THE UNIVESTIGATED FACTORS: DIMENSIONS OF PERSONALITY AND

PSYCHOPATHOLOGY IN SEX OFFENDERS

Josh Briley, B.S.

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APPROVED:

Richard Rogers, Major Professor
Kenneth Sewell, Committee Member
Randy Cox, Committee Member
Ernest H. Harrell, Chair of the Department of Psychology
C. Neal Tate Dean of the Robert B. Toulouse School of
      Graduate Studies

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Understanding the relation between personality characteristics, psychopathology, and sexual offenses can contribute to developing more effective treatment interventions. Previous research with sex offenders has focused on general personality traits or inconsistently classified sex offenders based on psychopathology. It was hypothesized that combining personality and psychopathological traits can assist in understanding sex offenders. The current study evaluated 88 male sex offenders in a court-mandated outpatient treatment program utilizing the NEO-PI-R and the MMPI-2. Three clusters of child molesters were examined for differences in personality characteristics and number of offenses. A second-order principle axis factor (PAF) analysis of personality and psychopathology traits revealed three factors: Psychological Distress, Excitement-Seeking, and Social Desirability. The potential clinical utility of these dimensions in predicting treatment compliance is examined.

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CHAPTER 1

Introduction

A critical component in the evaluation and treatment of sex offenders is an understanding of personality styles and their effects on the types of sex offense committed. An understanding of the relation between personality characteristics, psychopathology, and sexual offenses can contribute to the development of more effective treatment interventions. Numerous studies (Hall, Graham, & Shepherd, 1991; Kalichman, 1990; Kalichman, 1991; Kalichman, Dwyer, Henderson, & Hoffman, 1992; Kalichman & Henderson, 1991; Shealy, Kalichman, Henderson, Szymanowski, & McKee, 1991) have examined the possibility of categorizing sex offenders into homogenous subgroups based upon personality and psychopathological characteristics. These categories have been based on several factors including type of offense committed, age and gender of the victim, and the use of force. Overall, these studies have resulted in mixed conclusions and few replicated findings. This research is not able to establish definite categories largely because of the heterogeneity of sex offenders.

Despite the behavioral and psychological heterogeneity of sex offenders, some common personality traits, especially in interpersonal characteristics, have been found. As a population, sex offenders tend to lack in interpersonal skills, feelings of confidence, and ease in interpersonal interactions with either gender (Baxter, Marshall, Barbaree, Davidson, & Malcolm, 1984). For example, Baxter et al. (1984) found sex offenders are

less assertive, have lower self-esteem, and higher levels of anxiety in social interactions when compared to noncriminal males.

While these personality characteristics aid in the understanding of sex offenders, they are too broad to assist in discriminating sex offenders from other offender or nonoffender populations. The same general personality characteristics reported for sex offenders are common among non-sexual offenders and members of the general population. An alternate explanation (see Levin & Stava, 1987) is that psychopathology, combined with normal personality patterns, are responsible for sex offenders' crimes. However, research examining psychopathology of sex offenders (e.g., MMPI scales) is also not conclusive. As subsequently discussed, many different profiles have been found for sex offenders committing similar offenses.

This study examines both personality and psychopathological characteristics of sex offenders. Personality characteristics are discussed in terms of the Five-Factor Model, as measured by the NEO-PI-R. After a discussion of the components of this theory, the relationship of these factors to sexual behavior and deviance is examined. Psychopathology and inferred personality characteristics of sex offenders, as measured by the MMPI, are then reviewed.

Multifactoral Models of Personality

Multifactoral models of personality attempt to explain individual differences as defined patterns of personality traits. These patterns describe differing dimensions of thought, behavior, feeling, and action that are persistent across social and personal contexts (American Psychiatric Association, 1994; Costa & McCrae, 1992b). Two major

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models of personality are widely accepted: Eysenck's three-factor model (Clark & Watson, 1999; Eysenck, 1971, 1992a) and the Five-Factor Model (FFM; Costa & McCrae, 1990, 1992a; John & Srivastava, 1999; McCrae & Costa, 1999; Norman, 1963; Watson, 1989).

Eysenck's model defines behavior along three orthogonal factors: Neuroticism, Extraversion, and Psychotocism. Eysenck's theory is biologically based. For example, he stated that introverted individuals display greater cortical arousal than extraverts, resulting in lower sensory thresholds and better and more rapid formation of conditioned responses (Eysenck, 1971). According to Eysenck (1971), the Neuroticism factor measures emotional lability and the Psychotocism factor includes such personality traits as hostile, cruel, and impersonal. Clark and Watson (1999) have suggested that Eysenck's Psychotocism factor actually measures the extent to which impulsivity and sensation-seeking governs an individual's behavior.

The Five-Factor Model (FFM) posits that five factors are sufficient and necessary to delineate personality differences (Costa & McCrae, 1992a, 1992c). The FFM (Costa & McCrae, 1990, 1992a; John & Srivastava, 1999; McCrae & Costa, 1999; Norman, 1963; Watson, 1989) uses five bipolar orthogonal dimensions to define an individual's personality: Neuroticism versus Emotional Stability, Extraversion versus Introversion, Openness to New Experience versus Closedness, Agreeableness versus Antagonism, and Conscientiousness versus Undirectedness. These five factors attempt to explain personality comprehensively by examining an individual's emotional lability, desire for social contact, willingness to attempt novel experiences, and degree of moral flexibility.

In addition, each factor consists of six facets that explore different aspects of the factor. These factors and facets are described in more detail below.

These two models of personality share several commonalities. The goal of both Eysenck's three-factors and the FFM is a complete description of personality (Costa & McCrae, 1992c, 1992d; Eysenck, 1992a, 1992b). Based on variations in Extraversion, Psychotocism, and Neuroticism domains, Eysenck's model seeks to explain individual personality traits. In a similar fashion, the FFM also incorporates two of these factors within its domains. As expected, Neuroticism and Extraversion are correlated to the FFM domains of the same name (Costa & McCrae, 1992b; Digman & Inouye, 1986). Eysenck's third dimension, Psychotocism, does not have a direct parallel with the FFM, but correlated negatively ($\underline{r}$ = -0.85) with Agreeableness and Conscientiousness on the FFM (Costa & McCrae, 1992b; Eysenck, 1992b). This correlation suggests a strong inverse relationship between these factors on the two models. Researchers (Costa & McCrae, 1992c; Eysenck, 1992a) debate which model's conceptualization of the traits measured by these factors is better supported.

The FFM originated in studies examining trait-related terms in language (John & Srivastava, 1999; McCrae & Costa, 1999; Watson, 1989). Norman (1963) conducted one of the first personality studies that resulted in five factors. In an attempt to determine the factors surrounding descriptions of personality, he enlisted college students to rate their peers using a forced-choice list of bipolar traits. Norman (1963) found five factors that were both necessary and sufficient to rate personality: (a) Extraversion or Surgency, (b) Agreeableness, (c) Conscientiousness, (d) Emotional Stability, and (e) Culture. Using the

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same scales that Norman developed, Watson (1989) found these five factors were remarkably similar whether research participants were rating strangers or themselves.

These five broad factors have been reliably reported in children, college students, older adults, men, women, and clinical groups (Costa & McCrae, 1992b; Trull, 1992). The five personality traits have been empirically studied and consistently validated (Digman & Inouye, 1986). With respect to generalizability, these five domains are relevant beyond the American population and English speaking cultures; they have been validated in German, Dutch, Chinese, Japanese, and Filipino cultures as well (Costa & McCrae, 1992b; Digman & Inouye, 1986).

However, some debate continues in the literature regarding whether the five factors are a comprehensive theory of personality. In a factor analytic study of personality models, Zuckerman, Kuhlman, and Camac (1988) found that Neuroticism and Extraversion were stable factors regardless of whether the factor solution provided three, five, or seven factors. In defense of his own work, Eysenck (1992a) argued that his Psychotocism factor encompasses the personality traits associated with Agreeableness and Conscientious factors of the FFM. Therefore, only three factors are sufficient and necessary to comprehensively describe personality. In response, Costa and McCrae (1992c) posit that Psychotocism is a subset of both the FFM's Agreeableness and Conscientiousness factors. Moreover, Costa and McCrae (1992c) observed that Eysenck's theory does not incorporate the traits indicated by the FFM's Openness to New Experience Factor. Finally, Costa and McCrae (1992c) defend the FFM as gaining increasing research support as a comprehensive, stable model of personality. In summary,

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these researchers agree on two personality factors, Neuroticism and Extraversion. The debates regarding personality factors center on which factors are necessary to comprehensively describe personality beyond these two factors.

Given the findings discussed above, the FFM provides a more comprehensive description of personality than Eysenck's theory (Costa & McCrae, 1990, 1992a, 1992b; Digman & Inouye, 1986; McCrae & Costa, 1989; Trull, 1992). The FFM describes personality along interpersonal, emotional, cognitive, and motivational drive traits. These traits have been found in populations of different ages, cultures, and genders. Therefore, this model, as measured by the NEO-PI-R (Costa & McCrae, 1992a), will be used in this study.

<center>Factors and Facets of the FFM</center>

Costa and McCrae (1992a) defined the factors and facets of the FFM in the following terms with reference to their measure: the NEO-PI-R. The factors and facets of the FFM, as measured by the NEO-PI-R, are outlined in Table 1.

The Neuroticism Factor is defined as being anxious, insecure, guilt-prone, and self-conscious. Individuals high on this factor are more likely to have irrational ideas, be less able to control impulses, and to cope more poorly with stress than others. Frequent negative moods are associated with individuals high in Neuroticism (McCrae & Costa, 1989). Individuals low in Neuroticism are defined as emotionally stable, calm, even-tempered, and relaxed, able to deal with stressful situations without becoming overly upset or rattled. Although many individuals with psychological disorders would load highly on the Neuroticism domain, it should not be considered as an indicator of

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Table 1

Factors and Facets of the Five-Factor Model of Personality

Neuroticism	Extraversion	Openness to New Experience	Agreeableness	Conscientiousness
Anxiety	Warmth	Openness to Fantasy	Trust	Competence
Angry Hostility	Gregariousness	Openness to Aesthetics	Straightforwardness	Order
Depression	Assertiveness	Openness to Feelings	Altruism	Dutifulness
Self-Consciousness	Activity	Openness to Actions	Compliance	Achievement Striving
Impulsiveness	Excitement-Seeking	Openness to Ideas	Modesty	Self-Discipline
Vulnerability	Positive Emotions	Openness to Values	Tender-Mindedness	Deliberation

Note: The first row enumerates the five factors; the remaining rows delineate the respective facets for each of the factors.

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psychopathology (Costa & McCrae, 1992a). For instance, an individual may be high in Neuroticism and still function well. On the other hand, most individuals with Antisocial or Narcissistic Personality Disorders are not necessarily in significant distress and, therefore, not high in Neuroticism.

The Extraversion Factor, one of the two primarily interpersonal factors, is defined as being talkative, sociable, fun-loving, and affectionate. Individuals high in Extraversion prefer large groups and gatherings; they are assertive, active, and cheerful, liking excitement and stimulation. Positive moods are associated with individuals high in Extraversion (McCrae & Costa, 1989). Persons low in Extraversion are reserved, independent, and even-paced. These characteristics are not the opposite of Extraversion, such descriptions would include unfriendly, sluggish, and followers.

The Openness to New Experience Factor is defined as being non-conforming, imaginative, and showing broad interests. Openness is modestly related to education and measured intelligence. Individuals high in Openness are more willing to entertain novel ideas and unconventional values and experience positive and negative emotions. Liberal attitudes are also associated with high Openness (McCrae & Costa, 1989). Individuals low in Openness behave more conventionally and are more conservative. Their emotional experiences are less expressive than individuals high in this factor.

The Agreeableness Factor, the second of the two primarily interpersonal factors, is defined as sympathetic, warm, trusting, and cooperative. The person high in Agreeableness is altruistic, sympathetic, and eager to help, believing that other people will be equally helpful in return. In addition, such an individual is more governed by their

feelings than by impersonal logic (McCrae & Costa, 1989). Persons low in Agreeableness are egocentric, skeptical of others' intentions, and competitive rather than cooperative.

The Conscientiousness Factor is defined as ethical, dependable, productive, and purposeful. Persons high in Conscientious have self-control and are able to organize, plan, and carry out tasks. They are purposeful, strong-willed, determined, reliable, punctual, and scrupulous. Individuals low in Conscientiousness are not necessarily lacking in moral principles, but are less rigorous in applying them. They are hedonistic and more interested in sex than those higher in Conscientiousness.

The FFM does attempt to consider all aspects that are included in personality: need for social contact, emotional stability, morality, interaction styles, and curiosity. The factors measure personality traits along five bipolar continuums. For example, Extraversion, which seems the least bipolar of the factors, measures social interaction style from reserved, independent, and quiet (Introverted individuals), to gregarious, fun-loving, and sociable (Extraverted individuals). While no current theories are truly comprehensive in describing personality, the FFM, as measured by the NEO-PI-R, has been found to competently assess personality regardless of age, gender, or culture.

<center>Sexual Functioning and Personality</center>

Variations in Normal Sexual Behavior and Personality Traits

Research involving personality characteristics and sexual functioning have utilized either measures of Eysenck's three-factor model, including the Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1975) and the P, E, and N Inventory (Eysenck, 1971), or the Edwards Personal Preference Schedule (EPPS;

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Edwards, 1959). The EPPS is an inventory that measures personality along 15 personality traits. In addition, the EPPS attempts to minimize social desirability in a respondent's answers (Edwards, 1959).

Research has shown that sexuality cannot easily be isolated from other aspects of personality (Berner et al., 1992). One such investigation by Eysenck (1971) found correlations between his three-factor model of personality and sexual behavior in a sample of 423 male and 379 female unmarried college students. More specifically, individuals high in Neuroticism exhibited the greatest degree of sexual pathology, as measured in sexual conflict and distress. In addition, individuals high in Psychotocism reported a high frequency of impersonal and aggressive sexual behavior.

Similarly, Barnes, Malamuth, and Check (1984) discovered that college males scoring high on Psychotocism were more sexually aroused to auditory presentations of rape. In contrast to Psychotocism and Neuroticism, Eysenck (1971) found that Extraversion was associated with sexual satisfaction as observed in a high degree of consensual sexual activity. Eysenck also reported a predictable gender difference in attitudes towards sex. Not surprisingly, men endorsed a greater number of partners and more varied sexual behavior than women did (Eysenck, 1971). However, no significant gender differences were observed for personality types (e.g., both men and women scoring high in Psychotocism responded similarly on the sexual questionnaire).

Schenck and Pfreng (1986) examined sexual behavior in relation to Eysenck's personality theory with 498 unmarried young men. Unlike Eysenck (1971), they found no correlation between Neuroticism and sexual behavior. Similar to Eysenck (1971),

Schenck and Pfreng (1986) found that high Extraversion was associated with increased number of sexual partners, greater frequency of sexual behavior, and earlier age of first intercourse. Schenck and Pfreng (1986) also found that Psychotocism was associated with earlier first intercourse as well as greater frequency and number of sexual partners.

