

AN ABSTRACT OF THE THESIS OF

Scott C. Wilson for the Master of Science Degree
in Psychology presented on March 30, 1994

~~Title: MMPI-2 Profile Differences Among Sex Offender Groups~~

Abstract approved: Marcos Pelle

The purpose of this present study was to investigate

the differences between the MMPI-2 profiles of male incarcerated offenders. The groups included 25 rapists, 25 child molesters, 25 rapists convicted of additional crimes, and 25 non-violent offenders. The profiles of the sex offenders were obtained at a maximum security prison, while the profiles of the non-violent offenders were collected at a medium security institution. Results indicated that there was an overall significant difference among the four groups on the MMPI-2. Scale to scale significant differences were found between the four groups on Scales F, 4, 6, 7, 8, 9, and 0. Rapists had significant elevations (T-scores of 65 and greater) on Scales F, 4, 6, and 8. Child molesters produced significant elevations on Scales F, 4, 6, 7, and 8. Scale 4 was the only significantly elevated scale for rapists convicted of additional crimes. Non-violent offenders produced no elevated scale scores in their mean profile. The potential implications, limitations, and possible meanings of these results are discussed.

MMPI-2 PROFILE DIFFERENCES AMONG SEX OFFENDER GROUPS

A Thesis

Presented to

the Division of Psychology and Special Education

EMPORIA STATE UNIVERSITY

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

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May 1994

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ACKNOWLEDGEMENT

First and foremost I would like to thank my parents, Chuck and Pat Wilson, for giving me the courage, independence, and love to pursue my goals. Next, I would like to thank Bob Petersen for giving me the chance to test and expand my limits as a professional, as well as allowing me to conduct my research under his supervision. I would also like to thank Dr. Sharon Karr for her understanding in letting me set my own pace; Dr. Cooper B. Holmes for his support, knowledge, and supervision; and Dr. Lisa Reboy for her suggestions on this thesis.

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CHAPTER 1

INTRODUCTION

Assessment of the criminal sexual offender is an important and often difficult task. The importance stems from areas such as treatment, placement and protection of society. In order to treat the sex offender, an assessment is needed to ascertain if any psychological disorders exist and to understand the role of any environmental influences. Certain sex offenders are often threatened by others in the prison population, are hazards to themselves, or are dangerous to others. In these cases, assessment becomes important in order to establish what type of living arrangements and security considerations are needed within the prison. Finally, assessment is also important to see if the individual is or will continue to be dangerous to the society or community in which he or she lives. The parole board usually requires an accurate diagnosis before it will consider parole of the individual.

Sex offenders, as a group, are heterogeneous in many facets. These facets include motivation, socioeconomic level, education, behavioral patterns, and personality characteristics. In an attempt to understand these characteristics in sex offenders, many studies have been completed using the Minnesota Multiphasic Personality Inventory (MMPI).

Review of the Literature

The Minnesota Multiphasic Personality Inventory-2 (MMPI-2)

The MMPI is a paper and pencil administered test developed in 1940 by Hathaway and McKinley. Originally, the MMPI was created to diagnose specific disorders in individuals. The inventory contains 566 true and false items that make up three validity scales, ten clinical scales, and numerous subscales (Graham, 1977).

The validity scales are used to locate test-taking attitudes in individuals taking the test (Graham, 1990). The Cannot Say (?) Scale represents the total number of items that are not answered on the inventory. Thirty or more unanswered items renders the profile invalid and no further interpretation should occur (Graham, 1990).

The Lie (L) Scale is used to detect outright attempts by the test taker to place himself or herself in a positive light (Graham, 1990). Higher scores on this scale may point to a defensive test-taking attitude, over conventionality, or high social conformity (Graham, 1990). Low scores may indicate individuals who have knowledge of shortcomings and are honest with themselves (Graham, 1990).

Scale F was designed to detect deviant ways of responding to test questions (Graham, 1990). High scores on this scale can indicate faking bad, answering all items true, or random responding (Graham, 1990). A high Scale F may also relate to elevations in clinical Scales 6 and 8.

(Graham, 1990). Low scores indicate social conformity or denial of existing psychological concerns (Graham, 1990).

Scale K was developed as a more subtle way to detect faking good, the exaggeration of psychological concerns, or test-taking defensiveness (Graham, 1990). A high Scale K suggests a denial of concerns while a low Scale K indicates an individual who is purposefully placing himself or herself in an unfavorable light (Graham, 1990). A profile should be considered invalid if more than 30 items are omitted or if there is a T-score greater than 65 on one or more of Scales L, F, or K (Graham, 1990).

The clinical scales were originally developed to diagnose specific disorders (Graham, 1990). An indication of psychopathology on a scale may occur as the T-score for that scale increases over 65 or decreases below 50 (Graham, 1990). As the test underwent extensive use and experimentation, it was found that individual scales were not entirely useful or accurate in diagnosing mental illness. Therefore, the names of the clinical scales were converted to numbers and interpretation of the MMPI shifted to patterns, which seemed more accurate (Graham, 1990).

