRIN-r (True Response Inconsistency- revised)	**55.6**	6.1	54.83	5.5
Fp-r (Infrequent Psychopathology Responses- revised)	47.5	9.4	51.8	10.9
Fs (Infrequent Somatic Responses- revised)	49.6	10.6	53.5	12.9
FBS-r (Symptom Validity- revised)	52.7	10.8	53.4	11.5
RBS (Response Bias Scale)	51.6	11.8	53.6	12.2
L-r (Uncommon Virtues- revised)	**57.1**	11.0	54.3	8.9
K-r (Adjustment Validity- revised)	52.4	10.2	48.2	10.1
Higher-Order (H-O) Scales				
EID (Emotional/Internalizing Dysfunction)	48.7	11.2	52.1	12.0
THD (Thought Dysfunction)	53.2	11.1	54.5	11.9
BXD (Behavioral/Externalizing Dysfunction)	51.9	8.4	55.8	8.7

(continues)

Table 9 (cont).

	Intrafamilial (n = 104)		Extrafamilial (n = 106)	
Scale	M	SD	M	SD
Restructured Clinical (RC) Scales				
RCd (Demoralization)	49.9	10.0	54.3	11.9
RC1 (Somatic Complaints)	51.1	10.0	53.6	9.3
RC2 (Low Positive Emotions)	49.5	10.8	49.7	11.0
RC3 (Cynicism)	50.6	13.0	53.8	12.6
RC4 (Antisocial Behavior)	53.1	8.9	**56.6**	9.9
RC7 (Dysfunctional Negative Emotions)	45.7	9.1	50.2	10.8
RC8 (Aberrant Experiences)	48.8	10.5	**55.5**	12.3
RC9 (Hypomanic Activation)	45.9	8.2	50.8	10.5
Specific Problems (SP) Scales				
Somatic Scales				
MLS (Malaise)	51.1	9.9	51.5	8.4
GIC (Gastrointestinal Complaints)	51.2	10.2	51.9	10.6
HPC (Head Pain Complaints)	50.0	8.8	51.4	9.9
NUC (Neurological Complaints)	51.2	10.8	54.6	11.1
COG (Cognitive Complaints)	49.4	10.7	54.0	12.9
Internalizing Scales				
SUI (Suicidal/Death Ideation)	48.0	8.9	51.5	13.5
HLP (Helplessness/ Hopelessness)	48.0	11.2	52.7	12.5
SFD (Self-Doubt)	49.5	11.1	52.7	11.8
STW (Stress/Worry)	50.8	9.4	54.9	9.7
AXY (Anxiety)	49.2	9.4	53.7	13.6
ANP (Anger Proneness)	45.8	9.3	48.2	9.3
BRF (Behavior-Restricting Fears)	47.2	8.6	50.3	9.6

(continues)

Table 9 (cont).

	Intrafamilial (n = 104)		Extrafamilial (n = 106)	
Scale	M	SD	M	SD
Internalizing Scales				
MSF (Multiple Specific Fears)	45.5	6.3	46.9	7.6
Externalizing Scales				
JCP (Juvenile Conduct Problems)	54.7	11.8	**55.7**	11.4
SUB (Substance Abuse)	48.2	7.5	55.7	11.1
AGG (Aggression)	47.6	8.5	47.9	10.6
ACT (Activation)	45.8	9.6	51.43	11.4
Interpersonal Scales				
FML (Family Problems)	45.8	8.8	46.7	9.2
IPP (Interpersonal Passivity)	46.8	8.8	46.2	8.0
SAV (Social Avoidance)	51.9	10.0	50.7	11.1
SHY (Shyness)	45.9	8.5	48.0	9.6
DSF (Disaffiliativeness)	48.1	7.9	49.7	10.5
Interest Scales				
AES (Aesthetic-Literary Interests)	42.0	8.1	42.5	8.3
MEC (Mechanical-Physical Interests)	**58.0**	9.3	**57.9**	10.2
Personality Psychopathology Five (PSY-5) Scales				
AGGR-r (Aggressiveness-revised)	51.6	8.7	53.3	9.6
PSYC-r (Psychoticism-revised)	50.8	11.0	54.2	12.1
DISC-r (Disconstraint-revised)	53.5	9.2	**57.2**	9.0
NEGE-r (Negative Emotionality/Neuroticism-revised)	49.1	8.6	52.5	10.1

(continues)

Table 9 (cont).

Scale	Intrafamilial (n = 104) M	Intrafamilial (n = 104) SD	Extrafamilial (n = 106) M	Extrafamilial (n = 106) SD
Personality Psychopathology Five (PSY-5) Scales				
INTR-r (Introversion-Low Positive Emotionality-revised)	52.7	10.7	49.8	11.6

Note. Bolded scores reflect mean scale scores ≥ 0.5 SD and ≤ 1 SD above the normative mean (i.e., T = 55-59). Underlined bolded scores reflect mean scale scores ≥ 1 SD above the normative mean (i.e., T ≥ 60).

Four one-way between-subjects ANOVAs were conducted to examine the presence and absence of differences, per the hypotheses, between intrafamilial and extrafamilial offenders on the MMPI-2-RF scales RC4, RC8, RC2, and RC7. There was a significant effect of being either an intrafamilial or extrafamilial offender on RC4 scale scores, $F(1, 177) = 6.10$, $p = 0.01$; on RC8 scale scores, $F(1, 177) = 15.08$, $p < 0.001$; and on RC7 scale score, $F(1, 177) = 8.70$, $p = 0.004$. On RC4 and RC8, the significant results were contrary to the hypothesis. For RC7, extrafamilial offenders scored higher than intrafamilial offenders, again contrary to the hypothesized direction. The result was not significant for RC2 scale scores, $F(1, 177) = 0.024$, $p = 0.876$, although extrafamilial offenders were expected to score higher than intrafamilial offenders on this particular scale.

As for sex offenders with younger- and older-aged victims, Table 10 provides descriptive statistics for MMPI-2-RF scales scores for both subgroups.