The results of studies using Eysenck's three-factor model of personality to examine sexual behavior make intuitive sense. Individuals high in Extraversion would be expected to participate in social gatherings more often, be more comfortable around people, and therefore have more opportunities to engage in sexual behaviors than individuals who are low in Extraversion and prefer to avoid these types of social situations. Additionally, individuals high in Psychotocism would be expected to have more deviant attitudes towards sex, just as with other aspects of their lives. Such individuals might therefore be more likely aroused by depictions of deviant sexual behavior, including rape.

Personality Traits of Sex Offenders

Many studies have attempted to understand sex offenders by examining personality traits. These studies have attempted to minimize the heterogeneity of this group by organizing sex offenders into offense categories (Baxter et al., 1984; Fisher, 1969; Fisher & Howell, 1970; Fisher & Rivlin, 1971; Scott, 1982; Wilson & Cox, 1983). Interestingly, several studies (Schuyler, 1994; Valliant & Blasutti, 1992) found no significant personality differences according to offense committed. However, most studies have found that sex offenders are anxious, hedonistic, have poor social skills, and low self-esteem. The results of such studies have been useful in determining common

personality characteristics, but not in distinguishing sex offenders from other forensic or non-forensic populations.

Baxter et al. (1984) examined 144 incarcerated sexual offenders who were assessed for either treatment or parole purposes. Utilizing a variety of information sources, including criminal and personal histories, penile plethysmographs, and several self-report inventories, Baxter et al. (1984) examined personality differences between rapists and child molesters. They also attempted to differentiate child molesters according to age and gender of victim. Baxter et al. (1984) reported that all sex offender groups were anxious (especially in social situations), had low self-esteem, expressed negative attitudes concerning women, and were unassertive. The only significant differences between the groups were in levels of arousal to erotic stimuli. They found that homosexual pedophiles responded more to males than females, and pedophiles in general responded more to children than to adults (Baxter et al., 1994).

Valliant and Blasutti (1992) examined 64 jailed sex offenders to explore personality differences between child molesters and rapists. The only significant result between the groups related to trait anxiety levels. They found that extrafamilial child molesters were significantly more anxious than incestuous molesters. They reported decreases in trait anxiety with treatment for extrafamilial but not incestuous offenders (Valliant & Blasutti, 1992).

Many studies have found significant differences in personality traits between rapists and child molesters beyond anxiety. Utilizing multiscale inventories, these studies have examined personality traits in sex offenders. For example, Wilson and Cox (1983)

utilized the Eysenck Personality Questionnaire (EPQ) to study pedophiles in a community-based self-help club in England. Their most significant finding was that pedophiles are introverted and lack social skills. Many other studies have examined personality traits of sex offenders. These are organized below by the Edwards Personal Preference Schedule (EPPS) and the NEO-PI or NEO-PI-R, measures of the FFM.

EPPS Studies. Fisher and Rivlin (1971) examined 100 men convicted of rape using the EPPS and compared the results to other offender and non-offender adult males. When compared to the other groups, they found that rapists demonstrated a greater tendency to be self-critical, to analyze their own motives as well as those of others, and greater persistence. Surprisingly, this study also found rapists to be less aggressive, less independent, less motivated, and have lower self-assurance (Fisher & Rivlin, 1971). Fisher (1969) and Fisher and Howell (1970) examined convicted child molesters using the EPPS and found that child molesters are lower on need for achievement, change, and autonomy and high on abasement (i.e., the tendency to feel guilty and inferior to others) when compared on the EPPS to both rapists and the normative population.

Scott (1982) used the EPPS in conjunction with a semi-structured interview and the Thematic Apperception Test (TAT) to examine personality characteristics common to incarcerated rapists. Rapists were elevated on abasement on both the EPPS and the interview, indicating a need to feel guilty and be punished for wrongdoing. Levin and Stava (1987, p. 73) concluded that Scott's findings indicate "that the rapist is a guilt-ridden, socially insecure, and isolated person who is impulsively aggressive as a way of compensating for inadequacies."

FFM Studies. Fagan et al. (1991) utilized the NEO-PI to examine personality characteristics of 51 men diagnosed with paraphilias at the Sexual Behaviors Consultation Unit of John Hopkins Hospital. Fagan et al. (1991) reported that paraphilic men were high on all facets of Neuroticism and low on the Agreeableness and Conscientiousness factors. These men also scored high on the Excitement-Seeking facet of Extraversion and on the Openness to Fantasy facet of the Openness to New Experience factor. In addition, this sample was low on the Warmth facet of the Extraversion factor.

A parallel study (Wise, Fagan, Schmidt, Ponticas, & Costa, 1991) conducted at John Hopkins Hospital's Behavioral Consultation Unit compared 24 men diagnosed with transvestic fetishism and 26 men diagnosed with other paraphilias. This study found that both populations were high in Neuroticism and low in Agreeableness and Conscientiousness. These two studies concluded that individuals with sexual disorders, such as paraphilias, experience a wide range of negative affect and are low in interpersonal affection and intimacy. These men are generally seen as antagonistic and preferring pleasure to being goal oriented.

Lehne (1994) utilized the NEO-PI to measure personality traits of sex offenders in treatment at the Sexual Disorders Clinic of John Hopkins Hospital. Lehne (1994) examined the correlation between the NEO-PI and the MCMI. Lehne (1994) found that sex offenders were high on all facets of Neuroticism, but scored in the average range on Extraversion and Openness to New Experience. Similar to Fagan et al. (1991) and Wise et al. (1991), the sex offenders scored high on the Excitement-Seeking facet of

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Extraversion. These findings suggest that sex offenders are anxious, depressed, hostile individuals who crave constant stimulation.

Schuyler (1994) utilized the NEO-PI-R to explore differences in personality characteristics between an incarcerated sample of rapists and child molesters, as well as the normative sample for the measure. Schuyler (1994) found that both rapists and child molesters were higher on Neuroticism and lower on Conscientiousness than the normative sample. Schuyler (1994) also found that incarcerated rapists were significantly lower on Agreeableness than the normative sample. Surprisingly, however, both child molesters and rapists scored higher on the Tendermindedness facet of Agreeableness than norms. Interestingly, this study did not find any significant differences between rapists and child molesters on the five factor scores measured by the NEO-PI-R (Schuyler, 1994). These results suggest that sex offenders experience a wide range of negative emotions and are less driven by moral codes of conduct or feelings of responsibility. In addition, this study indicates that personality traits alone may not be sufficient to discriminate between types of sex offenders.

In addition to measuring personality traits utilizing the NEO-PI-R, Schuyler (1994) also assessed psychopathology traits with the Inventory of Clinical Characteristics (ICC; Schuyler, 1994). The ICC is a 436-item inventory that measures "a relatively large number of narrow attributes" (Schuyler, 1994, p. 51). A cluster analysis on the scales of these two measures indicated four subgroups of sex offenders. Cluster 1 ($\underline{n}$ = 10) could be defined as "Socially Withdrawn," as members of this cluster exhibited personality characteristics such as shyness, unassertiveness, depression, and impulsivity. This cluster

consisted mainly of child molesters. Sex offenders, mostly rapists, classified in cluster 3 (n = 8) exhibited personality traits of anger, aggressiveness, and distrust as well as impulsivity, and could therefore be labeled "Antisocial." Schuyler (1994) states Cluster 2 (n = 21) contained sex offenders who exhibited "personality attributes within relatively normal ranges" and Cluster 4 (n = 6) included "offenders who reported attributes consistent with good mental health." (p. 73). Clusters 2 and 4 contained both child molesters and rapists.

Despite the widely varied types of measures, the results of these studies are consistent. These studies have shown that men with sexual deviance, whether paraphiliacs or sex offenders, share some general personality traits, especially relating to interpersonal skills and interactions. As these studies (Baxter et al., 1984; Fagan et al., 1991; Fisher, 1969; Fisher & Howell, 1970; Lehne, 1994; Schuyler, 1994; Scott, 1982; Valliant & Blasutti, 1992; Wilson & Cox; 1983; Wise et al., 1991) demonstrated, men with sexual deviance, especially sex offenders, are hedonistic, socially insecure, impulsively aggressive, guilt-ridden, depressed, hostile, and anxious. It is likely that these negative feelings and ambiguity in social settings contribute to their social isolation and make it difficult for them to experience positive, satisfactory social relationships.

The findings of these studies are helpful in understanding this population of men with sexual deviance, especially sex offenders. However, sex offenders obviously do not have the monopoly on chronic negative affects and poor social skills. Although these discoveries contribute to understanding this population, they are not beneficial in explaining why sex offenders commit their offenses. In an attempt to understand this

motivation and classify sex offenders, studies have examined psychopathology in this population.

<center>Psychopathological Characteristics of Sex Offenders</center>

<u>Sex Offenders against Adults</u>

The psychopathological and personality characteristics of sex offenders have been widely studied, but have yielded few common findings. Many studies have combined the MMPI with specialized psychometric measures, such as the Multiphasic Sex Inventory (MSI; Nichols & Molinder, 1984) and the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983), in an attempt to establish homogenous classifications of sex offenders. While the results of these studies have varied, some common types of sex offenders, based on MMPI psychopathology characteristics are observed. Four categories of adult sex offenders, based on their MMPI elevations, are presented in Table 2: disturbed, deviant, antisocial, and sadistic.

<u>Disturbed.</u> Disturbed sex offenders are characterized by elevations on Scale 8 of the MMPI and exhibit social difficulties and distrust of others. Anderson et al. (1979) found this group evidenced long-term social maladjustment and was more likely degrade their victim. In clinical settings, this group was likely to show anxiety, suspicion, and depression, and other signs of emotional disturbance. In Hall et al. (1991), disturbed sex offenders were described as having strong, unfulfilled needs for affection. Offenders in this category were more likely to have alcohol problems and tended to act out when intoxicated. Members of this empirically-derived cluster were likely to exhibit distrust and be fearful of emotional involvement with others. Disturbed sex offenders in

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Table 2

MMPI Subgroups of Sex Offenders

		MMPI Clusters			
Studies	N	Disturbed	Deviant	Antisocial	Sadistic
Anderson et al. (1979)[a]	88	F,8 n = 40	2,4 n = 16	4,9 n = 32	
Armentrout & Hauer (1978)[a]	51		4,8 n = 13[b]	4 n = 17[b]	
Hall et al. (1991)[a]	261	(4-8), (4-7), (2-8), (7-8)[c] n = 61	(4-5), (2-4), (4-9), (4-6)[c] n = 66		
Kalichman et al. (1989)[d]	120	F,4,8,9 n = 21	F,2,4,6,8 n = 12	WNL 4 n = 39 n = 39	F,2,4,6,7,8,9 n = 9
Kalichman (1990)[d]	111	F,4,6,8,9 N = 9	F,2,4,6,8 n = 14	WNL 4 n = 21 n = 61	F,2,4,6,7,8,9 n = 6
Kalichman (1991)[d]	144			WNL n = 48[b]	
Panton (1978)[d]	78		(4-8),9,6 n = 30[b]		
Rader (1977)[e]	129[f]		4,8 n = 47	WNL n = 36	

Note. n = number of offenders for each cluster
[a] inpatient sex offenders
[b] sex offenders were at least partially categorized by age of victim, this number represents sex offenders against adults
[c] two-point codes
[d] incarcerated sex offenders
[e] incarcerated offenders
[f] the study examined rapists, exposers, and nonsexual assaulters; only rapists and exposers are presented here

Kalichman's studies (Kalichman, 1990; Kalichman et al., 1989) endorsed items related to distrust of others and difficulties in forming close relationships on the MSI. Kalichman (1990, p. 446) reported this group "admitted to more frequent thoughts about rape and displayed a wide range of sexual deviances in their MSI scores" than members of Kalichman's other clusters.

Deviant. Deviant sex offenders exhibit high levels of sexual deviance, aggressiveness, and dangerousness. Rader's (1977) deviant sex offenders had MMPI-2 profiles that indicated they were irritable, hostile, angry, and depressed. In addition, Rader stated that this group utilized denial and repression as their primary psychological defenses. Furthermore, they were more likely to project blame, act out in self-defeating methods, and be fearful of social involvement. Armentrout and Hauer (1978) described their deviant group of sex offenders as angry, resentful, and socially isolated. In mediating their impulses, they appear impulsive and intolerant of frustration.

During clinical interviews, Anderson et al. (1979) concluded that the deviant group tended to make good impressions and appeared to be alert and well oriented to the interviewer. Despite this impression, two-thirds of the group had a history of chronic alcohol abuse. Moreover, this group also showed the fewest Axis I symptoms in clinical settings. Panton (1978) concluded that rapists in the deviant cluster demonstrated aggravated hostility, resentment, impulsive and poorly controlled hostility, and self-centeredness, showing little or no regard for the consequences of their actions. Hall et al.'s (1991) deviant cluster was described as being characterized by sexual maladjustment, perverse sexual behavior, and acting out. This group was also more likely

to be married and have overly dependent relationships with their wives. Members of this deviant group typically had a low frustration tolerance and reacted aggressively when frustrated. Hall et al. (1991) reported that this group had poor prognosis for therapeutic change and was likely to terminate treatment prematurely. Kalichman et al. (1989) and Kalichman (1990) reported deviant sex offenders are characterized by instability and hostility, which increases the likelihood that they are dangerous.

Antisocial. Antisocial sex offenders displayed MMPI profiles similar to other criminal populations and endorsed items relating to impulsivity (Armentrout & Hauer, 1978; Kalichman et al, 1989; Kalichman, 1990; Rader, 1977). Armentrout and Hauer (1978) stated that this group tended to be hedonistic, impulsive, and socially non-conforming. From a different perspective, Rader (1977) described this group of sex offenders as mildly non-conforming with a history of minor infractions of the law. Anderson et al. (1979) reported that antisocial sex offenders showed less severe maladjustment in clinical settings.

Kalichman (1990, 1991) and Kalichman et al. (1989) found two antisocial subgroups of rapists with Spike 4 and within-normal limits (WNL) profiles. These groups were more likely to have committed rape in the course of another crime and demonstrated the lowest levels of overall psychopathology. The first antisocial subgroup, which presented a Spike 4 profile (Kalichman, 1990; Kalichman et al., 1989), tended to display less sexual deviance (as evidenced by low scores on the MSI Paraphilias Scale) than offenders in other clusters. The second antisocial subgroup presented WNL profiles (Kalichman 1990, 1991; Kalichman et al., 1989). This pattern is observed frequently in

general criminal populations. Overall, Kalichman (1991) reported that offenders in the antisocial cluster were more emotionally restrained.

Sadistic. Sadistic sex offenders were reported only in Kalichman's studies (Kalichman et al., 1989; Kalichman, 1990). This category showed the most elevated MMPI profiles. It is characterized by various deviant sexual thoughts and behaviors on the MSI. Kalichman (1990) reported that "this profile pattern and elevation is characteristic of persons diagnosed with sexual sadism" (p. 446). However, the extremely elevated F scales on these modal profiles raise question as to their validity.