Scale 1 (Hypochondriasis) was designed to identify individuals with a fear of disease and preoccupation with the body (Graham, 1990). High scores (T-scores greater than 65) represent individuals who have increasing bodily concerns while low scores indicate individuals with no

bodily concerns (Graham, 1990).

Scale 2 (Depression) was originally designed to test symptomatic depression (Graham, 1990). High scores on Scale 2 indicate depressive symptoms in the individual and low scores point to an absence of those symptoms (Graham, 1990).

According to Graham (1990), Scale 3 (Hysteria) was developed to identify somatic complaints, denial of psychological concerns, emotional troubles, and social uneasiness. High scores describe people who react to stress by avoidance and development of physical complaints (Graham, 1990). Low scorers on this scale may be seen as conventional, conforming individuals who often have blunted affect and are limited socially (Graham, 1990).

Psychopathic individuals who have amoral or asocial personalities can be identified by Scale 4 (Psychopathic Deviate) (Graham, 1990). High scores on this scale indicate an impulsive individual who has difficulty abiding by the rules and mores of society. Low scores represent a conventional and conforming individual who is honest and enjoys security (Graham, 1990).

Scale 5 (Masculinity-Femininity) was first developed to identify homosexuality (Graham, 1990). Because there is a reluctance to use this scale to identify homosexuality, it is generally used to indicate masculine or feminine traits in the test taker. High scores for men indicate a lack of stereotyped male interests (Graham, 1990). High scores for

women indicate a lack of female stereotyped thoughts and actions (Graham, 1990). Low scores in men represent extreme masculinity and low scores in women suggest extreme femininity (Graham, 1990).

Scale 6 (Paranoia) identifies individuals who have paranoid concerns (Graham, 1990). High scores on this scale (especially a T-score of 75 or more) are obtained from individuals who have psychotic behaviors (Graham, 1990). Moderate and low scores in normal persons suggest a well balanced person, and low scores (T-score less than 35) in psychotic patients may indicate a serious psychotic disorder (Graham, 1990).

Scale 7 (Psychasthenia) is used to identify obsessiveness, compulsiveness, and psychological concerns (Graham, 1990). A high score on Scale 7 suggests obsessive thinking, ritualistic behaviors, and feelings of insecurity (Graham, 1990). A low score points to a well adjusted and confident person (Graham, 1990).

Individuals who have been diagnosed as schizophrenic can be identified by Scale 8 (Schizophrenia) (Graham, 1990). High scoring individuals have symptoms marked by confusion, disorganization, disorientation, and occasionally, hallucinations. Extreme high scores (T-scores greater than 100) indicate people who may be faking bad (Graham, 1990). Low scores identify well adjusted and good natured individuals who avoid emotional concerns (Graham, 1990).

Scale 9 is used to identify individuals with elevated mood, accelerated speech, irritability, and a lack of focus (Graham, 1990). High scores may indicate the manic phase of a bipolar disorder. This disorder is marked by overactivity, lack of focus, unrealistic thoughts of self, and excessive amounts of energy. Low scores point to low energy and activity levels and may be accompanied by depression (Graham, 1990).

Scale 0 (Social Introversion) was designed to test the individual's reactions to social situations (Graham, 1990). High scorers are characterized by social introversion and are seen as insecure in social situations (Graham, 1990). Low scorers tend to be more extroverted, sociable, outgoing, and talkative (Graham, 1990).

Due to the lack of supporting evidence on single scale diagnosis, two and three point codes, which look at peak elevations of combined scales, have been developed and seem more accurate in assessment (Graham, 1990). The MMPI was revised in 1989 because of some serious concerns that included questions about the adequacy of the original standardization sample, item content, and the limited coverage of the item pool (Graham, 1990).

Butcher and Pope (1992) stated the goals of the MMPI restandardization were (a) to develop a new, more representative normative sample, (b) to revise obsolete items and add relevant items, (c) to maintain the validity

and clinical scales, (d) to develop new norms that reflect clinical problems, (e) to collect new clinical data for changes in items, (f) to develop new scales to include concerns not addressed by the original test, and (g) to develop an inventory for adolescents.

The MMPI-2 normative sample included 1,462 women and 1,138 men representing demographic data based on the United States 1980 Census (Butcher & Pope, 1992). Eighty-two items were rewritten or reworded to make the inventory more up-to-date (Graham, 1990). The validity and clinical scales were maintained, new norms were developed to address current clinical concerns, and several new subscales were developed to help answer those new clinical concerns (Graham, 1990). The Minnesota Multiphasic Personality Inventory-A (MMPI-A), an inventory for individuals under the age of 16, was developed (Graham, 1990).

The MMPI Compared with the MMPI-2

Ben-Porath and Butcher (1989a) correlated the 82 reworded or rewritten items and found that no significant differences occurred between the two sets of items. This suggests the two forms of the test are compatible.