Table 10

Means and standard deviations of MMPI-2-RF scale scores for sex offenders with younger- and older-aged victims

	Younger-aged victims (n = 71)		Older-aged victims (n = 95)	
Scale	M	SD	M	SD
Validity Scales				
VRIN-r (Variable Response Consistency-revised)	48.8	9.9	52.8	10.0
TRIN-r (True Response Inconsistency-revised)	**55.1**	5.9	54.7	5.4
F-r (Infrequent Responses-revised)	52.8	14.0	**56.2**	13.7
Fp-r (Infrequent Psychopathology Responses-revised)	46.0	8.0	53.3	11.4
Fs (Infrequent Somatic Responses-revised)	49.1	8.9	53.6	13.3
FBS-r (Symptom Validity-revised)	52.8	11.2	53.5	10.7
RBS (Response Bias Scale)	50.9	12.2	53.6	11.4
L-r (Uncommon Virtues-revised)	**56.3**	10.6	**55.4**	9.4
K-r (Adjustment Validity-revised)	53.0	9.3	48.1	10.0
Higher-Order (H-O) Scales				
EID (Emotional/Internalizing Dysfunction)	47.7	10.7	52.3	11.4
THD (Thought Dysfunction)	53.4	11.2	**55.1**	11.4
BXD (Behavioral/Externalizing Dysfunction)	51.8	8.1	**55.6**	9.4
Restructured Clinical (RC) Scales				
RCd (Demoralization)	49.6	9.8	54.0	9.0
RC1 (Somatic Complaints)	51.1	9.0	53.2	9.4
RC2 (Low Positive Emotions)	49.1	10.4	50.2	10.7
RC3 (Cynicism)	48.9	10.9	55.2	13.0
RC4 (Antisocial Behavior)	53.2	8.6	**56.8**	10.2
RC6 (Ideas of Persecution)	**58.5**	12.7	**58.0**	12.3
RC7 (Dysfunctional Negative Emotions)	44.5	8.3	50.9	10.3
RC8 (Aberrant Experiences)	49.5	11.0	**55.3**	12.1

(continues)

Table 10 (cont.)

Scale	Younger-aged victims (n = 71) M	Younger-aged victims (n = 71) SD	Older-aged victims (n = 95) M	Older-aged victims (n = 95) SD
Restructured Clinical (RC) Scales				
RC9 (Hypomanic Activation)	45.9	7.8	50.8	10.6
Specific Problems (SP) Scales				
Somatic Scales				
MLS (Malaise)	49.7	8.8	51.8	8.5
GIC (Gastrointestinal Complaints)	50.4	8.8	52.0	10.7
HPC (Head Pain Complaints)	50.0	9.1	51.3	9.4
NUC (Neurological Complaints)	52.5	10.1	54.4	11.3
COG (Cognitive Complaints)	48.8	11.4	54.1	11.9
Internalizing Scales				
SUI (Suicidal/Death Ideation)	48.9	9.9	50.7	12.7
HLP (Helplessness/Hopelessness)	48.1	11.4	52.6	12.1
SFD (Self-Doubt)	49.0	9.9	52.2	11.8
NFC (Inefficacy)	46.9	8.8	52.9	10.9
STW (Stress/Worry)	50.9	9.4	54.4	9.7
AXY (Anxiety)	47.8	9.3	53.7	12.9
ANP (Anger Proneness)	45.6	9.0	48.8	9.7
BRF (Behavior-Restricting Fears)	46.9	8.6	50.4	9.7
MSF (Multiple Specific Fears)	45.5	6.9	46.8	6.9
Externalizing Scales				
JCP (Juvenile Conduct Problems)	54.2	11.3	**56.4**	11.8
SUB (Substance Abuse)	49.5	8.4	50.4	10.7
AGG (Aggression)	47.0	8.5	48.4	10.6
ACT (Activation)	45.9	9.1	51.1	11.6
Interpersonal Scales				
FML (Family Problems)	44.8	9.1	48.5	9.2
IPP (Interpersonal Passivity)	46.8	8.9	46.4	7.9
SAV (Social Avoidance)	51.4	9.3	50.9	11.2

(continues)

Table 10 (cont.)

Scale	Younger-aged victims (n = 71) M	Younger-aged victims (n = 71) SD	Older-aged victims (n = 95) M	Older-aged victims (n = 95) SD
Interpersonal Scales				
SHY (Shyness)	45.8	7.8	48.0	9.7
DSF (Disaffiliativeness)	46.9	6.2	49.9	10.2
Interest Scales				
AES (Aesthetic-Literary Interests)	41.5	8.2	42.8	8.1
MEC (Mechanical-Physical Interests)	**56.9**	9.8	**58.1**	9.9
Personality Psychopathology Five (PSY-5) Scales				
AGGR-r (Aggressiveness-revised)	51.5	8.7	53.2	9.7
PSYC-r (Psychoticism-revised)	51.0	11.3	54.4	11.4
DISC-r (Disconstraint-revised)	53.3	8.8	**57.0**	9.7
NEGE-r (Negative Emotionality/Neuroticism-revised)	48.5	8.8	52.8	9.9
INTR-r (Introversion-Low Positive Emotionality-revised)	52.1	10.3	50.1	11.6

Note. Bolded scores reflect mean scale scores ≥ 0.5 SD and ≤ 1 SD above the normative mean (i.e., T = 55-59).

A one-way MANOVA was conducted to test the hypothesized mean score differences between offenders with younger-aged or older-aged victims on the three H-O, nine RC, and five PSY-5 scales on the MMPI-2-RF. A statistically significant MANOVA effect was obtained, Wilks' Lambda = 0.762, $F(1, 164) = 2.72$, p = 0.001. The multivariate effect size was estimated at 0.238, which indicates that 23.8% of the variance in these MMPI-2-RF scale score was accounted for by whether the offenders had younger- or older-aged victims.