Child Molesters

Many studies have examined child molesters in an attempt to discover homogeneous subgroups based upon measures of psychopathology, primarily the MMPI. Eight groups of child molesters based on their MMPI profiles are presented in Table 3: unimpaired, impulsive, disturbed, resentful, withdrawn, hostile, impaired, and deviant.

Unimpaired. Many studies of child molesters have discovered subgroups that neither produced significant elevations on the MMPI nor endorsed any significant psychological disturbance on other measures. McCreary (1975) found that child molesters with no previous sexual offenses against children were likely to exhibit unelevated MMPI profiles. Not surprisingly, the unimpaired groups in Kalichman's studies exhibited the lowest levels of psychopathology and fewer signs of sexual disturbance as well as the highest levels of sexual adjustment on the MSI (Kalichman et al., 1992; Kalichman & Henderson, 1991).

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Table 3

MMPI Subgroups of Child Molesters

						MMPI Clusters			
Studies	N	Unimpaired	Impulsive	Disturbed	Resentful	Withdrawn	Hostile	Impaired	Deviant
Armentrout & Hauer (1978)[a]	51						4,8 n = 21[b]		
Kalichman & Henderson (1991)[d]	113	WNL n = 62		2,4 n = 20		F,2,4,7,8 n = 7	3,4,5 n = 11	F,1,2,3,4,5,6,7,8 n = 4	2,3,4,6,7,8 n = 9
Kalichman et al. (1992)[e]	110	WNL n = 53	4,8,9 n = 11			2,4,5,6,7,8,0 n = 17		4,5 n = 29	
Kalichman (1991)[d]	144			4,8 n = 54[b]				4 n = 42[b]	
McCreary (1975)[c]	33	WNL n = 18	4,8 n = 15						
Panton (1978)[d]	78					4,7,2,3 n = 28[b]	(4-8),9,6 n = 20[b]		
Shealy et al. (1991)[d]	90		WNL n = 45		6 n = 17		4,6,8 n = 16	F,6,7,8 n = 12	

Note. WNL = within normal limits; n = specific cluster
[a] inpatient sex offenders
[b] sex offenders were categorized by age of victim, numbers represent sex offenders with child and adolescent victims
[c] child molesters assessed during post-conviction, pre-sentencing phase
[d] incarcerated sex offenders
[e] outpatient child molesters

Impulsive. Several studies have found that some child molesters have characteristics similar to other criminal populations, including antisocial attitudes and impetuousness. Shealy et al. (1991) found that impulsive child molesters presented MMPI profiles that are very similar to nonsexual offending criminals. Shealy et al. asserted that WNL profiles are commonly found in persons with antisocial personalities and impulsivity. McCreary (1975) found impulsive child molesters with elevations on Scales 4 and 8 exhibited unconventional behavior and conflicts with authority; they also appeared confused and alienated. This group was also more likely to have multiple sexual offenses against children. Kalichman et al.'s (1992) impulsive group exhibited similar elevations to McCreary (4, 8, 9) and was marked by high aggressiveness as well as impulsivity. Kalichman et al. (1992) reported this group also presented the highest level of sexual aggression on the MSI and were least likely to have victims exclusively under the age of thirteen.

Resentful. Shealy et al.'s (1991) resentful child molesters also presented a profile that is described as typical of people who harbor resentment towards others. This profile is indicative of people who are suspicious, guarded, and overly sensitive to the opinions of others. However, because this small group ($\underline{n}$ = 17) is only reported in one study, more research is needed to determine if this is a valid classification of child molesters.

Hostile. Several studies (i.e., Armentrout & Hauer, 1978; Kalichman & Henderson, 1991; Panton, 1978; Shealy et al., 1991) delineated hostile subgroups of child molesters who exhibited heightened levels of anger, aggression, and hostility. Similar profiles have been reported for accused murderers as well as for other violent offenders

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(Shealy et al., 1991). The hostile group was also more likely to victimize children they did not know (Shealy et al, 1991). Armentrout and Hauer (1978) stated that this group's profile indicated that they are impulsive, exhibit poor social judgment, tend to avoid close involvement with others, and have frequent conflicts with authority. Panton (1978) found no significant MMPI profile differences between hostile child rapists and rapists of adults. Kalichman and Henderson (1991) described this group as displaying less sexually disturbed thoughts and moderate levels of atypical psychosexuality on the MSI.

Impaired. Impaired subgroups of child molesters have the highest levels of psychopathology. Shealy et al.'s (1991) impaired subgroup showed a pattern that indicates an exaggeration of pathology. This group demonstrated the highest levels of anger and anxiety, but manifested the least amount of anger control. This group was most likely to have been seen for psychological services and had more suicide attempts. Kalichman's (1991) impaired group offended mainly against adolescents. Kalichman (1991) suggested that this group presented a mixed clinical picture of moderate psychological distress and sociopathy. Kalichman has found three subgroups of child molesters that can be considered impaired (Kalichman, 1991; Kalichman & Henderson, 1991; Kalichman et al., 1992). Unexpectedly, one subgroup (Kalichman & Henderson, 1991) was defined as having the most positive attitude towards treatment and did not tend to justify their sexually deviant behaviors. The Impaired subgroup in Kalichman et al. (1992) presented a profile reported to be associated with homosexual behavior and sexual delinquency in men. As expected, Kalichman reported that this group was least likely to have offended exclusively against girls.

Disturbed. The Disturbed group in Kalichman and Henderson (1991) had modal MMPI profiles with slight elevations on Scales 2 and 4. This group is only described as having high levels of sexual disturbance on the MSI. In contrast, Kalichman's (1991) disturbed cluster demonstrated elevations on Scales 4 and 8. This group primarily offended against children age 12 or younger. Kalichman (1991) and Kalichman and Henderson (1991) concluded that this group's emotional development was similar to their victims, meaning this group was immature, distressed, and had low levels of self-esteem. Despite the different MMPI profiles, Kalichman (1991) and Kalichman and Henderson's (1991) disturbed groups had similar results on the other measures, such as the MSI.

Withdrawn. The Withdrawn subgroups in Kalichman et al. (1992), Kalichman and Henderson (1991), and Panton (1978) presented a profile representative of individuals who are shy, introverted, and have a negative self-concept. Panton (1978) described this group as demonstrating an aversion to aggression as well as having feelings of insecurity and inadequacy. On the MSI, this subgroup scored highest on the Cognitive Distortions scale and presented several indications of sexually deviant behavior (Kalichman & Henderson, 1991; Kalichman et al., 1992).

Deviant. This small subgroup ($\underline{n}$ = 9) found by Kalichman and Henderson (1991) presented with elevations on six of the eight clinical scales of the MMPI. This group also showed the highest scores on the MSI Sexual Obsessions Scales and endorsed more items than the other groups justifying sexually deviant behavior on the MSI. However, since this group is very small and only reported in one study, more research is needed to determine the reliability of this classification.

Problems with Measures of Psychopathology

The fact that many of the subgroups of sex offenders described above present with vastly different MMPI profiles while being attributed similar personality characteristics suggests some methodological limitations in this approach. These limitations are related to both the methods and designs of many of these studies. Design limitations include reliance on small subgroups and an assumption that fundamental personality differences are stable between rapists and child molesters. The main methodological limitation of these studies is inferring personality characteristics exclusively from a measure of psychopathology. These limitations are discussed below, along with descriptions of how they are addressed in the current study.

A review of Tables 2 and 3 easily demonstrates the most glaring design limitation in many studies, namely reliance on small subgroups. These small groups potentially limit the stability of findings and their generalizability to other samples. As Tables 2 and 3 demonstrate, the smallest groups are described as the most pathological and dangerous; they likely represent the extreme end of a distribution of the sex offender population. Therefore, it is not surprising that these subgroups not only had the smallest representation, but also were only discovered in incarcerated sex offender populations. Further research with incarcerated sex offenders in maximum-security prisons would increase the likelihood of encountering higher numbers of this more dangerous population and thereby improve generalizability.

Another design limitation in these studies is the apparent assumption by most researchers that there is a fundamental difference between sex offenders against adults

and sex offenders against children. A review of Tables 2 and 3 demonstrates that this is not necessarily true. In fact, Panton (1978) found no significant differences in the MMPI profiles of rapists against children from rapists against adults. The majority of the subgroups between child molesters and sex offenders against adults are similar.

In addition, personality research on sex offenders has mixed results regarding personality differences between rapists and child molesters. Baxter et al. (1984), Schuyler (1994), and Valliant and Blasutti (1992) found no significant personality differences between these two subgroups of sex offenders. Given the findings of both personality and psychopathology oriented studies, age of the victim may not be a useful characteristic for attempting to classify this heterogeneous population.

Studies exclusively using measures of psychopathology in attempting to categorize sex offenders could easily be expanded to other measures. Although the MMPI has been widely utilized in research to examine personality characteristics, it is primarily a measure of psychopathology (Levin & Stava, 1987). The widely varying results of these studies suggest that perhaps additional information is needed. It is possible that personality characteristics interact with psychological disturbance or distress in many sex offenders.

Only one study (Schuyler, 1994) has attempted to classify sex offenders according to both personality and psychopathology characteristics. However, the clusters resulting from this study contain some of the same flaws as MMPI studies, namely small sample sizes. The two discriminating clusters, the Socially Withdrawn and the Antisocial

clusters, contained ten and six offenders respectively. Further research is needed to determine if Schuyler's (1994) clusters are reliable.

The mixed results of studies using the MMPI indicate that another approach is necessary for understanding the personality traits of sex offenders (Kalichman, 1990; Levin & Stava, 1987). Valliant and Blasutti (1992) stated that "investigation into the area of personality and sexual assault would indicate that clinical characteristics indicated by profiles [on the MMPI] are not the only factors responsible for sexual crimes" (p. 1068). In order to conceptualize sexual offenses more accurately, motivations, emotions, personal beliefs, and social cognitions must also be investigated (Valliant & Blasutti, 1992). Since the FFM is a comprehensive measure of personality, it may aid in the understanding of the personality characteristics of sex offenders. Perhaps by examining both personality and psychopathology characteristics, a more complete understanding of sex offenders may be discovered.

Summary and Research Questions

Two different approaches of examining personality characteristics of sex offenders have been attempted. The first approach focused on measures of normal adult personality, such as the EPPS or EPQ, while the second approach has utilized measures of psychopathology, such as the MMPI and the MMPI-2. Each approach has advanced the general understanding of this heterogeneous population.

The results of the normal personality approach has been generally helpful in understanding sex offenders as socially insecure, anxious individuals with few interpersonal skills (Hall et al, 1991; Kalichman, 1990; Kalichman, 1991; Kalichman et

al., 1992; Kalichman & Henderson, 1991; Shealy et al., 1991). However, these characteristics are obviously not limited to the sex offender population, or even to individuals with criminal or psychiatric histories. These characteristics are also readily found in members of the general population.

The approach utilizing psychopathology measures is beneficial for the identification of groups of sex offenders based on the levels and types of psychopathology endorsed. However, studies using this approach often make inferential leaps about personality characteristics of this population from these measures. Levin and Stava (1987) advise against such inferences. In addition, this approach has been generally unsuccessful in finding characteristics unique to the sex offender population.

These two approaches have contributed to global understanding of sex offenders' personality characteristics. Each approach provides information concerning sex offenders. However, neither approach has been able to reliably achieve the goal of specific understanding of this heterogeneous population. By combining these two types of approaches and examining sex offenders using both measures of personality and of psychopathology, distinctive characteristics of sex offenders may be discerned. However, given the heterogeneity of this population, it is extremely unlikely that a single pattern will be discovered that is unique to this population. Differences have been found among sex offenders by examining the age and gender of their victims, the offender's relationship to his victim and the number of offenses that have been committed. In the current study, offenders' relationships to victims are classified into three categories: intrafamilial (offenders only molested children related to them), extrafamilial (offenders

only molested children unrelated to them), and mixed (offenders molested both children related and unrelated to them). However, a review of Tables 2 and 3 easily demonstrates that some of these offense characteristics may not be discriminative and may not facilitate the accurate classification of sex offenders for treatment purposes. By also examining these variables in relation to personality characteristics and psychopathology traits endorsed, it may be possible to examine whether personality and psychopathology traits differ significantly in relation to offense characteristics. In addition, it may be possible to discover underlying factors based on these personality and psychopathological characteristics.

This study is designed to examine outpatient sex offenders on personality and psychopathological characteristics along several aspects, namely number of admitted victims, age and gender of victims, and compliance with treatment. In order to determine the relation between offense characteristics and personality and psychopathology traits and factors, the following research questions and hypotheses are examined.

1. Broad dimensions of personality and psychopathology will form the underlying structure of sex offenders' test patterns.

2. Significant differences in personality and psychopathology characteristics will be found between intrafamilial, extrafamilial, and mixed child molesters.

   a. Based on past research by Kalichman (1991), child molesters will be significantly higher than sex offenders against adults on Neuroticism and on MMPI-2 scales 4 and 8.

b. Incestuous child molesters will be significantly higher on Neuroticism and lower on Extraversion than extrafamilial child molesters (Valliant & Blasutti, 1992).

3. Personality and psychopathology factors will be used to classify treatment progress.

a. Sex offenders scores on Neuroticism, Conscientiousness, and MMPI-2 Scale 4 will predict treatment compliance. (Hall et al., 1991).

4. Significant differences will exist between child molesters with male victims and those with female victims in personality styles and psychopathology characteristics.

a. Child molesters with male victims will score higher on MMPI-2 Scale 5 and lower on Conscientiousness than child molesters with female victims or victims of both genders (see Kalichman et al., 1992).

CHAPTER 2

Method

<u>Ethical Approval</u>

Since human participants were to be involved, this study was submitted to the

University of North Texas Institutional Review Board (IRB) for ethical approval. This

committee reviewed the proposed study, including its written informed consent form.

Upon completion of this review, the IRB approved the study on May 1, 1998.

<u>Design</u>

This study utilized a between-groups design to examine differences in sex

offenders' personality and psychopathology traits on several variables. The groups were

not able to be randomly assigned, since inclusion in a group for analysis depended

exclusively on the offender's past offenses. However, the researchers had no prior

knowledge of a participant's group membership at the time the tests were administered.

<u>Treatment Facility</u>

Data collection occurred at the Professional Associates Counseling and

Consultation Center (PACC), a Texas State Licensed sex offender outpatient treatment

facility in Tarrant County. PACC currently conducts group therapy with sex offenders on

probation or parole. Individual therapy is offered when staff members determine an

individual is not appropriate for groups. Ten Relapse Prevention groups, each with ten to

fifteen members, are conducted weekly. Other treatment groups are offered, including

Behavioral Management groups and Couples groups. While the groups are geared towards treating male offenders, two females (not included in this study) were attending Relapse Prevention groups at the time of data collection. Although not included in this study, adolescent sex offenders are also provided services in separate groups.