Ben-Porath and Butcher (1989b) compared the MMPI and MMPI-2 scales and profiles of 199 women and 178 men. Subjects completed the MMPI-AX, the 704 item experimental form used in restandardization, and the original form of the MMPI. The subjects were randomly assigned to one of two

groups. Group one was given the MMPI twice and group two took the MMPI once and the MMPI-AX once. No significant differences were found in the correlations of the men on the original MMPI and the experimental form. For women, Scale F was found to be significantly higher on the MMPI-AX than on the MMPI. Modifications of the MMPI's clinical scales and lowering the top part of the normal range (from a T-score of 70 to one of 65) produced no significant differences between the MMPI and the experimental form. Ben-Porath and Butcher (1989b) concluded the two forms of the inventory were comparable.

Ward (1991) found the men and women's T-scores on Scales L and F of the MMPI-2 became increasingly different in comparison to the MMPI as the elevations on both increased. Women's MMPI-2 scores were a few points lower on the MMPI-2 than the MMPI, but a reverse trend occurred with higher elevations on Scales 3, 4, 5, and 7. For men, Scale 5 scores were much lower on the MMPI-2 and differences occurred with high elevations on Scales 1, 2, and 8 for the MMPI-2. Ward suggested these differences could be overcome by plotting profiles for both tests to detect differences. However, he warned of the danger of relying on the old profiles which should be eliminated as soon as possible.

Strassberg (1991a) voiced concerns about the MMPI-2's new normative sample and the new method for deriving T-scores. MMPI-2 profiles may be significantly different

than MMPI profiles. Hence, future MMPI-2 users will be unable to use the extensive pool of MMPI research. The user needs awareness of the discrepancies until more research is completed on the MMPI-2.

Ben-Porath and Graham (1991) responded to Strassberg's concerns by indicating the changes in the MMPI-2 were necessary for improvement and the two forms were similar. Strassberg (1991b) countered by indicating that individuals who use the MMPI-2 should still be concerned with the new normative sample and the code-type incongruences it causes. A code-type is a way of identifying an MMPI profile by using more than one clinical scale at a time. Strassberg expressed concern about the frequency of incongruences and the best strategies to deal with them.

The History of the MMPI and Sex Offenders

Sex offender research has usually labeled the sex offender as a rapist, child molester, or exhibitionist. The rapist's victims were usually adult women, the child molester's victims were girls or boys under the age of 17, and the exhibitionist's victims were usually adults. The following sex offender studies indicate the historical changes in sex offenders' MMPI profiles.

Wattron (1958), while studying the Marsh-Hilliard-Liechti MMPI Sexual Deviation Scale, found an elevated Scale 4 in the mean profile of sex offenders. This scale was the only one found to be significantly elevated,

while others remained moderate, indicating no other pathology. Wattron's findings were supported by other researchers who found the same results (Cabeen & Coleman, 1961; Swenson & Grimes, (1958).

Seventeen years later McCreary (1975) found the severity of psychopathology among exhibitionists increased as the number of past exhibitionistic acts increased. In contrast, Smukler and Schiebel (1975) found no elevated scales in the MMPI profiles of exhibitionists, resulting in no labels of pathology.

Rader (1977) compared three groups of offenders involved in sex crimes, physical violence, or both. The sample consisted of 129 men who were arrested for indecent exposure, rape, or assault. Rapists scored higher than exposers on Scales F, 1, 2, 3, 4, 6, and 0 and higher than assaulters on 4, 7, and 0. Because of these findings, Rader concluded rapists' profiles indicated more psychological disturbance than exposers' or assaulters' profiles.

Armentrout and Hauer (1978) reported an 8-4 profile (a code-type indicating Scales 8 and 4 are significantly elevated) for rapists, an elevated Scale 4 profile for child molesters, and a moderately elevated 4-8 profile for non-rapist sex offenders. Armentrout and Hauer concluded rapists were driven by anger, alienation, and resentment.

Langevin, Paitich, Freeman, Mann, and Handy (1978) supported earlier work done on exhibitionists by showing no

elevations and no pathology in that group. These results were supported by a follow-up study conducted a year later (Langevin, Paitich, Ramsey, Anderson, Kamrad, Pope, Geller, Pearl, & Newman, 1979).

A study of 92 identified sex offenders using the MMPI found three similar profiles (Anderson, Kunce, Joseph, & Rich, 1979). Type one was characterized by a high Scale 8 and a moderately high Scale F. Type two had a two-point code of 4-8. Type three had a two-point code of 2-4. Type one offenders had poor vocational adjustment and their sex offenses were more blatantly degrading to the victim. Type two subjects were labeled as sexually deviant. Type three subjects had a lower education level, were older, and had more serious crimes than the other two types.

Panton (1979) compared the MMPI profiles of 35 incestuous father and 28 non-incestuous child molesters. Scale 4 was the highest for both groups. Scales 2, 3, and 7 were elevated toward pathology. Scale 2 was the second highest for both groups. Scale 9 was the lowest. Panton attributed this to both groups' non-aggressive, self-alienating, anxiety driven lifestyle. The incestuous fathers were more introverted than the child molesters and the child molesters functioned at a lower level of sexual maturity than the incestuous fathers.