A series of one-way ANOVAs for each of the MMPI-2-RF scales was conducted as follow-up tests to the MANOVA. Table 11 shows the results for 10 scales that were statistically significant, with effect sizes (partial η^2) ranging from a low of 0.03 (RC4) to a high of 0.10 (RC7). It should be noted that, based on the Levene's test, the score variances across the two groups were not homogenous for RC3, RC7, and RC9. The ANOVA results were not significant for THD, RC1, RC2, RC6, PSYC-r, AGGR-r, and INTR-r.

Table 11

Significant ANOVA results for scale scores of sex offenders with younger- and older-aged victims

Measure	Younger-aged victims (n = 71)		Older-aged victims (n = 95)		F(1, 164)	p	η^2
	M	SD	M	SD			
EID	47.69	10.71	52.28	11.36	6.98	0.009**	0.04
BXD	51.77	8.10	55.63	9.41	7.68	0.006**	0.05
RCd	49.63	9.81	54.04	11.19	7.00	0.009**	0.04
RC3[a]	48.85	10.90	55.21	13.04	11.11	0.001**	0.06
RC4	53.24	8.57	56.80	10.26	5.62	0.019*	0.03
RC7[a]	44.52	8.293	50.86	10.26	18.23	0.000**	0.10
RC8	49.54	11.01	55.28	12.08	9.92	0.002**	0.06
RC9[a]	45.89	7.79	50.84	10.62	11.02	0.001**	0.06
DISC-r	53.25	8.77	56.97	9.69	6.47	0.012*	0.04
NEGE-r	48.45	8.80	52.84	9.91	8.78	0.004**	0.05

Note. *$p < 0.05$, **$p < 0.01$. [a] unequal variances between groups.

These results demonstrate that sex offenders with older-aged victims scored significantly higher on 10 of the 17 scales included in these analyses. The direction of these results, however, is contrary to the relevant hypothesis, as sex offenders with

younger-aged victims were anticipated to score significantly higher than those with older-aged victims.

Table 12 presents the descriptive statistics of MMPI-2-RF scale scores for sex offenders with or without personality disorders or features.

Table 12

Means and standard deviations of MMPI-2-RF scale scores for sex offenders with and without personality disorders or features

	With personality disorder or features (n = 88)		Without personality disorders or features (n = 150)	
Scale	M	SD	M	SD
Validity Scales				
VRIN-r (Variable Response Consistency-revised)	51.7	10.9	49.8	9.4
TRIN-r (True Response Inconsistency-revised)	**55.8**	6.2	**55.6**	6.0
F-r (Infrequent Responses-revised)	**59.2**	16.8	**54.4**	16.0
Fp-r (Infrequent Psychopathology Responses-revised)	51.8	11.5	50.0	11.7
Fs (Infrequent Somatic Responses-revised)	54.6	13.6	51.5	12.2
FBS-r (Symptom Validity-revised)	53.6	11.2	53.7	11.4
RBS (Response Bias Scale)	**55.0**	12.0	52.7	12.7
L-r (Uncommon Virtues-revised)	**55.1**	9.6	53.9	9.9
K-r (Adjustment Validity-revised)	47.7	10.0	50.8	10.6
Higher-Order (H-O) Scales				
EID (Emotional/Internalizing Dysfunction)	53.5	12.5	50.5	11.6
THD (Thought Dysfunction)	**55.3**	12.7	52.6	11.8
BXD (Behavioral/Externalizing Dysfunction)	**57.1**	10.8	52.2	7.6

(continues)

Table 12 (cont.)

Scale	With personality disorder or features (n = 88) M	SD	Without personality disorders or features (n = 150) M	SD
Restructured Clinical (RC) Scales				
RCd (Demoralization)	54.5	11.4	52.3	11.7
RC1 (Somatic Complaints)	53.0	11.0	53.0	10.6
RC2 (Low Positive Emotions)	51.9	12.7	49.8	11.0
RC3 (Cynicism)	53.4	12.0	50.9	12.4
RC4 (Antisocial Behavior)	**59.2**	10.8	53.6	8.2
RC6 (Ideas of Persecution)	**61.0**	13.0	**56.0**	12.5
RC7 (Dysfunctional Negative Emotions)	50.0	10.7	48.4	11.1
RC8 (Aberrant Experiences)	54.0	12.7	52.0	12.3
RC9 (Hypomanic Activation)	49.7	10.8	47.4	9.6
Specific Problems (SP) Scales				
Somatic Scales				
MLS (Malaise)	52.9	10.2	52.0	10.2
GIC (Gastrointestinal Complaints)	51.6	11.1	51.5	10.2
HPC (Head Pain Complaints)	51.3	9.6	51.2	10.1
NUC (Neurological Complaints)	54.6	12.2	53.7	11.7
COG (Cognitive Complaints)	53.1	12.6	52.5	12.4
Internalizing Scales				
SUI (Suicidal/Death Ideation)	52.2	14.7	49.4	11.8
HLP (Helplessness/Hopelessness)	53.2	14.1	49.6	10.6
SFD (Self-Doubt)	52.7	12.7	51.5	11.5
NFC (Inefficacy)	50.9	9.8	51.9	11.6
STW (Stress/Worry)	54.8	10.4	53.1	10.3
AXY (Anxiety)	53.1	14.0	52.5	13.1
ANP (Anger Proneness)	50.4	11.4	47.0	9.2
BRF (Behavior-Restricting Fears)	49.9	9.0	48.5	9.7
MSF (Multiple Specific Fears)	46.1	6.8	46.6	7.7

(continues)

Table 12 (cont.)