The goal of the Relapse Prevention group is to identify the forms of denial, as well as the thought and behavioral patterns that contribute to committing sexual offenses. Once identified, the group confronts these maladaptive patterns in an attempt to aid the individual in modifying them. The objective of the groups is to identify and stop the offense cycle. Behavioral Management groups utilize aversive imagery in an attempt to decrease deviant sexual arousal. The Couples group is the last step in completing the program. During these groups, the significant others of the offenders are included to promote healing in the relationship as well as to teach the significant others to be effective supervisors of the offenders (S. Stipe, personal communication, October 19, 1999).

The treatment program is modeled after guidelines established by the Association for the Treatment of Sexual Abusers (ATSA) and the Interagency Council for Sex Offender Treatment (S. Stipe, personal communication, October 19, 1999). This format contains six levels or phases that the offender must complete in order to meet the treatment program requirements. Each phase is designed to be completed within six months in this three-year treatment program. However, only a small percentage of participants complete the six levels within this expected time frame. Each level consists of reading and written assignments that must be satisfactorily completed. A twice-annual

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progress review is also required. This progress review is an individual meeting with the

treatment provider to discuss number of completed assignments, missed sessions, review

results of assessments, and to assess any needs for medical or psychiatric referrals. A

treatment outline, which includes the periodic assessments, is presented in Appendix C.

Attendance at group meetings is required by the program and by conditions of the

offenders' parole or probation. Should a group member become at risk of being

terminated due to his/her absences, the offender and parole officer are notified. Requests

to re-enter the program are considered on an individual basis. If a group member re-

offends at any stage in the treatment plan, he/she is immediately terminated and not

allowed to re-enter the program.

Participants

Participants in the study were 99 adult male child molesters, rapists, and exposers

currently undergoing treatment at PACC. Group members, who participated in this study,

did so during their normal weekly group meetings. Participants were recruited from the

Relapse Prevention groups, the Behavioral Management, and Couples' groups. Members

who did not wish to participate attended their usual group meetings. In order to be

included in this study, participants must have had at least a fourth grade reading level.

Measures

Shipley Institute of Living Scale (Verbal Subtest). Participants were administered

the Verbal Subtest of the Shipley Institute of Living Scale (SIL; Zachary, 1986). The time

limit for the SIL Verbal Subtest is ten minutes. The verbal subtest contains a list of forty

words. Participants must select the one of four alternatives that is closest in meaning to

the target word. The SIL correlates strongly with the WAIS-R ($\underline{r}$ = .85) and the Verbal

Subtest has a median test-retest reliability of .60 (Zachary, 1986). The SIL Verbal Subtest

correlates moderately with the WRAT-R ($\underline{r}$ = .73; Bowers & Pantle, 1998). Because the

SIL's Verbal Subtest requires a minimum of grade 6 to complete(Frisch & Jessop, 1989),

it was concluded that most participants with a raw score $\geq$ 25 would have at least a grade

6 reading level. Individuals who could not meet the minimum requirement of 25 on the

SIL were administered the NEO-PI-R (grade 4 reading level), and the audiotape version

of the MMPI-2 (grade 4 reading level).

NEO-PI-R. Participants were administered the NEO-PI-R to measure FFM

personality traits. The NEO-PI-R consists of 240 items answered on a five-point scale,

ranging from "Strongly Agree" to "Strongly Disagree." The measure requires a minimum

of a fourth grade reading level. According to Costa and McCrae (1992a), the self-report

version of the NEO-PI-R has internal consistency ranges from .86 to .92 for the five

factors. Test-retest reliability at a three-month interval ranged from .75 to .83 ($\underline{M}$ = .79).

Convergent validity between self-report and peer ratings tend to be modest, with

correlations ranging from .30 to .48 ($\underline{Mdn}$ $\underline{r}$ = .38). Peidmont (1994) found higher

convergent validity between self-report and peer ratings, ranging from .36 to .70 ($\underline{M}$ $\underline{r}$ =

.52). In assessing broad personality dimensions, correlations of this magnitude are

typically found.

MMPI-2. Participants were administered the MMPI-2 to examine patterns of

psychopathology. The MMPI-2 consists of 567 true-false items. According to Butcher,

Dahlstrom, Graham, Tellegen, and Kaemmer (1989), it requires an eighth grade reading

level to complete all the items. More recently, Schinka and Borum (1993) found that a reading level of grade 4 to grade 5 was sufficient for the valid completion of the MMPI-2. Test-retest reliability at a seven-day interval ranged from .67 to .92 ($\underline{M}$ = .81) for males for the validity and clinical scales (Butcher et al., 1989).

Procedure

Informed Consent. Informed consent was obtained from each participant prior to his involvement in the study. During the first group session of the study, written consent forms were given to each group member (see Appendix A). These forms briefly explain the participants' roles and details involved in the study. The consent form was read aloud and questions concerning the project answered.

Group members who agreed to participate in the study signed the consent form. A master list was kept at PACC that matched names of participants to assigned research numbers. All data are stored anonymously without personal identifiers.

Test Administration. Participants were administered the SIL, NEO-PI-R and the MMPI-2 during two consecutive group meetings. The SIL and the NEO-PI-R were administered the first week, and the MMPI-2 the second. To facilitate timing and ensure calculation of minimum reading level requirements, the SIL was administered first, followed by the NEO-PI-R. The MMPI-2 was administered free of charge as a benefit to participating in the study. In order to prevent participants from taking advantage of the free administration of this measure and not completing the other measures, the MMPI-2 was administered last. A researcher was present during each group administration to

answer questions related to the comprehension of individual items. Such questions

included word definitions in a question and occasionally the interpretation of a question.

PACC uses the MMPI-2 as an assessment instrument in their sex offender

treatment program. Participants in this study were allowed to use this free administration

of the MMPI-2 as one of their required measures rather than paying for an administration

at a later date. Therefore, coded MMPI-2 answer sheets were scored and interpreted using

a computer program. These reports were delivered to PACC, where the coded reports

were matched with the master list mentioned previously.

A SIL Verbal Subtest raw score ≤ 25 raised concerns whether participants'

reading level is at least grade 6 and whether it was lower than the requirements for the

MMPI-2. As described above, participants with a SIL Verbal Subtest raw score ≤ 25 were

administered the audiocassette version of the MMPI-2. In addition, the audiocassette

administration was available to any participants requesting to take the MMPI-2 in this

manner. Given that the audiocassette lowered reading level requirements to a grade 4

level, this type of administration does not appear to have effected the results of this study.

Exclusion of Incomplete or Invalid Test Protocols. MMPI-2 response sheets that

were incomplete (≥ 30 items unanswered), inconsistent (VRIN raw score ≥ 13), or invalid

(as detected by the MMPI-2 Wiggin's Social Desirability scale; Wsd), were excluded

from the study. Butcher, et al. (1989) suggests that MMPI-2 profiles are invalid with ≥ 30

items unanswered or a VRIN raw score ≥ 13. Therefore, these cut-scores were also

utilized as criteria to exclude participants. No participants were excluded solely because

of the VRIN cut-score, however.

A meta-analysis by Baer, Wetter, & Berry (1992) revealed the Wsd scale has a large effect size ($\underline{d}$ = 1.62) in detecting students who were asked to be defensive. Intuitively, it is expected that sex offenders would be defensive and attempt to portray themselves in the best possible manner. Greene (1997) reported that a raw score of 20 on the Wsd was found in only five percent of patients with mental disorders, indicating its utility at detecting individuals underreporting psychopathology. Therefore, a Wsd raw score $\geq$ 20 was used to determine the validity of a profile for use in this study. It was expected that this score would only detect those participants who were being defensive to such an extent as to invalidate their MMPI-2s. However, none of the participants obtained a raw score $\geq$ 20, so no participants were excluded based on an invalid MMPI-2.

The NEO-PI-R has three validity questions, which are face-valid questions. These questions did not detect any invalid profiles. Therefore, no participants were excluded due to invalid NEO-PI-R protocols based on these validity questions.

File Information. Participants' files were examined for information regarding background information and sexual history. The sexual history provided information about (a) the age, gender, number, and relation to their victims, and (b) the nature of their offenses. This sexual history is the questionnaire that was completed prior to the first polygraph required by the treatment program. Information relating to offenders' compliance with the treatment program (attendance, percentage completed per quarter, number of reprimands per year) was also gathered from the files. This information was used to operationally define treatment progress.

    <u>Treatment Progress: Successful versus Unsuccessful.</u> Treatment progress is operationally defined as a ratio of percent of the treatment program completed (as indicated in the treatment plan in Appendix C) to the total number of months in the program. This ratio controls for the length of time in treatment and provides more accurate estimates than simply considering percent of the program completed. Once this ratio was calculated for each participant, the sample was divided into quartiles.

1. Treatment success: Participants in the upper quartile (treatment progress ratio $\geq$ 1.50) were considered successful in treatment. These participants completed at least 17% of the treatment program per year.

2. Treatment Unsuccessful: Participants in the lower quartile (treatment progress ratio $\leq$ .62) were considered unsuccessful in treatment. These participants completed less than 7.5% of the treatment program per year.

CHAPTER 3

Results

Sample Attrition

The sample of 99 participants was reduced to 88 by sample attrition. Seven

participants were dropped from the study during data collection. One participant

withdrew from the study due to visual difficulties. Another participant withdrew on

request from his psychiatrist, who wished to conduct a separate assessment. One member

was withdrawn from the groups during data collection in order to attend individual

sessions; therefore, he was excluded from this study. One participant did not complete the

NEO-PI-R and never took the MMPI-2; another completed the NEO-PI-R but was

arrested before taking the MMPI-2. Two additional participants did not complete the

sexual history questionnaire before data analysis began. Three participants were excluded

from the study during data entry due to incomplete MMPI-2s ($\geq$ 30 items; Butcher et al.,

1989). One participant was excluded due to an incomplete NEO-PI-R ($\geq$ 41 items; Costa

& McCrae, 1992a). After these exclusions, 88 participants were retained for data

analysis.

Statistical Analysis

Descriptive Statistics. Table 4 summarizes the descriptive statistics grouped by

ethnicity of the participants. In order to determine how the ethnic groups in the sample

differed, ANOVAs and Chi-Square tests were computed on the data presented in Table 4.

The participants significantly differed on SIL scores. Scheffé post hoc tests indicated that

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Table 4

Descriptive Statistics by Ethnicity [a]

Characteristics	Ethnicity			Significance Tests
	African American n = 13 (14.8%)	Hispanic American n = 10 (11.4%)	Caucasian n = 58 (65.9%)	
Age				$F (2, 78) = .04$
M	38.15	37.40	38.40	
SD	8.36	6.87	10.74	
SIL Score				$F (2, 78) = 9.30**$
M	23.69*	24.60*	30.05*	
SD	7.15	4.97	5.37	
Education Level [b]				$F (2, 76) = 1.80$
M	12.92	12.00	13.28	
SD	1.38	1.70	2.13	
Marital Status				$\chi^2 = .31$
Married	5	5	25	
Unmarried [c]	8	5	33	
Occupation				$\chi^2 = 1.25$
Laborer	10	6	34	
Nonlaborer [d]	3	4	22	

Note: One Asian American (1.1% of participants) and 2 Native Americans (2.3% of participants) are not included in this table.

[a] 4 participants did not provide ethnicity.

[b] 2 participants did not provide education level

[c] Unmarried group is comprised of single, separated, or divorced participants

[d] Nonlaborer group is comprised of unemployed, retired, professional, and student participants

* WAIS-R Equivalents for African American participants is 85, for Hispanic American participants is 87, and for Caucasian participants is 98. WAIS-R Equivalents were calculated by predicting Abstract Scores based on mean Verbal Scores and education levels utilizing tables provided in Appendix C of the SIL Manual and adding predicted score to Verbal raw score (Zachary, 1988). WAIS-R Equivalents provided by Appendix D (Zachary, 1988).

**$p < .001$

Caucasians scored significantly higher on the SIL than both African Americans (p = .002)

and Hispanic Americans (p = .02). Given that this measure was used to determine

whether the MMPI-2 was administered normally or with an audiocassette, this difference

has no direct effect on the results of this study.

Results Addressing Research Questions

1. Broad dimensions of personality and psychopathology will form the underlying

   structure of sex offenders' test patterns.

The first research question utilized a second-order principle axis factor (PAF)

analysis with an orthogonal rotation on the five factor scales from the NEO-PI-R, and the

three validity and ten clinical scales from the MMPI-2. The purpose of this PAF was to

explore the possible existence of common underlying factors based on personality and

psychopathology dimensions. Given that the PAF was exploratory, a varimax orthogonal

rotation was utilized. A varimax rotation maximizes the variance across variables within

a factor. This variance makes the correlation of variables to the factors they load on

obvious and facilitates interpretation (Tabachnik & Fidell, 1996). For the purpose of this

analysis, the NEO-PI-R factors are labeled as "scales" to avoid confusion with the factors

resulting from the PAF.

Several second-order factor solutions were examined to provide an optimal

solution in terms of scale overlap and interpretability. A two-factor solution accounted

for 39.6% of the variance and resulted in two cross-loadings. However, the scales were

divided almost exclusively by measure, with one factor containing only MMPI-2 scales

and NEO-PI-R scales loading solely on the other factor. A four-factor solution accounted

for 56.1% of the variance with three scales cross-loading onto different factors. However,

this solution contained one very weak factor, consisting of only one unique loading.

A three-factor solution was considered optimal in terms of explained variance and

interpretability of the solution. Table 5 illustrates the loadings of each of the MMPI-2 and

Table 5

Factor Solution of Personality and Psychopathology Characteristics of Outpatient Sex

Offenders

Scales	Psychological Distress	Excitement-Seeking	Social Desirability
Scale 8K	.85	-.08	-.23
Scale 7K	.84	-.17	-.13
Scale 1K	.75	-.13	.25
Scale 3	.73	.18	.41
Scale 4K	.66	.11	-.03
Scale 2	.64	-.43	-.07
Scale 6	.59	-.04	-.23
Scale 5	.27	.21	-.33
Neuroticism Scale	.38	-.29	-.56
L Scale	.06	-.18	.52
Conscientiousness Scale	-.25	.09	.31
Scale 0	.10	-.79	-.17
Extraversion Scale	-.14	.70	.07
Openness Scale	.04	.65	-.13
Scale 9K	.04	.03	-.42
F Scale	.45	-.30	-.41
K Scale	.24	.50	.65
Agreeableness Scale	.03	.11	.50
Eigen values	4.9	3.1	2.2
Variance accounted for	25.3%	14.9%	8.8%

Note: Substantial loadings with absolute magnitude ≥ .40 are underlined. Total variance accounted for is 49.0%

NEO-PI-R scales on the three factors. The three factors discovered in this analysis are Psychological Distress, Excitement-Seeking, and Social Desirability.

Factor 1, Psychological Distress, is composed of five unique loadings and accounts for 25.3% of the variance. Relying solely on MMPI-2 scales, this factor addresses overall psychological impairment with stress, anxiety, and depression. The highest unique loadings (MMPI-2 scales 8, 7, and 1) indicate a tendency towards isolation, anxiety, and having a pessimistic attitude. Three cross-loadings were observed. Scale 3 loads positively on both Factor 1 and Factor 3 (Social Desirability). Two other scales have inverse loadings: Scale 2 with Factor 2 and the F Scale with Factor 3.