Research in the early 1980s on child molesters, rapists, and other sex offenders found no significant

differences between the three groups' MMPI profiles (Quinsey, Arnold, & Pruesse, 1980). There were no significant elevations on any of the scales of the three groups' profiles, suggesting no pathology.

Kirkland and Bauer (1982) found 90% of incestuous fathers had at least two MMPI scales elevated over a T-score of 70. The study included 10 randomly selected subjects with a mean age of 36.3 years and 12.2 years of education. Half of the subjects were fathers and the other half were stepfathers. Scales 2, 4, 7, 8, and 0 were elevated significantly. There was a significant difference between the incest group and the control group on Scales 4, 7, and 8.

Groff and Hubble's (1984) work on father-daughter and stepfather-daughter incest found small peaks on Scales 2 and 4 for each group. It was also found that each group showed higher levels of introversion and problems with self-esteem when compared to nonincestuous controls. No significant differences were noted between the two groups.

The MMPI Scale 4 was used as a predictor of criminal and antisocial behavior for male exhibitionists (Forgac, Cassel, & Michaels, 1984). The sample consisted of 84 males arrested for exposure of the genitals. Their mean age was 27 years. Eighty-four percent of the subjects were Caucasian, 13% were African-American, and 3% were Hispanic. Nearly 50% were married, 41% were single, 8% were divorced,

and 3% were separated. Results indicated pure exhibitionistic individuals scored low on Scale 4, whereas exhibitionists with criminal records and activities scored higher. Specifically, elevated Scale 4 scores were related to antisocial acting out, nonexhibitionistic criminal behavior, and total criminal behavior.

Lanyon and Lutz (1984) theorized individuals who have denied their sex offense activities would score higher on the MMPI scales which indicated defensiveness. The study involved 90 men over the age of 21, who had been convicted of a felony sex offense. The results indicated individuals with partial, as well as full denial of their sex offenses, scored significantly higher on the validity scales than did admitters.

Hall, Maiuro, Vitaliano, and Proctor (1986) reexamined the ability of the MMPI to differentiate a sex offender population. The mean age for 406 male sex offenders was 35.8 years. Three hundred eighty-five were white and 21 were nonwhite. One hundred seventy-six were married, while the remainder were unmarried. Four separate multivariate analysis of variances were run at the .01 alpha level. Only Scale 5 of the profiles of offenders' with male victims were significantly elevated when compared with the profiles of men with female victims. There was also an inverse relationship between victim age and elevations on Scales F, 7, and 8 (as age increased, the elevations decreased). The

overall mean two-point code was 4-8. Sixty-seven percent of the sample had more than two scales significantly elevated.

Walters (1987) conducted a study with the MMPI in a military prison on 28 child molesters, 35 rapists, and 75 nonsex offenders. His results indicated child molesters tended to be Caucasian, older, better educated, and married or divorced when compared to nonsex offenders. The rapist group had a higher percentage of blacks than the nonsex offender group. In addition, the rapist group had fewer outpatient psychiatric contacts than child molesters. The MMPI failed to differentiate between rapists and child molesters and between rapists and nonsex offenders. Compared to the nonsex offenders, child molesters had a significant elevation on Scale 5.

In reviewing the MMPI literature on sex offenders, Levin and Strava (1987) found pedophiles (child molesters) were more introverted than rapists. They also found rapists and heterosexual child molesters were low in aggression, had feelings of guilt, and were self-abasing. Homosexual child molesters were high in nurturance. The reviewers concluded sex offender groups were heterogeneous and varied on critical dimensions.

Erickson, Luxenberg, Walkek, and Seely (1987) examined the variety of psychological characteristics that occurred in a group of 568 sex offenders. Nineteen percent of the profiles were considered normal (T-scores below 70 on all

scales). Twenty-nine percent had at least one score that fell between a T-score of 70 and 80 (suggesting moderate pathology). Fifty-one percent of the subjects had at least one scale elevated over a T-score of 80. Scale 4 was included in 59% of the two-point codes, Scale 8 in 29% of them, and 13% had Scale 9 included as one of the two-point codes. Sixteen percent had a peak on Scale 5. A 4-8 two-point code was more prevalent in sex offenders than in the general population sample. In conclusion, only Scale 4 had a significant elevation. The profiles where 4-8 was prevalent indicated individuals who were oddly impulsive and had difficulty with authority. These findings did not support any MMPI profile as typical for any part of the sex offender population.