Scale	With personality disorder or features (n = 88) M	SD	Without personality disorders or features (n = 150) M	SD
Externalizing Scales				
JCP (Juvenile Conduct Problems)	**59.4**	12.6	53.5	10.9
SUB (Substance Abuse)	52.3	11.6	50.0	10.2
AGG (Aggression)	50.0	11.7	46.5	8.5
ACT (Activation)	48.5	11.1	48.1	10.7
Interpersonal Scales				
FML (Family Problems)	48.8	11.3	45.8	7.7
IPP (Interpersonal Passivity)	48.1	8.7	46.9	9.1
SAV (Social Avoidance)	54.3	11.6	51.7	11.6
SHY (Shyness)	46.6	8.5	48.5	10.5
DSF (Disaffiliativeness)	52.7	13.9	48.6	9.2
Interest Scales				
AES (Aesthetic-Literary Interests)	42.5	8.0	42.3	8.4
MEC (Mechanical-Physical Interests)	**59.2**	11.0	**56.8**	9.0
Personality Psychopathology Five (PSY-5) Scales				
AGGR-r (Aggressiveness-revised)	52.4	9.8	51.1	8.8
PSYC-r (Psychoticism-revised)	53.9	12.4	51.6	11.9
DISC-r (Disconstraint-revised)	**58.4**	10.6	53.6	8.2
NEGE-r (Negative Emotionality/Neuroticism-revised)	53.2	10.4	51.1	10.3
INTR-r (Introversion-Low Positive Emotionality-revised)	53.4	12.4	51.7	11.7

Note. Bolded scores reflect mean scale scores ≥ 0.5 SD and ≤ 1 SD above the normative mean (i.e., T = 55-59). Underlined bolded scores reflect mean scale scores ≥ 1 SD above the normative mean (i.e., T ≥ 60).

A one-way MANOVA compared mean score differences between sex offenders with personality disorder diagnoses or features or those who did not have these features

or diagnoses on the three H-O, nine RC, 23 SP, and five PSY-5 scales on the MMPI-2-RF. A statistically significant MANOVA effect was obtained, Wilks' Lambda = 0.696, $F(1, 236) = 2.15$, $p < 0.001$. The multivariate effect size was estimated at 0.30, which indicates that 30% of the variance in these MMPI-2-RF scale score was accounted for by the presence or absence of personality disorder diagnoses or features among the sex offenders.

Based on a series of Levene's *F* tests, the homogeneity of variance assumption was considered satisfied for 29 of the 40 scales. A series of one-way ANOVAs for each of the MMPI-2-RF scales was therefore conducted as follow-up tests to the MANOVA. The ANOVA results were statistically significant for 10 of the 40 scales, all of which were in the predicted direction. Effect sizes (partial η^2) ranged from a low of 0.02 (HLP) to a high of 0.08 (RC4), as shown in Table 13. The score variances across the two groups were not homogenous for RC4, BXD, DISC-r, HLP, ANP, JCP, AGG, FML, and DSF.

Table 13

Significant ANOVA results for MMPI-2-RF scale scores of sex offenders with or without personality disorders or features

Measure	With personality disorders or features (n = 88)		Without personality disorders or features (n = 150)		F(1, 236)	p	η^2
	M	SD	M	SD			
RC4[a]	59.20	10.81	53.58	12.01	20.48	<0.001**	0.08
RC6	60.97	12.96	55.97	12.47	8.64	0.004**	0.04
BXD[a]	57.09	10.80	52.17	7.60	16.88	<0.001**	0.03
DISC-r[a]	58.38	10.57	53.57	8.24	15.26	<0.001**	0.06
HLP[a]	53.19	14.09	49.57	10.61	5.04	0.026*	0.02

(continues)

Table 13 (cont.)

Measure	With personality disorders or features (n = 88)		Without personality disorders or features (n = 150)		F(1, 236)	p	η^2
	M	SD	M	SD			
ANP[a]	50.42	11.44	46.98	9.22	6.44	0.012*	0.03
JCP	59.42	12.61	53.49	10.87	12.00	0.001**	0.06
AGG[a]	49.95	11.71	46.47	8.49	7.03	0.009**	0.03
FML[a]	48.84	11.26	45.77	7.68	6.22	0.013*	0.03
DSF[a]	52.68	13.89	48.63	9.22	7.31	0.007**	0.03

Note. *$p < 0.05$, **$p < 0.01$. [a] unequal variances between groups.

Further analyses, to address hypothesis 5, initially involved deriving means and standard deviations of MMPI-2-RF scale scores for the within-normal-limits subgroup of sex offenders as well as the community comparison sample. Table 14 presents these descriptive statistics for both groups.

Table 14

Means and standard deviations of MMPI-2-RF scale scores for within-normal-limits sex offender subgroup and community comparison sample

Scale	Within-normal-limits subgroup (n = 89)		Community Comparison Sample (n = 75)	
	M	SD	M	SD
Validity Scales				
VRIN-r (Variable Response Consistency-revised)	**55.0**	9.6	48.9	9.0
TRIN-r (True Response Inconsistency-revised)	**55.8**	6.0	56.0	6.0
F-r (Infrequent Responses-revised)	**56.2**	8.1	50.7	10.2

(continues)

Table 14 (cont.)

Scale	Within-normal-limits subgroup (n = 89) M	SD	Community Comparison Sample (n = 75) M	SD
Validity Scales				
Fp-r (Infrequent Psychopathology Responses-revised)	51.1	9.3	48.9	8.5
Fs (Infrequent Somatic Responses-Revised)	**55.4**	9.8	51.1	10.1
FBS-r (Symptom Validity-revised)	54.1	9.9	48.2	10.3
RBS (Response Bias Scale)	53.8	9.8	53.1	10.1
L-r (Uncommon Virtues-revised)	53.6	8.7	52.3	8.7
K-r (Adjustment Validity-revised)	45.3	6.0	51.4	9.2
Higher Order (H-O) Scales				
EID (Emotional/Internalizing Dysfunction)	53.7	8.2	46.6	9.2
THD (Thought Dysfunction)	**55.7**	9.4	50.4	10.3
BXD (Behavioral/Externalizing Dysfunction)	**56.0**	8.8	51.2	8.7
Restructured Clinical (RC) Scales				
RCd (Demoralization)	**55.4**	6.9	49.2	10.2
RC1 (Somatic Complaints)	**55.5**	7.9	48.5	11.0
RC2 (Low Positive Emotions)	49.7	10.5	45.4	9.1
RC3 (Cynicism)	**55.8**	11.3	50.3	8.1
RC4 (Antisocial Behavior)	**57.1**	9.0	52.7	9.3
RC6 (Ideas of Persecution)	**60.4**	10.0	51.0	9.7
RC7 (Dysfunctional Negative Emotions)	52.6	7.0	47.7	9.8
RC8 (Aberrant Experiences)	**55.6**	9.8	52.1	10.7
RC9 (Hypomanic Activation)	52.2	9.9	49.0	8.46

(continues)

Table 14 (cont.)