Factor 2, Excitement-Seeking, is composed of three unique loadings and accounts for 14.9% of the variance. Factor 2 is characterized by preferred amount of social contact, desire for new experiences, and need for stimulation. Unique loadings include the NEO-PI-R scales of Extraversion and Openness to New Experience and a negative loading by MMPI-2 scale 0. Two cross-loadings include Scale 2 (inverse loading with Factor 1) and the K Scale (loading with Factor 3).

Factor 3, Social Desirability, consists of four unique loadings and accounts for 8.8% of the variance. Factor 3 is characterized by a desire to present one's self in an extremely positive manner and a denial of psychological problems. Unique loadings include NEO-PI-R Neuroticism (negative) and Agreeableness (positive) scales and MMPI-2 L Scale (positive) and Scale 9 (negative). Cross-loadings include: the F Scale (inverse loading with Factor 1), Scale 3 (with Factor 1), and the K Scale (with Factor 2).

Correlations for the three factors are extremely low. Very weak positive

correlations existed between Psychological Distress and Social Desirability ($r = .001$) and

between Social Desirability and Excitement-Seeking ($r = .07$). A very weak negative

correlation existed between Psychological Distress and Excitement-Seeking ($r = -.012$).

2. Significant differences in personality and psychopathology characteristics will be

found between intrafamilial, extrafamilial, and mixed child molesters.

In order to control the degrees of freedom due to the large number of dependent

variables, three between-groups MANOVAs were utilized to examine this research

question. The independent variables examined in each of the three MANOVAs were (a)

extrafamilial child molesters, (b) intrafamilial child molesters, and (c) mixed child

molesters (i.e., individuals who offended against both intrafamilial and extrafamilial

children). The dependent variables for the first MANOVA were the five scales of the

NEO-PI-R. Given that many clinicians examine the MMPI-2 validity scales and clinical

scales separately, these scales were examined by separate analyses on this research

question. Therefore, the dependent variables for the second MANOVA were the three

MMPI-2 validity scales, and for the third MANOVA were the ten MMPI-2 clinical

scales.

Results of the first MANOVA are presented in Table 6, examining differences in

the three groups on the NEO-PI-R. The overall MANOVA was significant, $F(10, 142) =$

2.84, $p = .003$. Table 6 indicates that the three groups were significantly different on the

Openness to New Experience Scale, $F(2, 74) = 14.15$, $p < .001$. Scheffé post hoc tests

with the NEO-PI-R Scales indicate that the intrafamilial child molester group is

Table 6

Means, Standard Deviations, and Univariate F values for Relationship to Victims on the

NEO-PI-R Scales

| Scales | Child Molesters | | | F |
	Intrafamilial n = 34	Extrafamilial n = 24	Mixed n = 19	
N	59.44 (8.04)	57.38 (8.41)	57.79 (11.86)	.41
E	47.35 (7.72)	48.25 (9.67)	52.79 (6.88)	2.82
O	40.91[a] (5.56)	47.96 (8.38)	51.16 (8.17)	14.15*
A	46.71 (8.28)	45.46 (7.91)	48.05 (11.64)	.43
C	40.12 (10.57)	40.71 (10.17)	40.79 (9.74)	.04

Note: Values in parenthesis indicate standard deviations.
* $p < .001$
[a] Scheffé post hoc tests indicate Intrafamilial child molesters significantly lower than Extrafamilial ($p = .002$) and Mixed ($p < .001$) child molesters on Scale O.

significantly lower on this factor than either the extrafamilial (p = .002) or the mixed

child molester groups (p < .001).

The second MANOVA, presented in Table 7, addressed differences in the three

child molester groups on the MMPI-2 validity scales. The overall MANOVA was not

significant for the three groups, F (6, 146) = 1.74, p = .12.

Table 7

Mean, Standard Deviations, and Univariate F values for Relationship to Victims on the

MMPI-2 Validity Scales

		Child Molesters		
Scales	Intrafamilial	Extrafamilial	Mixed	F
	n = 34	n = 24	n = 19	
L	52.24	51.42	53.00	.14
	(10.78)	(8.30)	(9.27)	
F	52.00	53.46	49.95	.69
	(9.31)	(11.57)	(7.62)	
K	49.94	51.54	59.05	4.98[a]
	(10.98)	(9.77)	(9.68)	

Note: Values in parenthesis indicate standard deviations.
[a] Overall MANOVA was not significant (F [6, 146] = 1.74, p = .12); therefore, the
significant finding on the K Scale (p < .01) was not investigated further.

The third MANOVA, which examined the three child molester groups on the MMPI-2 clinical scales, was significant, $F (20, 132) = 1.73$, $\underline{p} = .04$. As Table 8 indicates, the three groups did exhibit significant differences on Scale 3, $(F [2, 74] = 3.25, \underline{p} = .05)$ and Scale 0, $(F [2, 74] = 6.73, \underline{p} = .002)$. Scheffé post hoc tests indicate that the intrafamilial child molester group was significantly lower on Scale 3 $(\underline{p} = .05)$ and significantly higher on Scale 0 $(\underline{p} = .003)$ than the mixed child molester group.

The results of the MANOVAs indicate intrafamilial child molesters are significantly lower on preference for new experiences, desire for social interactions, and tendency to present a façade of self-control. These results suggest that child molesters who only offend against family members are more socially introverted and less likely to engage in novel experiences than child molesters whose victims are nonfamilial. In addition, incestuous offenders are less likely to maintain an appearance of being in control than either extrafamilial or mixed child molesters. These latter groups are more likely to be willing to enter new situations and take risks.

2a. Extrafamilial child molesters will be significantly higher than sex offenders against adults on Neuroticism and on MMPI-2 scales 4 and 8.

There were insufficient participants who offended exclusively against adults $(\underline{n} = 9)$ to examine this issue. Therefore, this hypothesis was not addressed in this study.

2b. Incestuous child molesters will be significantly higher on Neuroticism and lower on Extraversion than extrafamilial child molesters.

A between-groups MANOVA was utilized to examine this research question. For this MANOVA, the independent variables were intrafamilial or extrafamilial offenders.

Table 8

Mean, Standard Deviations, and Univariate F values for Relationship to Victims on the

MMPI-2 Clinical Scales

Scales	Child Molesters			F
	Intrafamilial	Extrafamilial	Mixed	
	n = 34	n = 24	n = 19	
1	52.71	54.29	53.79	.17
	(11.65)	(9.98)	(9.53)	
2	55.65	54.00	51.74	1.05
	(9.84)	(10.07)	(7.73)	
3	50.44[a]	53.83	58.32	3.25*
	(11.68)	(10.37)	(9.73)	
4	62.26	62.38	64.05	.23
	(10.26)	(9.04)	(9.23)	
5	46.59	47.83	50.63	1.49
	(5.88)	(10.30)	(8.82)	
6	52.53	54.71	56.47	1.09
	(11.36)	(8.41)	(7.11)	
7	53.38	57.00	53.89	.98
	(9.87)	(11.05)	(8.89)	
8	53.21	55.21	53.79	.26
	(11.51)	(9.69)	(9.95)	
9	51.85	54.29	46.95	2.81
	(9.75)	(12.03)	(8.22)	
0	54.74[b]	49.67	45.05	6.73**
	(10.31)	(10.62)	(4.78)	

Note: Scales 1, 4, 7, 8, and 9 are K-corrected t-scores. Values in parenthesis indicate standard deviations.

* $p < .05$

** $p < .01$

[a] Scheffé post hoc tests indicate Intrafamilial group lower than Mixed group ($p = .05$).

[b] Scheffé post hoc tests indicate Intrafamilial group higher than Mixed group ($p = .003$).

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The dependent variables were the Neuroticism and Extraversion Scales from the NEO-PI-R. Mean and standard deviations for intrafamilial and extrafamilial child molesters on the Neuroticism and Extraversion scales are presented in Table 6. The MANOVA was not significant, $F(2, 55) = .44$, $\underline{p} = .65$.

3. Personality and psychopathology variables will be able to predict treatment progress.

In order to explore the ability of the NEO-PI-R and MMPI-2 scales to predict progress in treatment, a stepwise discriminant analysis was utilized. A stepwise discriminant analysis was used in order to examine the strongest predictors among these scales. The analysis was limited to four steps to maintain at least a 10:1 subject-to-variable ratio. Three possible predictors entered the stepwise analysis, using the Wilks' Lambda (F to enter = 3.84, F to remove = 2.71). These predictors are: MMPI-2 Scales 5 and 0 and the NEO-PI-R Conscientiousness Factor. The dependent variable is treatment progress (successful versus unsuccessful).

Table 9 presents the results of this stepwise discriminant analysis for successful and unsuccessful participants. As Table 9 indicates, the overall classification rate was moderate (69.0% correct classification, Wilks' lambda = .68, canonical correlation = .57; $\underline{p} = .002$). Structure coefficients for this stepwise discriminant analysis are .52 (Scale 0), .49 (Scale 5), and .39 (Conscientiousness).

Table 9

Stepwise Discriminant Analysis of Sex Offender Treatment Success for Personality and

Psychopathology Traits[a]

| | | Actual Group Membership | |
Predicted Group	n	Unsuccessful	Successful
Unsuccessful	21	68.2% (15)	31.8% (7)
Successful	21	30.0% (6)	70.0% (14)

Note. Positive Predictive Power (i.e., classification of successful participants) = .70, Negative Predictive Power (i.e., classification of unsuccessful participants) = .68, Sensitivity = .67, Specificity = .71. Canonical correlation of .57; Wilks' lambda = .68; p = .002; Overall classification rate = 69.0%
[a] MMPI-2 Scales 5 and 0 and NEO-PI-R Conscientiousness Factor were used in this analysis

3a. Sex offenders scores on Neuroticism, Conscientiousness, and MMPI-2 Scale 4 will

predict treatment compliance.

A direct discriminant analysis was utilized to investigate the ability of these three

scales to predict treatment compliance. Table 10 presents the results of this discriminant

analysis for successful and unsuccessful participants. As Table 10 shows, there was a

moderate classification rate with these factors (66.7% correct classification, Wilks'

Lambda = .77, canonical correlation = .51, $\underline{p}$ = .01). Structure coefficients are .46

(Neuroticism), .44 (Conscientiousness), and .10 (Scale 4).

4. Significant differences will exist between child molesters with male victims and those

with female victims in personality styles, and psychopathology characteristics.

4a. Child molesters with male victims will score higher on MMPI-2 Scale 5 and lower on

Conscientiousness than child molesters with female victims or victims of both

genders.

This research question and hypothesis were intended to examine differences in

sex offenders based on the gender of their victims. The three groups were to be sex

offenders who offended exclusively against males, offenders with exclusively female

victims, and sex offenders who offended against both males and females. However, there

were not enough participants with exclusively male victims ($\underline{n}$ = 8) or both male and

female victims ($\underline{n}$ = 10) to examine any potential personality or psychopathology

differences. Therefore, this research question and concomitant hypothesis are unable to

be addressed in this study.

Table 10

Direct Discriminant Analysis of Treatment Success for Neuroticism, Conscientiousness,

and Scale 4

| | | Actual Group Membership | |
Predicted Group	n	Unsuccessful	Successful
Unsuccessful	21	68.4% (13)	31.6% (6)
Successful	21	34.8% (8)	65.2% (15)

Note. Positive Predictive Power = .65, Negative Predictive Power = .68, Sensitivity = .71, Specificity = .62. Canonical correlation = .51; Wilks' lambda = .77; p = .008; Overall classification rate = 66.7%

Additional analyses were performed with the second-order factors (i.e.,

Psychological Distress, Excitement-Seeking, and Social Desirability) to investigate their

applicability to treatment settings. Differences in number of admitted victims on these

second-order factors were examined. In addition, the ability of the second-order factors to

predict treatment progress were explored. Differences between the three child molester

groups (i.e., intrafamilial, extrafamilial, and mixed) on the six facets of the Openness to

New Experience scale were also explored. In addition, a cluster analysis was utilized to

confirm previously reported subgroups of child molesters on the MMPI-2 scales.

Differences on offense characteristics and personality traits were explored for the groups

resulting from this cluster analysis.

Applicability of Second-Order Factors.

Differences on the Factors Based on Number of Victims. A between-groups

MANOVA was utilized to examine differences in the factors based on number of

admitted victims. The independent variables for this analysis were offenders with only

one admitted victim and offenders with multiple admitted victims. The dependent

variables for this analysis were the three factors. The factor scores for these factors were

calculated with the regression method, which multiplies an individual's score on the scale

with the loading of that scale on the factor. Overall, the MANOVA was significant, $F(3,$

$82) = 5.00$, $p = .003$. Table 11 presents the mean, standard deviation, and univariate F

ratios of this analysis. As Table 11 indicates, sex offenders with multiple victims were

higher than offenders with one victim on the Psychological Distress factor, $F(1, 84) =$

6.25, p = .014 and on the Excitement-Seeking factor, $F(1, 84)$ = 7.73, p = .01. These results suggest that offenders with one victim are less likely than offenders with multiple victims to (a) experience negative affects and (b) engage in novel, stimulating activities.

Table 11

Means, Standard Deviations, and Univariate F Values for Number of Sex Offender

Victims and Three Factors

| Factors | Number of Victims | | F |
| | One | Multiple | |
	$N = 43$	$n = 43$	
Psychological Distress	-.27	.23	6.25[a]
	(.88)	(1.00)	
Excitement-Seeking	-.26	.27	7.73[b]
	(.80)	(.96)	
Social Desirability	-.01	-.02	.003
	(.87)	(.98)	

Note: Values in parentheses are standard deviations.
[a] p = .014
[b] p = .007

Factors' Ability to Predict Treatment Progress. To investigate the ability of the second-order factors to predict treatment progress, a direct discriminant analysis was computed with the three factors as predictor variables. The groups were successful and unsuccessful participants. As Table 12 illustrates, the overall classification rate was not significant (61.9% correct classification, Wilks' Lambda = .87, Canonical Correlation = .36, p = .16). Structure coefficients were .72 (Excitement-Seeking), .47 (Social Desirability), and .24 (Psychological Distress).

Table 12

Direct Discriminant Analysis of Treatment Success for Factors

		Actual Group Membership	
Predicted Group	n	Unsuccessful	Successful
Unsuccessful	21	60.9% (14)	39.1% (9)
Successful	21	36.8% (7)	63.2% (12)

Note. Positive Predictive Power = .63, Negative Predictive Power = .61, Sensitivity = .57, Specificity = .67. Canonical correlation of .36, Wilks' lambda = .87 p = .16; Overall classification rate = 61.9%

Openness to New Experience among Child Molesters. Intrafamilial offenders were found to be significantly lower on the Openness to New Experience scale than either extrafamilial or mixed child molesters. To examine this finding, a between-groups MANOVA was computed between these three groups on the facets of the Openness scale. The results of this MANOVA were significant, F (12, 140) = 2.39, p < .01. Table 13 displays the means and standard deviations for each of the six facets. As illustrated on this table, Scheffé post hoc tests indicated differences on three facets. Intrafamilial offenders were significantly lower than both extrafamilial and mixed child molesters on two facets: Openness to Aesthetics (p = .03 and .001, respectively) and Openness to Ideas (p = .01 and .004, respectively). Intrafamilial molesters were also significantly lower on Openness to Values than mixed child molesters (p = .04).