Kalichman, Craig, Shealy, Taylor, Szynowski, and McKee (1989) found five profile types in a group of 127 incarcerated adult male rapists with a mean age of 29.2 years and a mean education level of 10.3 years. Approximately 69% of the sample was black. Profile type one had peaks on Scales 4 and 9, but none had a T-score over 70. Profile type two had an elevated Scale 4 over 70. Elevations on Scales 1, 2, 4, 6, and 8 characterized profile type three. Profile type four had high elevations on 4, 8, and 9 with moderate elevations on 6 and 7. Finally, profile type five had elevations on Scales 7, 8, and 9. Profile type one subjects usually committed their crime in the

course of another crime and 18% of them knew their victim before the crime. Profile type two was the group least likely to know their victims and the least likely to commit another crime during the rape. Profile type three subjects were most like the general criminal population in their profiles and were more likely to commit the rape during another crime. Profile type four had a history of substance abuse and frequently thought about rape. They had a wide range of sexual deviances, committed rape during another crime, and had possible gender conflicts or passive acting out as indicated by a high Scale 5. Lastly, profile type five was the most deviant of the types. These individuals usually had disturbed thought processes marked by high defensiveness as indicated by a high Scale F. They also tended to be substance abusers and were aroused by thoughts of rape. These findings were further supported by Kalichman and associates (Kalichman, 1990; Kalichman, Szymowski, McKee, Taylor, & Craig, 1989).

Langevin, Wright, and Handy (1989, 1990) used the MMPI to characterize 42 child molesters, 28 sexual aggressives, 77 incest offenders, and 10 exhibitionists. Various subscales of the MMPI were used. Of the 125 subscales examined, 61 had an alpha reliability over .70, suggesting that a large amount of the MMPI derived subscales could be considered internally consistent. Only the Sexual Deviation Scale, however, was significant enough to be considered for

further clinical use with these populations. The Sexual Deviation Scale discriminated between repeat and first-time sex offenders. The Sexual Deviation Scale is a subscale of the MMPI consisting of 100 items. The subscale was developed by contrasting responses from a hospitalized group of sex offenders and a group of college students in an effort to identify deviant sexual behavior (Lanyon, 1993). The Langevin et al. (1989, 1990) studies supported the hypothesis that many of the MMPI derived subscales can be useful in the clinical assessment of the sex offender population.

Grossman and Cavanaugh (1989) used the MMPI to find out if sex offenders minimize psychiatric symptoms. Their findings were based on the MMPI profiles of 53 sex offenders. Twenty-three were facing legal charges and would not admit to their crime and 30 were facing no legal charges although they admitted to sexually deviant behavior. Nonadmitters showed more psychopathology than the subjects who faced charges. The researchers also found individuals with no legal charges against them showed more psychopathology than individuals who faced charges. The individuals with increased psychopathology had peaks on Scales 2, 3, 4, 7, and 8.

In a related study, Grossman and Cavanaugh (1990) examined the MMPI scores of 53 offenders, ages 17 to 77 years, to investigate manifestations of psychopathology and

denial. Subjects who denied their criminal behavior were more likely to deny or minimize any psychological concerns. Results from this study supported Grossman and Cavanaugh's earlier findings that showed subjects with no legal charges had higher psychopathology.

Twenty-six percent of 81 child molesters with a mean age of 34.4 years had a F over 70 (Hall, 1989). Hall reported the 10 most common two-point codes in descending order were: 4-8, 2-4, 4-5, 3-4, 7-8, 6-8, 1-3, 2-8, 4-0, and 4-9. Scales 4, 2, and 8 were frequently the highest elevated scales. The overall profile for the sample was marked by elevations on Scales 2, 4, 7, and 8. Hall concluded the MMPI may be limited in characterizing sex offenders.

Lanyon (1993) investigated the validity of five MMPI subscales dealing with sexually deviant behavior. The subscales were the Pedophile (Pe) Scale, the Sexual Deviation (Sv) Scale, the Aggravated Sex (Asx) Scale, the Sexual Morbidity (Sm) Scale, and the Impotence and Frigidity (IF) Scale. The study was based on 130 sex offenders and 239 male controls. The results showed that sex offenders differed from controls on the Pe, Sv, and Sm Scales. Differences on the three subscales emerged regardless of comparable defensiveness and psychopathology among the two groups. In addition, differences on the same three subscales were found between defensive nonadmitting sex

offenders and the defensive controls.

Non-Violent Offenders' MMPI Profiles

Quinsey et al. (1980) analyzed the MMPI profile differences among rapists, child molesters, and other sex offenders. They also included research on violent and non-violent offenders. They concluded the MMPI profiles of the two groups were not significantly different from each other.

Langevin, Paitich, Orchard, Handy, and Reassign (1982) compared 109 murderers, 38 non-violent offenders, and 54 normal controls. The murderers and non-violent offenders scored higher than the normal controls on Scales F, 4, 6, and 8 and lower on Scale K. The murderers scored higher than the other two groups on Scales 1 and 3. Only the murderers' Scale 3 scored significantly higher than the other two groups. These results suggest murderers showed more pathology than the normal controls, but they did not differ from no-violent offenders.

Henderson (1983) found little difference between 87 non-violent offenders and 108 of their violent counterparts. Non-violent offenders tended to be less pathological, less introverted, anxious, and hostile than the violent offenders. Pre-trial assessments indicated no significant differences between the MMPI profiles of non-violent and violent offenders (Valliant, Asu, Cooper, & Mammola, 1984).