Scale	Within-normal-limits subgroup (n = 89) M	SD	Community Comparison Sample (n = 75) M	SD
Specific Problems (SP) Scales				
Somatic Scales				
MLS (Malaise)	52.5	8.6	48.7	8.5
GIC (Gastrointestinal Complaints)	53.4	11.2	50.2	9.2
HPC (Head Pain Complaints)	53.2	8.5	48.9	9.1
NUC (Neurological Complaints)	**55.8**	10.9	**51.1**	11.0
COG (Cognitive Complaints)	54.9	8.0	51.6	10.4
Internalizing Scales				
SUI (Suicidal/Death Ideation)	50.5	11.0	48.0	10.6
HLP (Helplessness/ Hopelessness)	52.7	11.7	48.3	9.3
SFD (Self-Doubt)	53.5	9.7	49.3	10.4
NFC (Inefficacy)	54.2	8.7	50.2	11.1
STW (Stress/Worry)	**57.3**	8.9	52.3	10.6
AXY (Anxiety)	54.1	11.2	49.1	9.2
ANP (Anger Proneness)	50.7	9.6	47.4	8.1
BRF (Behavior-Restricting Fears)	50.2	8.8	46.7	7.7
MSF (Multiple Specific Fears)	46.4	6.9	43.5	6.8
Externalizing Scales				
JCP (Juvenile Conduct Problems)	**56.9**	11.7	50.1	10.6
SUB (Substance Abuse)	50.2	9.1	56.7	11.7
AGG (Aggression)	50.1	10.8	47.7	9.4
ACT (Activation)	52.3	10.0	48.8	9.7
Interpersonal Scales				
FML (Family Problems)	48.3	8.2	48.3	8.2

(continues)

Table 14 (cont.)

	Within-normal-limits subgroup (n = 89)		Community Comparison Sample (n = 75)	
Scale	M	SD	M	SD
Interpersonal Scales				
IPP (Interpersonal Passivity)	46.1	8.5	46.9	7.5
SAV (Social Avoidance)	52.3	11.6	50.3	9.2
SHY (Shyness)	49.3	9.1	46.9	8.5
DSF (Disaffiliativeness)	49.1	9.4	50.0	9.8
Interest Scales				
AES (Aesthetic-Literary Interests)	43.2	8.6	42.2	9.5
MEC (Mechanical-Physical Interests)	**58.6**	10.5	**56.5**	9.0
Personality Psychopathology Five (PSY-5) Scales				
AGGR-r (Aggressiveness-revised)	53.5	9.8	52.6	8.7
PSYC-r (Psychoticism-revised)	54.8	9.4	50.6	10.7
DISC-r (Disconstraint-revised)	**57.5**	9.0	54.6	9.0
NEGE-r (Negative Emotionality/Neuroticism-revised)	**55.5**	7.2	49.5	10.8
INTR-r (Introversion-Low Positive Emotionality-revised)	50.6	11.7	48.2	9.9

Note. Bolded scores reflect mean scale scores ≥ 0.5 SD and ≤ 1 SD above the normative mean (i.e., T = 55-59). Underlined bolded scores reflect mean scale scores ≥ 1 SD above the normative mean (i.e., T ≥ 60).

A one-way MANOVA was conducted to determine whether there were significant differences in mean scale scores between the within-normal-limits subgroup of sex offenders and the community comparison group on the three H-O, nine RC, 23 SP, and five PSY-5 scales on the MMPI-2-RF. Contrary to what was anticipated, a statistically significant MANOVA effect was obtained, Wilks' Lambda = 0.404, $F(1, 162) =$, $p <$

.0001. The multivariate effect size was estimated at .596, which indicates that 59.6% of the variance in these MMPI-2-RF scale score was accounted for by belonging to either the within-normal-limits subgroup or community comparison sample.

A series of one-way ANOVAs for each of the MMPI-2-RF scales was conducted as follow-up tests to the MANOVA. It should be noted that, based on the Levene's test, the score variances across the two groups were not homogenous for RCd, RC1, RC3, RC7, GIC, SUI, NFC, COG, AXY, BRF, SUB, SAV, and NEGE-r. The ANOVA results were statistically significant for 31 of the 40 scales, with the within-normal-limits group producing higher mean scores than the community comparison group on all 31 scales. The within-normal-limits subgroup and community comparison sample mean MMPI-2-RF scale scores did not statistically differ on scales SUI, AGG, FML, IPP, SAV, SHY, DSF, AGGR-r, and INTR-r.

Chapter 7: Discussion

Personality assessment is a useful approach in both research and practice to evaluate an extensive range of states, traits, and behaviors in order to gain a better understanding of the patterns of personality characteristics typical of sex offenders. Research has provided the field with information regarding trends of personality dysfunction and psychopathological characteristics of this population. In practice, measures of personality are regularly incorporated in psychological evaluations of sex offenders to determine level of risk or provide clarification about the individual's presentation to inform criminal proceedings or treatment. The MMPI and its subsequent versions are the most widely utilized measures in both clinical personality assessment and research of sex offenders, however to date there is only one published study utilizing the MMPI-2-RF to study this population. Given the addition of several new scales and revisions made to preexisting scales from its predecessors, personality assessment research using the MMPI-2-RF to study sex offenders would provide additional information regarding differences in personality and psychopathology between different subgroups of these offenders, as well as provide support for previous research using older versions belonging to the MMPI family. The hypotheses for the current study were informed by theories and studies of sex offenders, and particularly by the results of previous MMPI and MMPI-2 research on sex offenders. The MMPI-2-RF differs from the earlier versions in structure and content of several scales, therefore extrapolations from earlier research findings were made for the current study.