Table 13

Openness to New Experience Facets: Mean and Standard Deviations for Three Groups

based on Relationship to Victims

	Child Molesters		
Facets	Intrafamilial	Extrafamilial	Mixed
Openness to Fantasy	43.91	48.04	49.95
	(1.49)	(1.77)	(1.99)
Openness to Aesthetics	45.21[a]	50.78	53.95
	(1.32)	(1.57)	(1.76)
Openness to Feelings	44.35	49.13	49.37
	(1.35)	(1.61)	(1.81)
Openness to Actions	45.77	47.04	50.32
	(1.38)	(1.64)	(1.84)
Openness to Ideas	40.94[a]	48.33	49.90
	(1.57)	(1.87)	(2.10)
Openness to Values	44.41[b]	47.58	49.79
	(1.25)	(1.49)	(1.67)

[a] Scheffé post hoc tests indicate Intrafamilial child molesters significantly lower than Extrafamilial and Mixed child molesters
[b] Scheffé post hoc tests indicate Intrafamilial child molesters significantly lower than Mixed child molesters.

MMPI-2 Clusters for Child Molesters. A hierarchical cluster analysis was utilized to examine subgroups of child molesters based on MMPI-2 profiles. The three validity and ten clinical scales of the MMPI-2 were clustered using Ward's method of agglomeration and the squared euclidean distance between clusters. Utilizing this clustering technique, a significant decrease in the euclidean coefficient signifies that similar clusters are being combined. Both a two cluster and a three cluster solution provided significant decreases in the euclidean coefficient. The three cluster solution appeared to be the most interpretable and closely resembled MMPI clusters found in previous research.

Figure 1 presents the mean MMPI-2 profiles for the three clusters. Cluster 1 ($n = 24$) is the "antisocial cluster," which exhibited a Spike 4 MMPI-2 profile. Cluster 2 ($n = 45$), the "unimpaired cluster," presented a WNL profile. Cluster 3 ($n = 8$) is the "impaired cluster," with clinically significant elevations on the F Scale as well as Scales 1, 2, 4, 6, 7, 8, and 0.

A between-groups MANOVA was utilized to examine differences among the clusters on personality traits, as measured by the NEO-PI-R. The independent variables were the three clusters described above, the dependent variables were the five NEO-PI-R scales. The overall MANOVA was significant, $F(10, 142) = 2.96$, $p = .002$. As Table 14 indicates, the three groups differed significantly on the Neuroticism scale, $F(2, 74) = 10.64$, $p < .001$, and the Extraversion scale, $F(2, 74) = 8.25$, $p = .001$. Scheffé post hoc tests indicate that the "impaired" cluster was significantly higher than both the

Figure 1

Mean MMPI-2 Profiles for Child Molester Clusters
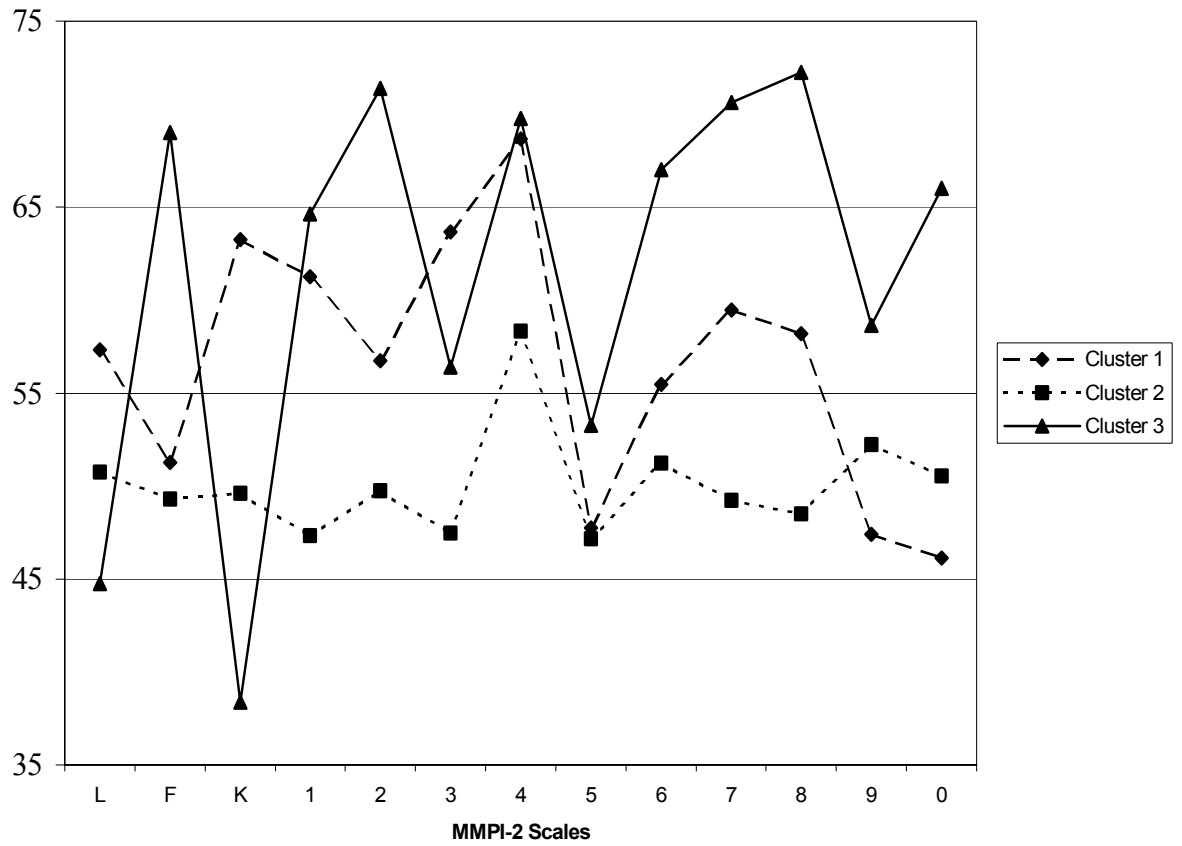
"antisocial" and "unimpaired" clusters on Neuroticism ($p < .001$) and significantly lower

than the other two clusters on Extraversion ($p = .001$).

Table 14

Mean, Standard Deviation, and Univariate F scores on NEO-PI-R Scales for the Three

Child Molester Clusters.

Scales	Cluster 1	Cluster 2	Cluster 3	F
Neuroticism	56.79	57.00	71.00[a]	10.64**
	(10.01)	(7.36)	(5.98)	
Extraversion	51.67	49.31	39.00[b]	8.25*
	(6.80)	(7.65)	(10.24)	
Openness to New	46.04	46.93	42.75	0.53
Experience	(6.30)	(9.34)	(8.28)	
Agreeableness	48.42	46.82	40.38	2.49
	(9.66)	(8.37)	(9.18)	
Conscientiousness	41.29	41.13	34.25	1.72
	(9.39)	(10.23)	(10.71)	

Note. Values in parentheses indicate standard deviations
* $p = .001$
** $p < .001$
[a] Scheffé post hoc tests indicate Cluster 3 significantly higher than Clusters 1 and 2 ($p < .001$).
[b] Scheffé post hoc tests indicate Cluster 3 significantly lower than Clusters 1 and 2 ($p = .001$).

Fisher's-exact tests were utilized to examine differences between pairs of the three clusters on offense characteristics. The "antisocial" and "unimpaired" clusters differed significantly (p = .03) on the number of offenses committed. As Table 15 indicates, almost all members of the "antisocial" cluster (i.e., 23 or 95.83%) committed multiple offenses. In contrast, the "unimpaired" cluster had 33 (75.3%) members commit multiple offenses. Although all members of the "impaired" cluster committed multiple offenses, no significant differences were found between this cluster and either of the other two, possibly due to the fact that only eight child molesters were classified in the "impaired" cluster. Although the Fisher's exact test is useful for small sample sizes, Rosenthal and Rosnow (1991) warn that this test is also most conservative with small samples.

Table 15

Cluster Differences for Child Molesters: Single versus Multiple Offenses

		Offenses	
Clusters	n	One	Multiple
Antisocial [a]	24	1	23
		(4.17%)	(95.83%)
Unimpaired [a]	45	12	33
		(26.67%)	(73.33%)
Impaired	8	0	8
		(0%)	(100%)

Note. Values in parentheses indicate row percentages.
[a] Fisher's Exact test is significant (p = .03) for the difference between the Antisocial and Unimpaired clusters.

CHAPTER 4

Discussion

Personality and psychopathology traits of sex offenders have been extensively

studied. Much of this research can be classified into two major approaches. The first

approach described personality characteristics of sex offenders in broad, general terms

(Baxter et al., 1984; Fagan et al., 1991; Fisher, 1969; Fisher & Howell, 1970; Fisher &

Rivlin, 1971; Lehne, 1994; Scott, 1982; Valliant & Blasutti, 1992; Wilson & Cox, 1983).

The results of the personality characteristics approach were theoretically useful in

understanding most sex offenders, but are not able to distinguish sex offenders either

from other criminal populations or from the general population. The second approach

utilized measures of psychopathology, namely the MMPI-2. This approach attempted to

distinguish among sex offenders and inferred personality traits based on differences on

the MMPI and other measures, such as the MSI and the STAI (Anderson et al., 1979;

Armentrout & Hauer, 1978; Hall et al., 1991; Kalichman, 1990, 1991; Kalichman et al.,

1989; Kalichman et al., 1992; Kalichman & Henderson, 1991; McCreary, 1975; Panton,

1978; Rader, 1977; Shealy et al., 1991). The psychopathology characteristics approach

provided detailed descriptions that are organized by subgroups of sex offenders.

However, the distinctions between the subgroups are not useful for two reasons. First,

different MMPI profiles are described with similar characteristics. For example, five

different types of MMPI profiles are classified as a "Deviant" cluster in the sex offender

studies. Second, very similar profiles are described with different characteristics (Levin

& Stava, 1987). For example, Shealy et al.'s (1991) "Impulsive" child molesters displayed a WNL profile, which is not consistent with findings of other studies (Kalichman, 1991; Kalichman & Henderson, 1991; Kalichman et al., 1992) that child molesters with WNL profiles typically are classified as "Unimpaired."

The current study combined the two approaches in an attempt to account for both the personality and psychopathological characteristics of sex offenders. Toward the goal of integration, this study found that the personality and psychopathological characteristics combined into three second-order factors. These second-order factors are examined in light of two external criteria: offense history and treatment progress.

This chapter is organized into four major sections. First, the replication of previous cluster analyses is discussed. Second, the clinical utility of the traits measured by the NEO-PI-R and the MMPI-2, including the second-order factors, is addressed. Third, the limitations of the current study are discussed. Fourth, suggestions for areas of future research are provided.

Replication of Past Cluster Analyses

A hierarchical cluster analysis was utilized to confirm the existence of the child molester clusters discussed previously (Armentrout & Hauer, 1978; Kalichman, 1991; Kalichman & Henderson, 1991; Kalichman et al., 1992; McCreary, 1975; Panton, 1978; Shealy et al., 1991). This study found three clusters of child molesters exhibiting MMPI-2 profiles with some similarities to previous research (Kalichman & Henderson, 1991; Kalichman et al., 1992; McCreary, 1975; Shealy et al., 1991). These clusters are described below.

Cluster 1, "Antisocial," presented with a Spike 4 MMPI-2 profile, similar to Kalichman's (1991) Impaired child molester cluster. However, Kalichman (1991) examined his Impaired cluster in relation to age of the victim, whereas this study addressed the number of victims and selected personality traits. Therefore, similarities and differences aside from modal MMPI-2 profiles are not able to be determined. In the current study, the child molesters in the Antisocial cluster were more likely than the Unimpaired cluster to commit multiple offenses. In addition, members of the Antisocial cluster scored in the average range on the five NEO-PI-R scales.

Cluster 2, "Unimpaired," exhibited a WNL MMPI-2 profile, which is the same profile that was exhibited by the Unimpaired child molester cluster (Kalichman & Henderson, 1991; Kalichman et al., 1992; McCreary, 1975) and Shealy et al.'s (1991) Impulsive cluster. In the current study, this cluster had a higher percentage of first-time offenders than the other two clusters, although the majority of molesters in this cluster did commit multiple offenses. This finding is similar to McCreary's (1975) finding that Unimpaired child molesters were less likely to have committed previous sexual offenses. Like the Antisocial cluster, the mean scores on the NEO-PI-R scales were all in the average range for members of the Unimpaired cluster in this study.

Cluster 3, "Impaired," presented a profile indicative of severe psychopathology with clinically significant elevations on the F Scale as well as Scales 1, 2, 4, 6, 7, and 8. All eight members of this cluster committed multiple offenses. A similar profile was reported by Kalichman and Henderson (1991) as an Impaired cluster and Kalichman et al. (1992) as a Withdrawn cluster. In the current study, the Impaired cluster had mean scores

in the high range on the NEO-PI-R Neuroticism scale and in the low range on both Extraversion and Conscientiousness.

The three child molester clusters were significantly different on personality traits and whether multiple offenses were committed. The Impaired cluster was significantly higher on Neuroticism and lower on Extraversion than both the Antisocial and Unimpaired clusters. It is expected that individuals with MMPI-2 profiles as elevated as the members of the Impaired cluster would be more withdrawn and experience more negative moods than molesters with few or no elevations. Thus, the child molesters in this cluster are more anxious, depressed, and hostile than members of the other two clusters. The Antisocial and Unimpaired clusters differed significantly on the number of offenses committed. Only one molester in the Antisocial cluster committed a single offense, compared to the slightly more than one-fourth in the Unimpaired cluster. The difference in number of offenses by these two clusters has some similarities with McCreary (1975). He found that child molesters with no previous offenses presented a WNL MMPI profile, whereas molesters with prior offenses tended to exhibit elevations on Scales 4 and 8.

The results of this cluster analysis partially confirm the clusters reported in previous literature. These clusters differed significantly on number of offenses. The difference in personality traits in these clusters indicates a need to consider both psychopathology and personality characteristics in sex offenders. As discussed below, this study investigated the combination of personality and psychopathology characteristics and found three second-order factors.

The Personality and Psychopathology Factors

This study revealed three second-order factors based on personality and psychopathology characteristics of sex offenders: Psychological Distress, Excitement-Seeking, and Social Desirability. It appears likely that the general dimensions of personality and psychopathology, which compose these second-order factors, may aid in the understanding of sex offenders and assist in their treatment. To facilitate a discussion of the factor loadings, Table 16 provides a summary of the three factors with the MMPI-2 and NEO-PI-R loadings. The following MMPI-2 interpretations are based on standard references (Butcher & Williams, 1992; Graham, 2000; Greene, 2000). Interpretations are only provided if all three references contain a consistent description of the scale. The NEO-PI-R interpretations are based on the manual for this measure (Costa & McCrae, 1992a).