Langevin, Ben-Aron, Wortzman, Dickey, and Handy (1987)

investigated neuropsychological functioning, diagnosis, and substance abuse in violent and non-violent offenders. They found no differences between the MMPI profiles of murderers, assaulters, or non-violent offending controls. Despite the lack of differentiation, significant elevations of T-scores greater than 70 were present, indicating possible pathology in each group.

Twenty percent of 35 violent offenders and 12% of 32 non-violent offenders had MMPI profiles with 4-8 two-point code types (Fraboni, Cooper, Reed, & Saltstone, 1990). These results indicated no significant differences between violent and non-violent offenders when using the MMPI two-point code types.

Summary

In summary, many characteristic differences have occurred in the sex offender population over the years. In early testing, little or no significant elevations occurred in the MMPI profiles of sex offenders. Recently, significant elevations on more scales have begun to appear.

Wattron (1958) found a significantly elevated Scale 4 on the MMPI profiles of sex offenders. During the 1970s, studies showed conflicting results on studies of exhibitionists. One found pathology (McCreary, 1975) and the other found no pathology (Smukler & Schiebel, 1975). During the same decade, studies found a two-point code of 8-4 for rapists (Rader, 1977) and an elevated Scale 4 on

profiles of child molesters (Armentrout & Hauer, 1978).

In the 1980s, more conflicts began to emerge between studies. Some research showed child molesters with elevated scores on Scales 2, 4, 7, 8, and 0 (Kirkland & Bauer, 1982). Other research showed only an elevated Scale 5 for child molesters (Walters, 1987).

In the late 1980s and early 1990s, sex offender profiles became more heterogeneous. One study found an elevation on Scale 5 for sex offenders (Erikson et al., 1987), while another found indications of elevated scores on Scales 2, 3, 4, 7, and 8 (Grossman & Cavanaugh, 1989). Rapists had elevated scores on Scales 1, 2, 4, 6, 7, 8, and 9 (Kalichman, 1990). Finally, child molesters had elevated scores on Scales 2, 4, 7, and 8 (Hall, 1989).

Overall, it appears rapists have had elevated scores on Scales 1, 2, 4, 6, 7, 8, and 9. Exhibitionists, on the other hand, appeared to have no elevations or low to moderate elevations on Scale 4. Child molesters seemed to have the elevated scales of 4 and 5, with moderate elevations on 2, 3, and 7. Lastly, non-violent offenders showed no significant differences when compared to their violent cohorts (Fraboni et al., 1990; Henderson, 1983; Langevin et al., 1987; Quinsey et al., 1980; Valliant et al., 1984).

The differences in the MMPI sex offender research could be due to various factors such as changing times, changing

attitudes and values in society, and/or differences in research techniques. Whichever of these reasons may be the cause, further research is warranted to explore these differences.

Purpose of the Study

The purpose of this study was to investigate the differences in the MMPI-2 scores among incarcerated male sex offender groups and non-violent offending controls. The four groups studied were individuals convicted of rape and aggravated sodomy only; individuals with rape, aggravated sodomy, and other criminal convictions; individuals convicted of child molestation (including incest); and individuals convicted of non-violent offenses.

Exhibitionists were excluded from this study due to their limited number in the incarcerated sex offender population.

CHAPTER 2

METHOD

Subjects

The 100 male subjects for this study included those who were incarcerated for criminal sexual offenses and non-violent offenses at facilities of a midwestern state's department of corrections. The subjects were divided into four groups of 25 each: rapists (those who have been convicted of rape only); rapists who have been convicted of rape and other charges (rapists plus); child molesters (those who have been convicted of child molestation or incest); and non-violent offenders (those who have been convicted of crimes where no weapon was used against another person). Non-violent offenders were included in this study in order to provide a control group to compare with the sex offender groups. The sex offenders used in this study were located at a maximum security facility, while the non-violent offenders were found at a medium security facility. The offense type information was obtained through the department of corrections criminal files and records.

Instrument

The MMPI-2 is a personality based pencil and paper test. It has 567 true and false items that are divided into 3 validity scales, 10 clinical scales, and numerous subscales.

Graham (1990) suggested the research base that

supported the reliability and validity of the MMPI would also support the MMPI-2, due to the continuity between the two forms of the inventory. With a one-week interval, the test-retest reliability for males in the normative sample of the MMPI-2 ranged from .67 (on Scale 6) to .92 (on Scale 0) (Graham, 1990). In comparison, the original normative sample on the MMPI had a test-retest reliability ranging from .70 to .80 for the same time interval (Graham, 1990). In addition, the internal consistency of the MMPI-2 for the same male normative sample ranged from .34 to .82 (Graham, 1990). Graham reasoned that the wide differences between the internal consistency estimates exist due to the lack of concern for internal consistency for the original sample.