Hypothesis 1: Contact and noncontact sex offenders

The first hypothesis of this study concerned differences between contact and noncontact offenders. It was predicted that contact offenders would obtain significantly higher mean scores than noncontact offenders on scales RC4, RC8, JCP, BXD, DISC-r, and THD, which together are largely representative of acting-out behaviors and cognitive distortions. These results were expected based on the notion that individuals who perpetrate contact sex offenses are, by the nature of the offense, acting out on their impulses more directly than those who commit internet-based or other noncontact sex offenses. The overall multivariate result with regards to contact offenders scoring higher than noncontact offenders was not significant, contrary to the hypothesis. However, the univariate results indicated that contact offenders did score significantly higher than noncontact offenders on THD and BXD, that is, on two out of the six scales. Given that these two scales are Higher-Order scales of the MMPI-2-RF, the direction of these results support previous research findings regarding contact offenders exhibiting a greater tendency in two broad areas -- engaging in cognitive distortions, as well as demonstrating a higher level of impulsivity and acting-out behaviors (Bogaerts et al., 2005; Elliot et al., 2013; & Tomak et al., 2009). The differences in mean scores for the remaining four scales were not significant, which suggests that contact and noncontact sex offenders do not differ significantly with regards to specific aspects of antisocial behavior, unusual thoughts or perceptions, conduct problems in school, and under-controlled behavior measured by the MMPI-2-RF Restructured Clinical (RC) scales. Overall, there was a lack of compelling evidence of specific distinctions between contact and noncontact sex offenders at the level of the lower-level scales of the MMPI-2-RF hierarchical structure,

at least in terms of the disordered thought and behavioral scales selected for analysis in this study.

Hypothesis 2: Intrafamilial and extrafamilial sex offenders

Previous findings in the literature have suggested differences between intrafamilial and extrafamilial sex offenders. Anticipated differences between these sex offender subgroups' mean scale scores on RC2 and RC7 were such that extrafamilial offenders would score significantly higher on RC2 and intrafamilial offenders would obtain significantly higher mean scales scores on RC7. This was based on previous findings demonstrating MMPI profiles with scale 2 elevations belonging primarily to extrafamilial offenders, and intrafamilial offenders producing MMPI and MMPI-2 profiles with higher scale 7 scores (Erickson et al., 1987; Kirkland & Bauer, 1982). Additionally, these two subgroups of sex offenders were anticipated to have comparable difficulty in unusual thoughts and perceptions as well as antisocial behaviors, and therefore not significantly differ with respect to mean scale scores on RC4 and RC8. In the end, none of the anticipated findings manifested. The results demonstrated that extrafamilial offenders scored significantly higher on both RC4 and RC8, contrary to the previously stated hypothesis, as no significant differences were expected between these two sex offender subgroups on these scales. Extrafamilial offenders also scored significantly higher than intrafamilial offenders on RC7, contrary to the anticipation that intrafamilial offenders would produce higher RC7 mean scale scores. Furthermore, intrafamilial and extrafamilial offenders did not produce significantly different scores on RC2, contrary to the prediction that extrafamilial offenders would score significantly higher than intrafamilial offenders on this particular scale.

It may be speculated that failure to obtain the anticipated results could be attributed to construct differences between the RC scales and the original clinical scales. Given the dearth of MMPI-2-RF research with sex offenders to date, this hypothesis was largely based on previous research using the MMPI and MMPI-2 clinical scales, and there have been notable differences identified between these RC scales and scales 2 (Depression) and 7 (Psychasthenia) (Nichols, 2006). In a critique and review of the development of the RC scales, Nichols (2006) noted that in developing RC2, variance related to the construct of demoralization was removed from scale 2, which lead to a decrease in depressive variance in RC2. Nichols suggested this ultimately left a core component of depression variance missing from RC2 and therefore, making it considerably different than scale 2. Further discussion of RC scale development identified some considerable changes with regards to scale 7 and RC7. Nichols (2006) noted that the items that arguably capture the core construct of scale 7 the best were not retained in RC7. Additionally, he discussed that although both scale 7 and RC7 capture aspects of psychoticism, RC7 has slightly higher correlations with other scales measuring this construct compared to scale 7. This suggests that RC7 and scale 7 differ in some important ways with regards to their core constructs as well. Overall, these differences between RC2 and RC7 and the original clinical scales from which they were derived are a possible explanation as to why the anticipated results regarding these scales were not observed in the current study.

On the other hand, the results pertaining to this comparison of intrafamilial and extrafamilial sex offenders may illustrate that differences between these two subgroups of sex offenders are ultimately more subtle. Overall, the results of the current study show a

pattern of greater cognitive and behavioral disturbance among extrafamilial offenders than intrafamilial offenders on the selected RC scales.

Hypothesis 3: Sex offenders with younger- and older-aged victims

In the current study, the age ranges for older- and younger-aged victims were 13 to 17 and 12 and younger, respectively. Sex offenders with younger-aged victims were anticipated to produce MMPI-2-RF profiles indicative of greater psychological disturbance, evidenced by significantly higher mean scores than offenders with older-aged victims on the three H-O scales, nine RC scales, and five PSY-5 scales. This followed from generally held beliefs that sex offenses against young children are more heinous and that this arises from psychological disturbance, as well as previous research showing significantly higher levels of psychiatric disturbance in offenders against younger children than those who victimize older children or adolescents (Firestone et al., 2005). The results regarding this particular subgroup of sex offenders were contrary the proposed hypotheses. Although the overall effect of the comparison between offenders with younger- or older-aged victims was significant, the results demonstrate that offenders with older-aged victims produce significantly higher mean scores.