Psychological Distress. The Psychological Distress factor indicates the extent to which a sex offender is experiencing emotional, psychological, and social difficulties. Very strong loadings (>.70) were found on Scales 8, 7, 1, and 3. A strong loading by Scale 8 indicates that sex offenders often feel isolated from other people and tend to use fantasy as a means to defend themselves against that isolation. Scale 7 indicates anxiety and difficulty concentrating. Scale 1 measures a tendency to have a negative and pessimistic attitude and complain about vague somatic symptoms. Similarly, Scale 3 gauges a tendency to react to stress with physical difficulties and to use these physical problems to avoid meeting responsibilities. In addition, Scale 3 also indicates engaging in superficial and immature relationships.

Table 16

Personality and Psychopathology Second-Order Factors of Sex Offenders and their Scale

Characteristics

Factors	Positive Loadings	Negative Loadings
Psychological Distress	Scales 8, 7, 1, 3, 4, 2, 6, F	
Excitement-Seeking	Extraversion, Openness to New Experience, K Scale	Scales 0, 2
Social Desirability	Agreeableness, Scales K, L, 3	Neuroticism, Scales F, 9

Note. Loadings are presented in descending order.

Moderate loadings (>.40) were found on Scales 4, 2, 6, and F. Scale 4 measures hostility and problems with authority figures. Scale 2 indicates depression and a tendency to be withdrawn from others, while Scale 6 gauges a tendency to be guarded, suspicious of other people, and overly sensitive to criticism. The F Scale measures severity of psychological distress.

The difficulties indicated on the Psychological Distress factor have been well documented in sex offender literature. The emotional difficulties on this factor, such as depression and anxiety, appear to be a core characteristic of sex offenders. Anderson et al.'s (1979) disturbed subgroup as well as Rader's (1977) deviant subgroup of sex offenders against adults were described as being anxious and depressed. Similarly, Lehne (1994) and Schuyler (1994) found that sex offenders endorsed a wide range of negative affects, such as anxiety and depression.

Social difficulties are also a very consistent finding in sex offender research. Several personality studies on sex offenders (Lehne, 1994; Scott, 1982; Valliant & Blasutti, 1992; Wilson & Cox, 1983) have found that sex offenders have poor interpersonal relationships and lack social skills. In addition, poor social skills were one of the defining characteristics of the disturbed group of sex offenders against adults (Anderson et al., 1979; Hall et al., 1991; Kalichman et al., 1989; Kalichman, 1990) as well as the Hostile and Withdrawn groups of child molesters (Armentrout & Hauer, 1978; Kalichman & Henderson, 1991; Panton, 1978; Shealy et al., 1991). In addition, Armentrout and Hauer's (1978) Antisocial sex offenders were described as socially non-

conforming, while deviant sex offenders (Armentrout & Hauer, 1975; Rader, 1977) were found to be socially isolated.

Excitement-Seeking. The Excitement-Seeking Factor connotes the amount of stimulation an individual prefers. The scales that load on this factor measure social needs and preference for novel experiences. The Extraversion Scale indicates a tendency to be talkative, fun-loving, sociable, affectionate, assertive, upbeat, energetic, and an individual who likes excitement and stimulation. The Openness to New Experience Scale indicates a tendency to be non-conforming, imaginative, have broad interests, and a preference for variety and independent judgment. The K Scale measures self-control and defensiveness in familial and interpersonal interactions. An inverse relationship with MMPI-2 Scale 0 and this factor indicates socially outgoing, gregariousness, and a person who seeks social interactions. The inverse relationship between Scale 2 and the Excitement-Seeking factor indicates optimism, interest in activities, and sociability.

The finding that sex offenders crave stimulation and novel situations has been found in previous studies. Fagan et al. (1991) and Wise et al. (1991) found that men with sexual deviances scored high on the Excitement-Seeking facet of the NEO-PI. In addition, Lehne (1994) found sex offenders also scored high on the NEO-PI Extraversion facet of Excitement-Seeking. Armentrout and Hauer (1978) reported that antisocial sex offenders were hedonistic, indicating a desire for constant and instant desire fulfillment.

The scales that load on the Excitement-Seeking factor indicate a desire for social interactions, which are contrasted with the social difficulties and isolation described on the Psychological Distress factor and the previous literature (Anderson et al., 1979;

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Armentrout & Hauer, 1978; Hall et al., 1991; Kalichman et al., 1989; Kalichman, 1990; Kalichman & Henderson, 1991; Lehne, 1994; Panton, 1978; Scott, 1982; Shealy et al., 1991; Valliant & Blasutti, 1992; and Wilson & Cox, 1983). In contrast to the Psychological Distress factor, the Excitement-Seeking factor is characterized by a sex offender's desire for social interactions. It is possible that part of the anxiety, depression, and other negative emotions experienced by sex offenders stems from unfulfilled needs for social interaction. An area for further research may be the relationship between the amount of distress experienced by sex offenders in relation to their social skills and desires for social contacts.

Social Desirability. This factor indicates a desire to maintain a public image very different from a person's private life. The scales that load on this factor measure a denial of problems or difficulties. All three MMPI-2 validity scales load on this factor, but the F Scale loads negatively. This negative loading may indicate denial rather than exaggeration of difficulties. The L Scale describes an attempt to portray oneself positively by denying minor, personal dishonesties, aggression, and "bad" thoughts. The K Scale gauges defensiveness, an appearance of self-control, and denial of any problems. The strong loading on this factor by the Agreeableness Scale suggests eagerness to help and sympathy for other people. Scale 3 measures the attempt to develop and maintain a facade of superior adjustment. Likewise, the inverse relationship between Scale 9 and this factor indicates an attempt to repress feelings of egocentricity, impulsivity, and irritability. A negative loading for Neuroticism suggests a tendency to present as

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emotionally stable with few negative feelings, such as fear, anger, sadness, embarrassment, guilt, disgust, or anxiety.

The scales that load on the Social Desirability factor, especially Agreeableness, appear inconsistent with previously reported research on sex offenders in general. Fagan et al. (1991) and Wise et al. (1991) found that men with sexual deviance were low on the NEO-PI scale of Agreeableness. Similarly, Schuyler (1994) reported that incarcerated rapists were low on the NEO-PI-R Agreeableness scale.

However, several studies also report sex offender traits similar to those described on the Social Desirability factor. Despite the low Agreeableness scale score, Schuyler (1994) also found that rapists were higher than norms on the Agreeableness facet of Tendermindedness. Unfortunately, the other FFM studies of men with sexual deviance as well as sex offenders (Fagan et al., 1991; Lehne, 1994; Wise et al., 1991) used the NEO-PI, which did not measure facet scores for the Agreeableness factor. Therefore, it is impossible to know whether these studies would have found similar scores on this facet.

Psychopathology studies have also reported similar sex offender traits to those found on the Social Desirability factor. Anderson et al. (1979) stated that sex offenders in the Deviant cluster tended to make a good first impression during clinical interviews, despite the majority of them having a history of chronic alcohol abuse. Shealy et al.'s (1991) Resentful child molester cluster was described as guarded and defensive, which supports the K Scale's loading on this factor.

Several studies have addressed defensiveness and denial in sex offenders' attempts to portray themselves positively (see Sewell & Salekin, 1997 for a review).

Specifically, Kennedy and Grubin (1992) describe four patterns of denial utilized by sex offenders, ranging from admitting offenses but denying harm to victims to those completely denying the offense. This denial could be expressed in blaming the victim-type excuses ("She was asking for it"), rationalizing that the offense was helpful to the victim ("I was just teaching the child about sex."), or blaming external factors ("I was drunk."). In addition, Rogers and Dickey (1991) examined three models of deception (i.e., pathogenic, criminogenic, and adaptational) and related them to the attempts of sex offenders to portray themselves positively. From the adaptational perspective, Rogers and Dickey (1991) state, "sex offenders have learned to avoid both social censure and arrest by leading 'double lives'" (p. 56).

The importance of these factors to sex offenders needs to be considered for specific groups of sex offenders and their patterns of abuse. Levin and Stava (1987) suggested that several often-overlooked variables be considered in research with sex offenders. These variables include age and gender of the victims, use of force, and prior history of sexual offenses. The current study attempted to examine sex offenders on several of these variables, namely age and gender of victims and previous sexual offenses. Use of force was not studied because the data were collected at a community-based treatment facility for sex offenders on probation. Therefore, it was not expected that many participants on probation would have committed a physically violent offense. The relationship of the second-order factors to offense type could not be explored for type of victim because of insufficient numbers of adult victims and incidents involving

male victims. However, sufficient information on victims (i.e., one or multiple) was available for analysis in relationship to the second-order factors.

Information regarding number of prior offenses and victims was gathered from participants' files. As Table 15 indicates, sex offenders with multiple victims were significantly higher on both the Psychological Distress and the Excitement-Seeking factors than sex offenders with only one admitted offense. The difference on the Psychological Distress factor indicates that this group possibly experiences more emotional, psychological, and social difficulties than offenders with one victim. The difference on the Excitement-Seeking factor suggests the possibility that sex offenders with multiple victims are more likely to engage in more sensation-seeking behaviors than sex offenders with one victim. Despite Levin and Stava's (1987) suggestion, few studies have compared sex offenders in terms of number of victims. Previous research (e.g., McCreary, 1975; Schuyler, 1994) focuses on the number of offenses rather than victims. Especially with child molesters, offenders may have an extensive history of sexual offenses but limit their activities to one victim.

Although previous research has typically focused on either personality or psychopathology characteristics of sex offenders, the current data suggest these characteristics integrate onto the Psychological Distress, Excitement-Seeking, and Social Desirability factors. The three factors provide a new model to investigate the differences between sex offenders and other offender populations. For example, rather than simply describing sex offenders as "having few social skills," it is now possible to discuss their interpersonal abilities in terms of three general dimensions: Psychological Distress,

Excitement-Seeking, and Social Desirability. These dimensions may be beneficial in creating more specific hypotheses regarding social, psychological, and emotional difficulties experienced by sex offenders. In addition, these three second-order factors may allow research to investigate differences more fully in sex offenders' patterns of deviant behavior (e.g., the number, age, and gender of victims). By understanding differences in sex offenders on these dimensions, more effective treatment recommendations can be considered. Such research would be clinically beneficial for providing treatment to sex offenders.

Clinical Utility of Sex Offender Personality and Psychopathology Traits and Factors

Understanding the psychopathology and personality characteristics of sex offenders is necessary to provide treatment for this population. Most sex offender treatment facilities routinely compile information on the psychopathology characteristics of their clients. Regular assessments, which utilize measures such as the MMPI-2, provide mental health professionals with important information regarding the psychopathology characteristics of the sex offenders being treated. However, most research on these characteristics has been largely utilized to determine distinct subgroups of sex offenders (Anderson et al., 1979; Armentrout & Hauer, 1978; Hall et al., 1991; Kalichman, 1990; Kalichman, 1991; Kalichman et al., 1989; Kalichman et al., 1992; Kalichman & Henderson, 1991; McCreary, 1975; Panton, 1978; Rader, 1977; Shealy et al., 1991). For most treatment providers, knowing the subgroup in which a male sex offender fits is not as important as predicting whether he is likely to be successful in treatment. This study examined clinical applications of psychopathology and personality

characteristics of sex offenders. The following paragraphs discuss differences in terms of relation to victims and the ability of these characteristics to predict treatment progress.

Differences between Intrafamilial and Extrafamilial Child Molesters. Valliant and Blasutti (1992) found that intrafamilial child molesters were more introverted and possessed fewer social skills than extrafamilial molesters. Therefore, it was expected that these groups would differ on Extraversion. However, this study found that incestuous child molesters were significantly lower on the Openness to New Experience scale of the NEO-PI-R than either extrafamilial or mixed child molesters. Specifically, intrafamilial molesters were found to be significantly lower on Openness to Aesthetics and Openness to Ideas than other molesters. In addition, intrafamilial offenders were significantly lower on Openness to Values than extrafamilial offenders. These findings suggest that intrafamilial child molesters are less likely to re-examine their social, political, or religious values; are more likely to resist changing their opinions on most subjects, including topics dealing with their offenses (Costa & McCrae, 1992a).

Intrafamilial child molesters were significantly lower on Scale 3 and higher on Scale 0 than either extrafamilial or mixed child molesters. These findings suggest that intrafamilial molesters are less likely to develop superficial and immature relationships (Butcher & Williams, 1992; Graham, 2000; Greene, 2000), and be less likely to be socially impulsive (Butcher & Williams, 1992) than extrafamilial or mixed molesters.

The differences between intrafamilial, extrafamilial, and mixed child molesters have implications for therapy. Incestuous offenders may be slower to open up and share personal information with the group and less willing to entertain and initiate changes in

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their habits and lifestyle. Fisher (1969) and Fisher and Howell (1970) found child molesters in general are low on perceived needs for change. Therefore, the finding of this study that intrafamilial molesters may be less open to change may prove especially difficult for treatment providers.

Treatment Progress. Successful completion in treatment programs is the predominant goal of mental health professionals working with sex offenders. Therefore, it is important to explore the ability of personality and psychopathology traits to predict treatment progress. In this study, several traits were examined for their ability to predict treatment compliance.

Table 9 illustrated that a discriminant function based on Scale 5, Scale 0, and the Conscientiousness Scale was able to correctly predict treatment progress in approximately 70% of sex offenders. The positive predictive power (ability to predict successful treatment progress) and negative predictive power (ability to predict unsuccessful progress in treatment) of these scales were also moderately high (.70 and .68 respectively). In addition, the sensitivity and specificity of these predictors is also moderately high (.67 and .71 respectively). These values suggest that these scales are generally effective at classifying individual sex offenders as either successful or unsuccessful in treatment. However, replication with larger samples is clearly warranted.

Neuroticism, Conscientious, and Scale 4 were specifically examined in terms of ability to predict treatment progress. Table 10 illustrated that a discriminant function based on these three scales was able to correctly predict treatment success in approximately 67% of sex offenders. The positive and negative predictive powers of

these scales (.62 and .71, respectively) indicate that these scales are also fairly accurate at making predictions concerning treatment success. Sensitivity and specificity (.71 and .62 respectively) of these scales is also high in predicting treatment progress. As with the previous discriminant function, cross-validation is necessary to establish its ability to correctly classify treatment progress in sex offenders.

The characteristics that this study found to be predictive of treatment progress have been well documented in sex offender literature (Armentrout & Hauer, 1978; Hall et al., 1991; Kalichman & Henderson, 1991; Shealy et al., 1991; Valliant & Blasutti, 1992). These characteristics include: social introversion, hedonism, negative affect (especially anxiety), and conflicts with authority. For example, Armentrout and Hauer (1978) found that antisocial sex offenders are more likely to be hedonistic. Likewise, Hall et al. (1991) found that deviant sex offenders, characterized by hedonistic traits such as low frustration tolerance and acting out behaviors, had poor prognosis for change and were more likely to terminate treatment. Hedonism is a characteristic of low Conscientiousness scores. The current study found that Conscientiousness is one of the scales which is able to predict success in treatment. Kalichman and Henderson (1991) ascertained that hostile child molesters, who also exhibited high Scale 4 scores, tended to report positive attitudes toward treatment. However, sex offenders in the current study exhibited similar Scale 4 scores regardless of treatment progress (see Appendix D).