The congruence validity between the MMPI and the MMPI-2 appears to be adequate. The agreement of elevated scores (categories ranged from none over 70 to scores over 100) between the two forms ranged from 78% to 84% (Graham, 1990). The high congruence percentages suggest that the research body of the MMPI can be used on the MMPI-2, further supporting the validity of the MMPI-2. External correlates for the MMPI-2 clinical scales were taken in addition to the congruence validity. The findings of these correlates were similar to those on the original MMPI, implying validity of the new instrument (Graham, 1990).

Procedure

Permission to conduct the research and gather the

MMPI-2 profiles of the subjects was obtained from a midwestern state's department of corrections following established policy and procedures. In addition, permission was obtained from the Emporia State University Human Subjects Review Board.

Sex offenders and non-violent offenders without current MMPI-2 profiles were asked to volunteer for testing and to complete a consent form. Current is defined as MMPI-2 profiles from January of 1991 to the present. Sex offenders and non-violent offenders with current MMPI-2 profiles were also asked to complete a consent form. Testing took place in the correctional facilities. After instructions were read, subjects were asked to complete the inventory. The inventories were scored using standard hand-held scoring templates. Only nonrandom profiles with fewer than 30 omitted items were accepted for inclusion into the research. Only the L, F, K, and the 10 clinical scales were studied.

Statistical Analysis

The MMPI-2 profiles were analyzed through a 4 by 13 multivariate analysis of variance (MANOVA). Specific differences were obtained through the use of univariate analysis of variance (ANOVA). The MANOVA and ANOVA were used in order to provide significant statistical power and speed of processing to this study. A MANOVA is the appropriate statistical analysis for comparing more than one group on multiple dependent variables. Preference for use

of the MANOVA is based on the following four reasons (Stevens, 1990):

1. The MANOVA controls Type I error rate.
2. MANOVAs incorporate important information, such as correlations among dependent measures.
3. Small differences on each variable may combine in a MANOVA to produce a reliable overall difference.
4. The multivariate approach is more powerful than the univariate approach in detecting differences among groups.

CHAPTER 3

RESULTS

Means and standard deviations of the 75 sex offenders and 25 non-violent offenders are reported in Table 1. The multivariate analysis of variance (MANOVA) involving the four groups, three validity scales and ten clinical scales showed an overall significance: $F (36, 1247) = 2.08$, $p < .001$. The hypothesis concerning the statistically significant differences between the four groups was supported.

Univariate comparisons were computed to compare the groups on each scale. There were no significant differences found between the four groups on Scales L, K, 1, 2, 3, and 5. Significant differences were found between the four groups on Scale F ($\Omega^2 = .17$, $F [3, 96] = 7.99$, $p < .0001$), Scale 4 ($\Omega^2 = .13$, $F [3, 96] = 6.10$, $p < .0001$), Scale 6 ($\Omega^2 = .10$, $F [3, 96] = 4.76$, $p < .001$), Scale 7 ($\Omega^2 = .11$, $F [3, 96] = 5.35$, $p < .001$), Scale 8 ($\Omega^2 = .17$, $F [3, 96] = 7.77$, $p < .0001$), Scale 9 ($\Omega^2 = .08$, $F [3, 96] = 3.89$, $p < .01$), and Scale 0 ($\Omega^2 = .04$, $F [3, 96] = 2.56$, $p < .05$).

In order to find specific differences between the four groups, the Tukey-HSD (honestly significant difference) procedure, a conservative t -test, was run on each of the scales where a significant difference was found between groups. On Scale F specific differences were found between rapists and rapists plus, rapists and non-violents, child

Table 1

Means and Standard Deviations on MMPI-2 Validity and Clinical Scales for Sex Offenders and Non-Violent Offenders

	Groups							
	Rapists		Molesters		Rapists Plus		Non-Violent	
MMPI-2 SCALES	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
L	58.28	13.67	58.36	10.84	60.72	12.88	59.80	09.12
F	67.60	23.69	68.68	16.52	54.80	09.15	50.28	11.87
K	50.64	08.50	49.04	11.43	55.88	10.64	51.52	11.75
1	58.68	14.14	60.52	16.12	55.80	07.93	52.04	09.23
2	62.52	16.32	63.08	15.59	56.40	08.52	54.68	07.78
3	57.04	12.39	58.08	17.75	53.60	08.04	51.80	09.00
4	71.92	13.08	73.24	12.34	70.40	08.75	60.72	11.36
5	49.52	10.74	51.84	10.90	46.40	07.92	44.96	09.18
6	65.12	21.00	67.48	17.93	55.28	12.83	52.96	12.16
7	62.04	15.86	65.12	17.57	53.88	07.61	52.72	08.51
8	69.92	19.92	67.24	18.46	56.28	07.96	51.58	12.74
9	62.40	15.02	52.80	11.06	53.60	10.77	52.96	10.99
0	53.20	12.30	58.92	14.50	52.04	11.19	50.00	14.39

molesters and rapists plus, and child molesters and non-violents. For Scale 4 the specific differences occurred between rapists and non-violents, child molesters and non-violents, and rapists plus and non-violents. Specific differences between rapists and non-violents, child molesters and rapists plus, and child molesters and non-violents were found on Scale 6. The Tukey-HSD also found specific differences between child molesters and rapists plus and child molesters and non-violents on Scale 7. Scale 8 had differences between rapists and rapists plus, rapists and non-violents, and child molesters and non-violents. Differences between rapists and child molesters, rapists and rapists plus, and rapists and non-violents were found on Scale 9. Lastly, specific differences were found on Scale 0 between child molesters and non-violents.