A possible explanation as to why the results were contrary to the expectations regarding victim age is that one of the studies which noted offenders with younger-aged victims as demonstrating greater levels of disturbance used a measure outside of the MMPI family: the Brief Psychiatric Rating Scale (BPRS). This is a measure of psychiatric symptoms in which clinicians rate symptom severity based on a clinical interview and observations of the examinee. Therefore, although research has demonstrated significant differences in psychological disturbance between subgroups of

sex offenders based on victim age, it is possible that content and method differences between the BPRS and the MMPI-2-RF could potentially explain why the current study's results did not support these previous research findings. Another potential explanation is that the sex offender's choice of victim by age may not be based on level of psychological disturbance, but rather on accessibility factors such as situation and time. Previous research demonstrated that offenders' selection of younger vs. older children can be attributed to time of the day, as younger children were found to be victimized more often earlier in the day compared to middle-aged children and adolescents (McKillop et al., 2015). Therefore, it is possible that situational factors such as timing and availability may play a larger role in the observed differences between sex offenders with younger- and older-aged victims. Finally, previous studies have dichotomized victim age somewhat differently than done in the current study due to differences in victim age range across samples, which may also contribute to different results.

An alternative interpretation of these results related to victim age, assuming they can be replicated, is that there may be a greater level of disturbance associated with sexual offending against adolescents. This is because it may imply that the offenders are treating adolescents as if they were adult sexual partners, although still with the application of coercion or force. Further exploration of differences between sex offenders who victimize younger- and older-aged minors could be a direction for further research in the future.

Hypothesis 4: Sex offenders with and without personality disorder diagnoses or features

Previous research has shown that personality disorder pathology is common in sex offenders (Bogaerts et al., 2005; Bogaerts et al., 2008; Eher et al., 2019; Raymond et

al., 1999). A significant effect was predicted for sex offenders with personality disorder diagnoses or features to produce significantly higher mean scores than offenders without these particular diagnoses or features across the three H-O scales, nine RC scales, the 23 SP scales, and the five PSY-5 scales. The results were mixed with regards to differences amongst the sex offenders in these two particular subgroups, as scores on only 10 out of 40 MMPI-2-RF scales included in the analyses were significantly different. On the other hand, all 10 of the significant scales differences were in the anticipated direction, with sex offenders who had personality disorder diagnoses or features scoring significantly higher than those who did not. Therefore, to a certain degree the current findings using the MMPI-2-RF are in line with other previous research. Although the results are not as broad sweeping as was anticipated, they certainly zero in on distinct differences between sex offenders with or without personality disorder diagnoses and features.

Hypothesis 5: Within-normal-limits sex offenders and community comparison sample

Finally, the subgroup of sex offenders previously classified as producing within-normal-limits profiles based on VanSlyke's (2017) cluster analysis were anticipated to be comparable in mean scores to the community comparison sample, with few (if any) significant differences. The results were contrary to the hypothesis, as the mean scores of these two groups differed significantly on 31 of the 40 MMPI-2-RF scales included in the analyses. The within-normal-limits subgroup of sex offenders consistently produced higher mean scores on these 31 MMPI-2-RF scales. Although these results were not anticipated, they indicate that the subset of sex offenders who do not appear to demonstrate a significant level of psychopathology still demonstrate more psychological maladjustment than individuals who do not commit sex offenses. This makes sense when

taking into consideration the fact that this subgroup of sex offenders were given this within-normal-limits classification relative to other cluster-analysis based subgroups of sex offenders. Although these sex offenders exhibited a lack of clinically elevated scales in their MMPI-2-RF profiles, this subgroup ultimately demonstrate more personality dysfunction when compared to non-offending adult men from the community. This may provide a partial explanation as to why these sex offenders, who may not appear overtly pathological in most life contexts, perpetrate the problematic criminal behavior of sex offending.

Some observations with regards to the within-normal-limits subgroups' mean scale scores are offered. This subgroup of sex offenders had 17 mean scale scores that reached at least one half of a standard deviation above the normative mean, with the mean scale score on RC6 reaching at least one standard deviation above the normative mean (M = 60.4). However, the overall sex offender sample had only six mean scale scores that fell at least a half of a standard deviation above the normative mean and no mean scale scores reaching T ≥ 60. While observing these differences, it should be noted that the overall sample of 244 sex offenders used in this study included a subgroup of 116 sex offenders who were previously deemed as having a "well-adjusted" defensive presentation by VanSlyke (2017). Thus, this defensive group made up nearly half of the current study's sample, and their presence likely lowered the mean MMPI-2-RF scale scores of the overall sex offender sample. However, this defensive subgroup was ultimately retained for this study because their inclusion increased the overall representativeness of this sex offender sample. Specifically, it can be argued that this is a common presentation of sex offenders, particularly those who undergo pre-trial

evaluations, and therefore would likely be seen in the practice of personality assessment of these offenders.

The current study expanded the existing literature on sex offenders with regards to personality and psychological dysfunction by analyzing personality characteristic similarities and differences between specific subgroups of sex offenders using the MMPI-2-RF. At the time this study was conducted, there was only one published empirical study using the MMPI-2-RF to study sex offenders, which examined its psychometrics with this particular population (Tarescavage et al., 2018). Therefore, it appeared that research focusing on the similarities and differences of personality characteristics between a number of different sex offender subgroups would be informative and potentially contribute new information regarding the MMPI-2-RF's utility with this population. The findings of this study ultimately highlight two central points:

1. There is evidence of greater psychological disturbance in some subgroups of sex offenders relative to their comparison subgroups, even if this was seen only in a limited number of MMPI-2-RF scales and was contrary to some hypothesized directions. This appears to be the case for contact offenders, extrafamilial offenders, offenders with older-aged victims, and those with personality disorder diagnoses or features, particularly with scales that are indicative of externalization. This finding can provide directions for further research investigation with the MMPI-3 as well as other measures of personality and psychopathology.

2. There is evidence of greater psychological disturbance in the subgroup of sex offenders with relatively normal-range MMPI-2-RF mean scores than in community men who are not sex offenders. Compared to more disturbed subgroups of sex offenders, this sex

offender subgroup's level of psychopathology may pass detection in the course of personality assessment. This finding suggests that cut scores for identifying psychological disturbance may need to be lowered on the substantive scales of the MMPI-2-RF for these sex offenders. Therefore, future research could be directed towards empirical determination of optimal cut scores.