The current data suggest that MMPI-2 and NEO-PI-R scales are able to predict treatment progress. However, Appendix D illustrates that the successful and unsuccessful participants demonstrated similar means on each of the scales included in the

discriminant analyses. Given the similarity in these scores, it is likely that a pattern of scales, rather than any one scale, is a more accurate predictor of treatment success. Most treatment facilities already collect information on the MMPI-2 Scales for their participants. The clinician who has these data available may be in a better position to provide treatment not only to the group as a whole, but to tailor the services provided to the specific needs of each individual in the group. In so doing, it may be possible to provide more effective treatment for sex offenders. Ideally, more tailored interactions would result in lower relapse rates, which is the ultimate goal of treatment with this population.

Limitations of Current Study

Limitations of this study exist in the use of measures and the sample of sex offenders. One of the most obvious limitations of the measures in this study was the use of the Vocabulary Subtest from the Shipley Institute of Living Scale (SIL) to screen for reading level. The advantage of using this measure is that it could be group administered in a maximum of ten minutes. However, this measure does not correlate directly with estimates of reading level. Future studies should utilize an instrument that assesses reading ability more directly.

A second limitation is the limited ability of the NEO-PI-R to assess response styles. This measure has only three questions to address response styles. They are separated from the other items, included only on the score sheet, and are face valid. As a result, they are unlikely to be useful in detecting individuals who are attempting to deceive the test. Schinka, Kinder, and Kremer (1997) have developed three preliminary

validity scales for the NEO-PI-R. These scales are: Positive Presentation Management (PPM), Negative Presentation Management (NPM), and Inconsistency (INC). Schinka et al. (1997) reported that PPM and NPM have alpha coefficients of .56 and .67, respectively. With further validation, these scales should be considered for use in future research.

A third limitation of the study is its generalizability to sex offenders in general. Most of the participants in this study (87.5%) offended exclusively against children. Therefore, the generalizability of the second-order factors to offenders against adults could not be determined by this study. In addition, the participants in this study were on probation for their sexual offenses. The clinical applications of the scales and second-order factors may not be generalizable to incarcerated offenders, who may have committed more serious, violent offenses. It is also possible that the results of this study are not generalizable to offenders with (a) male, or (b) both male and female victims.

Areas for Future Research

Large-scale research is necessary to confirm the findings of this study, especially for the three second-order factors. Confirmatory factor analyses need to be performed to determine the stability of the second-order factors in this study. Future studies should factor analyze the measures that were utilized in this study, as well as other personality and psychopathology measures.

One such possibility for future studies is to use psychopathology measures with less item overlap than the MMPI-2, such as the Personality Assessment Inventory (PAI; Morey, 1991). Measures with less item overlap may provide clearer descriptions of

psychopathological characteristics in sex offenders because individual items will not load on more than one scale. In addition, other methods of assessing psychopathology, such as structured and semi-structured interviews, should also be used in future research. However, the clinical applications of such measures may be difficult to evaluate in light of past research because most treatment and research facilities use the MMPI-2 for the assessment of sex offenders.

Future studies should also examine different methods of assessing personality traits as well. Other multiscale personality measures, such as the EPPS, should also be utilized. As described previously, the EPPS is an inventory of normal personality traits that measures personality on 15 scales and attempts to control for social desirability in a respondent's answers. In addition, other measures of the FFM should be considered. These include the NEO-FFI (Costa & McCrae, 1992a), a 60-item inventory based on the NEO-PI-R; and the Big-Five Inventory (BFI; John, Donahue, & Kentle, 1991), a 44-item inventory designed to assess the FFM.

In addition to self-report personality measures, future studies can use a semi-structured interview designed to assess the FFM. The Structural Interview for the Five-Factor Model of Personality (SIFFM; Trull & Widiger, 1997) is a 120-item structured interview. Unlike self-report measures, higher scores on the SIFFM indicate dysfunction caused by the personality traits.

Different sex offender populations are also necessary to determine the generalizability of the results in this study. Most of the participants in this study were Caucasian males with female victims. Research with sex offenders can assist in

determining the generalizability of these findings. Examples include different ethnicities, female sex offenders, sex offenders against adults, sex offenders with male victims, and incarcerated offenders Moreover, it is possible that sex offenders with more violent offenses (e.g., rape associated with other forms of physical aggression) may have different personality characteristics than sex offenders in general. In addition, research examining personality factors in nonsexual offenders can determine if these factors are exclusive to sex offenders and can compare sexual and nonsexual offenders based on personality and psychopathology characteristics.

<u>Summary</u>

This study set out to explore the possible existence of common factors based on personality and psychopathology traits. Three second-order factors were found: Psychological Distress, Excitement-Seeking, and Social Desirability. Offenders with multiple victims were higher in Psychological Distress and Excitement-Seeking than first-time offenders. Intrafamilial offenders were found to be lower on the Openness facets of Values, Ideas, and Aesthetics, as well as Scales 3 and 0 than Extrafamilial and Mixed offenders. Subject to cross-validation, this study suggested that data readily available to treatment providers, namely Scales K, 5, and 0, are able to predict treatment progress in sex offenders with moderate accuracy. This study has provided a new method of conceptualizing sex offenders with factors consisting of both personality and psychopathology traits. With replication, these results may be generalizable to other populations of sex offenders. This new conceptualization may facilitate understanding sex offenders, as well as the differences between sexual and nonsexual offenders. A more

comprehensive understanding of sex offenders may enable the development of more

effective treatment programs.

Appendix A

Consent Form

I, _____, agree to participate in a study on personality characteristics of sex offenders. I understand that I will take the NEO-PI-R, a self-report measure of personality, and the MMPI-2, one of the measures required by this program. The purpose of this study is to find common features among sex offenders that can be used to improve community supervision and outpatient treatment programs.

I understand the study will take approximately an hour and a half. I also give permission for my file at Professional Associates Counseling and Consultation Center (PACC) to be reviewed for background and treatment information.

I understand that the code number at the top of this form will be assigned to my name. These code numbers will be used only to match answers to the NEO-PI-R with information gathered from the files. When all data is gathered for purposes of this study, any lists matching my name with the code number will be destroyed. Under no circumstances will information resulting from the study identify me or any participants in the study, to the extent possible under the laws of the State of Texas.

As a participant in this study, I understand that there is no known risk or discomfort associated with this research. Also, participants in this study will not be charged the $50 fee usually required for taking the MMPI-2. I also understand that I am free to withdraw my participation in this study at any time. A decision to withdraw from this study will not affect any treatment I receive at PACC.

If I have any questions or problems regarding my participation in this study, I understand that I should contact Josh Briley or Dr. Richard Rogers at the University of North Texas campus at (940) 565-2671.

Signature of Participant	Date

Witness	Date

THIS PROJECT HAS BEEN REVIEWED BY UNIVERSITY OF NORTH TEXAS COMMITTEE FOR
THE PROTECTION OF HUMAN SUBJECTS (phone: 940-565-3940)

Appendix B

Sexual History Code Sheet

<u>Background Information</u>

_____ Physically abused as a child

_____ Sexually abused as a child

_____ Previous mental health treatment

<u>Number of Offenses</u>	<u>over 18</u>	<u>13 – 17</u>	<u>8 - 12</u>
Fondling a minor	_____	_____	_____
Penetration of a minor	_____	_____	_____
Fondling an adolescent	_____	_____	_____
Penetration of an adolescent	_____	_____	_____
Fondling adult	_____	_____	_____
Rape	_____	_____	_____
Date Rape	_____	_____	_____
Exposed self	_____	_____	_____

<u>Number and age of victims</u>	<u>Gender</u>
Below 12 years old	M_____ F_____
13 years to 17 years old	M_____ F_____
Above 18 years old	M_____ F_____

<u>Relationship to Victim</u>

_____ Unknown to participant

_____ Acquaintance

_____ Close friend (boyfriend/girlfriend/child of family friend)

_____ Distant relative (niece/nephew/cousin)

_____ Biological family member (son/daughter)

_____ Stepfamily member (stepson/stepdaughter)

_____ Spouse

Treatment Variables

First year: (Date started _____)

Appointments missed / Total appointments (by month)

1._____ 2._____ 3._____ 4._____ 5._____ 6._____

7._____ 8._____ 9._____ 10._____ 11._____ 12._____

Percent completed (quarterly):

1._____ 2._____ 3._____ 4._____

_____ Polygraphs passed _____ Polygraphs failed _____ Polygraphs due

_____ Notices of Non-Compliance

Second year: (Month / Year _____)

Appointments missed / Total appointments (by month)

1._____ 2._____ 3._____ 4._____ 5._____ 6._____

7._____ 8._____ 9._____ 10._____ 11._____ 12._____

Percent completed (quarterly):

1._____ 2._____ 3._____ 4._____

_____ Polygraphs passed _____ Polygraphs failed _____ Polygraphs due

_____ Notices of Non-Compliance

Third year: (Month / Year _____)

Appointments missed / Total appointments (by month)

1._____ 2._____ 3._____ 4._____ 5._____ 6._____

7._____ 8._____ 9._____ 10._____ 11._____ 12._____

Percent completed (quarterly):

1._____ 2._____ 3._____ 4._____

_____ Polygraphs passed _____ Polygraphs failed _____ Polygraphs due

_____ Notices of Non-Compliance

Additional years: _____ (# of additional years) (Month / Year _____)

Appointments missed / Total appointments (by month)

1._____ 2._____ 3._____ 4._____ 5._____ 6._____

7._____ 8._____ 9._____ 10._____ 11._____ 12._____

13._____ 14._____ 15._____ 16._____ 17._____ 18._____

19._____ 20._____ 21._____ 22._____ 23._____ 24._____

25._____ 26._____ 27._____ 28._____ 29._____ 30._____

31._____ 32._____ 33._____ 34._____ 35._____ 36._____

Percent completed (quarterly):

1._____ 2._____ 3._____ 4._____

5._____ 6._____ 7._____ 8._____

9._____ 10._____ 11._____ 12._____

_____ Polygraphs passed _____ Polygraphs failed _____ Polygraph due

_____ Notices of Non-Compliance

Sexual History Coding Sheet – Addendum

Number of Offenses	over 18	13 – 17	8 - 12
Bestiality	_____	_____	_____
Voyeurism	_____	_____	_____
Necrophilia	_____	_____	_____
Other _____	_____	_____	_____

Appendix C

Professional Associates Counseling and Consultation Center (PACC)

Treatment Plan

PHASE I

Risk Level, Cognitive Distortions, Denial	<u>Percent Completed</u>

1. Initial Relapse Prevention Plan, Notebook Section (one week)   3%[1]

2. Developmental History, Social and Sexual history (one week)   7%

3. Obsessive/Compulsive Behavior. <u>Out of the Shadows</u> (one month)   10%

4. Motivation. <u>Who Am I and Why Am I in Treatment</u> (one month)   14%

5. Initial Evaluation. (individually specified time limit)   17%

   a. Sexual preference (Abel Assessment)

   b. Psychological (Minnesota Multiphasic Personality Inventory)

   c. Cognitive Distortions, denial, motivation (Multiphasic Sex Inventory II)

   d. Honesty, community safety (Polygraph)

6. Progress Review (six months)

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[1] These percentages were assigned by PACC to designate the cumulative proportion of the program completed.

PHASE II

Cognitive Distortions, Impulse Control, Denial	<u>Percent Completed</u>

1. Cognitive Distortions I. <u>Inside the Criminal Mind </u>(six weeks)   22%

2. Cognitive Distortions II. Notebook Section II. (one month)   26%

3. Impulse Control I. Covert sensitization audio tapes (six weeks)   30%

4. Aggressive Behavior. <u>Men and Anger</u> (six weeks)   34%

5. Progress Review (six months)

PHASE III

Relapse Prevention, Impulse Control	<u>Percent Completed</u>

1. Deviant Behavior Cycle. <u>Why Did I Do It Again?</u> (two months)   39%

2. Impulse Control II. Ammonia Aversion audio tapes (one month)   43%

3. Sexual Assault. Notebook Section III. (one month)   47%

4. Measurement of Progress (individually specified time limit)   51%

   a. Sexual preference (Abel Assessment)

   b. Psychological (Millon Clinical Multiaxial Inventory III)

   c. Distortions, denial, motivation (Multiphasic Sex Inventory II)

   d. Honesty, community safety (Polygraph)

5. Progress Review (six months)

PHASE IV

Victim Empathy, Relapse Prevention   <u>Percent Completed</u>

1. Victim Trauma. <u>Just Before Dawn</u> (two months)   56%

2. Relapse Prevention Plan. <u>How Can I Stop?</u> (two months)   60%

3. Victim Empathy I. Notebook Section IV (six weeks)   64%

4. Restitution. For victims of violent crime (no time limit)   68%

5. Progress Review with chaperone (six months)

PHASE V

Arousal Conditioning, Victim Empathy, Relapse Prevention   <u>Percent Completed</u>

1. Arousal Conditioning. Satiation tapes for deviant arousal (two months)   71%

2. Victim Empathy II. <u>Empathy and Compassionate Action</u> (six weeks)   74%

3. Victimization. <u>Silently Seduced</u> (one month)   77%

4. Victim Empathy III. Notebook Section V (six weeks)   80%

5. Lifetime Relapse Prevention Plan. (one month)   83%

6. Measurement of Progress (individually specified time limit)   86%

     a. Sexual preference (Abel Assessment)

     b. Psychological (Minnesota Multiphasic Personality Inventory)

     c. Distortions, denial, motivation (Multiphasic Sex Inventory II)

d. Honesty, community safety (Polygraph)

7. Progress Review (six months)

PHASE VI

Interpersonal Skills, Healthy Sexuality	<u>Percent Completed</u>
1. Skills Training. (six months)	90%
2. Healthy relationships. <u>Getting the Love You Want</u> (six weeks)	95%
3. Healthy sexuality. <u>Love Life For Every Married Couple</u> (six weeks)	100%
4. Progress Review (six months)	

RECOMMENDATIONS BASED ON INDIVIDUAL TREATMENT NEEDS

1.

2.

3.

4.

Appendix D

Mean and Standard Deviations of MMPI-2 and NEO-PI-R Scales Predicting Treatment

Progress in Outpatient Sex Offenders

Scale	Unsuccessful	Successful
Neuroticism	56.19	61.14
	(10.35)	(7.70)
Conscientiousness	39.29	44.62
	(9.76)	(10.78)
Scale 4	60.38	61.43
	(8.75)	(8.47)
Scale 5	43.33	48.76
	(8.63)	(7.78)
Scale 0	46.71	54.05
	(9.67)	(11.28)

Note: Values in parenthesis indicate standard deviations.

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