CHAPTER 4

DISCUSSION

In the present study the MMPI-2 profiles of rapists, child molesters, rapists who have been convicted of additional charges, and non-violent offenders differed significantly on certain scales. Rapists produced a mean profile with significant elevations (T-score of 65 and greater) on Scales F, 4, 6, and 8. The elevated scores on Scale F may suggest some type of thought disturbance in the individuals, an aversion to test-taking procedures, and/or an individual choosing to show oneself in a negative light (Graham, 1990). This group's mean profile indicated Scales 4 and 8 were the most elevated clinical scales. This two-point code type adequately fits the profile most reported for criminal populations (Anderson, Kunce, Joseph, & Rich, 1979; Erikson, Luxenberg, Walkek, & Seely, 1987). This code type represents individuals who have problems conforming to authority, have socially deviant qualities, and have trouble distinguishing right from wrong (Graham, 1990). A moderately elevated Scale 6 for this group suggests individuals with varied paranoid ideations, who attempt to rationalize their behavior and blame others when things go wrong (Graham, 1990).

Child molesters elicited a profile similar to rapists with significant elevations on Scales F, 4, 6, 7, and 8. The significantly elevated Scale F suggests the same

characteristics identifying child molesters that represent rapists. The mean profile of child molesters produced a pair of possible two-point code types. The first type is represented by Scales 4 and 6. This code type may be indicative of individuals characterized by immature actions, passive dependence, suspiciousness, and intersexual concerns (Graham, 1990). The second two-point code type possible for this group emerges with Scales 4 and 8. This code type compares with the code type found for rapists. A marginally elevated score on Scale 7 suggests that individuals from this group may have concerns with psychological discomfort, may be high strung, and frequently experience forms of anxiety (Graham, 1990).

Scale 4 was the only significantly elevated score for the rapists plus group. Singular spiked elevations of this scale tend to represent individuals who are rebellious toward authority, may frequently come into conflict with family members, and are characterized with underachievement (Graham, 1990).

Non-violent offenders showed no significant elevations in scale scores. The mean profile produced by this group suggests little or no pathology. The profile is characteristic of the profiles elicited by individuals showing no concerns with the personality characteristics identified by the MMPI-2 (Graham, 1990).

Overall, the current study found rapists and child

molesters had profiles that contained more significantly elevated scale scores than rapists plus and the non-violent controls. These results imply crimes strictly sexual in nature are exhibited by individuals with more prevalent pathological concerns than their non-violent and mixed crime counterparts.

Many commonalities and differences can be found when comparing the current study with past research. Past research supports the present study's findings on rapists and child molesters producing elevated scores on Scales 4, 6, and 8 (using the MMPI) (Hall, 1989; Kalichman, 1990). However, the present study refutes previous research (Erikson et al., 1987) which found additional elevated scores on Scales 1, 2, 7, and 9 for rapists and Scales 2 and 5 for child molesters. Kalichman (1990) suggested the large number of elevated scale scores for the rapist population was due to the heterogeneous nature of the population. The present study attempted to correct that by dividing the rapist population into two separate groups. It appears the separation supported Kalichman's notion that the population is heterogeneous and should be divided further using various demographic information.

The present study produced certain limitations that may need to be reviewed and corrected for future research. The sample size should be increased in order to increase the representativeness of the population as a whole. The sex

offenders in this study were deemed as violent and needed the additional security of a maximum security prison. These individuals may be more likely to have increased elevated scores, may malingering, and may be suspicious of the testing procedures. Another limitation of the present study is the use of only the MMPI-2. Adequate assessment by professionals usually means using a battery of tests and relevant history, as well as clinical interviews. Questions can also be raised regarding the heterogeneous nature of the population. Is the heterogeneous nature due to the differences in characteristics of the population or the differences in the research conducted on the population? Lastly, it should be noted in reviewing the mean scores found in the validity scales of these groups, the profiles could be considered invalid. Elevated scores on Scale L, although not above 65, could indicate individuals who are choosing not to be honest on the inventory. In further review of past research, it has been found that the question on invalidation was not addressed when it should have been addressed. Future research may need to address that question more directly than it has been addressed in the past.

The current study suggests possible differences between the MMPI and the MMPI-2 for the sex offender population. Future research should increase the depth of information collected from the population. In addition to the MMPI-2,

future research should include the following demographics: age, marital status, socioeconomic status, race, ethnic background, educational level, and criminal and family history. The current study represents an initial step and should be used as a building block for future endeavors.

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Scott C. Wilson
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April 27, 1994
Date

MMPI-2 PROFILE DIFFERENCES AMONG SEX OFFENDER GROUPS
Title

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May 3, 1994
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