The limitations of this study must also be considered. First, it should be noted that in the various comparisons of sex offenders, some involved subgroups as small as $n = 55$ sex offenders. Therefore, limited statistical power for some of these analyses would have contributed to some of the negative findings. Another possible explanation for why these contrary results were found in this study is that the MMPI-2-RF may not be as effective as its predecessors in capturing some of these differences between different subgroups of sex offenders, with the exception of externalizing behavioral problems. Moreover, the sex offender sample was obtained from an archival database of test data obtained from pre-trial evaluations conducted at a single forensic psychological outpatient practice located in central Florida. The fact that the large majority of the data used in this study was obtained from one particular geographic area may also limit its generalizability to sex offenders in other regions of the United States. Additionally, it should be noted that these results apply primarily to Caucasian sex offenders as they were the predominant ethnic group represented. It should also be noted that the majority of sex offenders belonged to more than one subgroup based on the four variables of interest for this study. However, an advantage of this overlap is that it provides the results with ecological validity, as many sex offenders can be categorized in multiple ways in relation to their offenses and

personality characteristics. Therefore, this overlap in participant groups does not render the results questionable for that reason.

Given that many of the findings of this study differed from the conclusions of previous studies that utilized other MMPI versions, replication of this study assessing these particular subgroups of sex offenders with the MMPI-2-RF would help determine the reliability of these results. Additionally, future research could focus on comparing and contrasting other subgroups of sex offenders. For example, a comparison of the defensive subgroup and the within-normal-limits subgroup previously identified in VanSlyke's (2017) cluster analysis could be useful in identifying sex offenders who do not present with profiles indicative of severe psychopathology, but for different reasons. Furthermore, given the imminent release of the MMPI-3, it should be noted that this newest member of the MMPI family includes a new externalizing scale measuring self-importance, which might offer some interesting new prospects in investigation of sex offenders. Given the findings of this study regarding differences between sex offenders with and without personality disorders with regards to the former group's externalization of emotions and behaviors, future comparisons of these subgroups of sex offenders with the MMPI-3 may provide further information regarding potential differences between subgroups of sex offenders.

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10 USC § 920b (2019).

18 USC § 2246 (2019).

34 USC § 20911 (2019).

Appendix A

Informed Consent

Please read this consent document carefully before you decide to participate in this study. The researcher will answer any questions before you sign this form.

Purpose: This research study is being conducted by Isabella Campanini, a clinical psychology doctoral student, under the supervision of Dr. Radhika Krishnamurthy at Florida Institute of Technology. You are asked to participate in this study comparing personality characteristics in adult men. Your data will be compared to data of other adult men as part of this study.

What You Will Do: Upon agreeing to participate, will be asked to provide some general demographic information about yourself. Next, you will be asked to complete the Minnesota Multiphasic Personality Inventory – Second Edition – Restructured Form (MMPI-2-RF), a self-report personality questionnaire. This questionnaire takes approximately 35-50 minutes to complete.

Potential Risks and Voluntary Participation: There are no potential risks anticipated with participating in this study. While completion of the self-report personality questionnaire is not expected to cause any harm or discomfort, you have the right to withdraw from the study at any time without consequence. Your participation in this study is completely voluntary, and there is no penalty for not participating.

Benefits of Participating: Your participation in this study will provide information contributing to the knowledge of personality characteristics in groups of adult men that will ultimately provide a better understanding of these individuals.

Confidentiality: To ensure your anonymity and confidentiality of your identity, your response records and data sources will be assigned a participant identification number, instead of any personal identifying information. All data and findings will be tied to this participant identification number only, and your name will not be used in any part of this study. This consent form, which requires your signature, will be stored separately from all data sources to ensure confidentiality.

How Data Will Be Used: The results of this study will be used for scholarly research purposes only. Participants will not receive individual feedback regarding their test results and participant test results will not be disclosed to anyone else.

Contact Information: If you have any questions or concerns about this study, please contact Isabella Campanini at icampanini2013@my.fit.edu or Dr. Radhika Krishnamurthy at rkrishna@fit.edu. You may also reach out to Florida Tech's IRB Chairperson, Dr. Lisa Steelman, with any concerns about this study.

Dr. Lisa Steelman, IRB Chairperson
150 West University Blvd.
Melbourne, FL 32901
Email: lsteelma@fit.edu Phone: 321.674.8104

Agreement:
By signing below, I am affirming that I have read the procedure described above, I voluntarily agree to participate in the procedure, and I have received a copy of this description. I also am affirming that I am 18+ years of age.

Participant: _____ Date: _____

Principal Investigator: _____ Date: _____

Appendix B

Demographics Questionnaire

1. Your current age: _____ years

2. Your identified gender (please circle):

   Male Female Other

3. Your identified ethnicity (please circle):

   African American
   Asian
   Latinx
   Native American
   Pacific Islander/Native Hawaiian
   White/Caucasian
   Mixed/More than one of the above
   Other

4. Your current marital status (please circle):

   Single or Never Married
   Married
   Divorced or Separated
   Widowed

5. How many children you have (if any):

   _____ children _____ I do not have any children

6. The highest level of education you completed (please circle)

   High school diploma/GED
   Some college
   Associate's Degree
   Bachelor's Degree
   Some graduate school
   Master's Degree

7. Your current employment status (please circle)

   Unemployed
   Employed
   If employed, your current job title: _____

8. Have you ever been charged with any of the following? (Please circle)

   DUI/DWI
   Larceny/Theft
   Robbery
   Sexual Offense
   Aggravated Assault
   Domestic Violence

9. Have you ever experienced childhood physical or sexual abuse?

   Yes No

10. Have you ever received treatment for substance abuse?

    Yes No

11. Have you ever received treatment for anger management?

    Yes No

12. Have you ever received treatment for mental health reasons?

    Yes No