The purpose of this study was to validate the Sexual Deviation Scale, a special scale of the MMPI-2. The sample consisted of 90 participants that included 30 men incarcerated for sexual offenses, 30 men who were incarcerated for violent non-sexual offenses, and 30 men enrolled at a small midwestern state university. Demographic information and MMPI-2 data from the two groups of incarcerated participants were obtained from their institutional files, while the student participants voluntarily completed the MMPI-2 and demographic questionnaires at the university. Statistical results indicated, as hypothesized, the sex offender group scored significantly higher on the Sexual Deviation Scale than both the violent offender group and the university student group. Potential implications and limitations of the study are discussed.
VALIDITY OF THE SEXUAL DEVIATION SCALE FROM THE MMPI-2

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
Angela S. Weber
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Approved for the Graduate Council
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CHAPTER 1

INTRODUCTION

The assessment of sex offenders has become an increasingly important issue in the field of psychology. With state governments imposing stricter legal sanctions against sex offenders, clinicians must assess an alleged sex offender's level of functioning including the potential for sexual deviance. Interpretations of these assessments are passed on to the court system and are often used by judges to determine an appropriate prison sentence. Sex offender assessments are also used to determine the level of supervision required for each offender in the prison system, types of treatment recommended, and the offender's threat to self or others.

Few resources are available to clinicians when conducting assessments on alleged sex offenders. Many personality instruments and other psychological measures exist; however, few of these measures specifically pertain to sexual deviance. While clinicians may draw many conclusions regarding personality and cognitive functioning based on psychological testing, they rarely receive objective testing information regarding sexual deviation.

While the majority of clinicians may never be faced with the task of assessing a sex offender, many will.
With continuous changes in the laws pertaining to sex crimes, the number of these assessments will inevitably increase. Therefore, more objective methods for successful identification and assessment of sex offenders in a multitude of clinical settings must be developed.

Review of the Literature

The MMPI and the MMPI-2

The Minnesota Multiphasic Personality Inventory (MMPI) was developed by Hathaway and McKinley in 1940 to assist in the task of assessing and diagnosing patients with mental disorders (Butcher & Williams, 1992). It is a paper and pencil inventory containing 566 true or false items. The MMPI has become the most frequently administered personality assessment instrument (Butcher & Pope, 1992) and is used in a wide variety of mental health settings, including the classification of criminal offenders in correctional facilities (Megargee, 1984). Consequently, the MMPI is the primary psychometric measure for differentiating sex offenders from other criminal populations (Kalichman, 1990).

The MMPI consists of three validity scales, 10 clinical scales, and numerous subscales. The validity scales were developed to help a clinician interpret the subject's level of openness and cooperation. These scales indicate whether responses have been distorted so much as
to render the results invalid. The validity scales most often interpreted by their T-scores include the Cannot Say (?) Score, the L (lie) Scale, the F (infrequency) scale, and the K (defensiveness) scale (Butcher & Williams, 1992).

The clinical scales were originally developed to diagnose specific mental disorders pervasive at the time of the MMPI's development. These 10 scales are Hs (Hypochondriasis), D (Depression), Hy (Hysteria), Pd (Psychopathic Deviate), Mf (Masculinity-Femininity), Pa (Paranoia), Pt (Psychasthenia), Sc (Schizophrenia), Ma (Hypomania), and Si (Social Introversion) and are reported in the form of T-scores as well (Butcher & Williams, 1992).

Over 40 years after the creation of the MMPI, a committee was formed to revise the test. Despite the instrument's popularity among clinicians, many problems had surfaced. As described by Butcher and Pope (1992), three obvious problems were recognized. First, many items of the MMPI were worded in offensive or outdated language. Second, the normative sample used in the standardization of the MMPI was viewed as unrepresentative of the American population. Third, psychometric problems regarding T-scores caused discrepancies and confusion when interpreting the MMPI. Goals of the restandardization
committee were listed as: (1) developing a new normative sample that was highly representative of the American population, (2) deleting objectionable or obsolete items and adding more relevant items, (3) keeping intact the original validity and clinical scales, (4) developing norms more reflective of clinical problems, (5) collecting data relevant to making changes in the items and scales, (6) developing new scales focused on clinical concerns not included in the MMPI, and (7) creating a form of the MMPI appropriate for use with adolescents (Butcher & Pope, 1992). In 1989 the restandardization project produced the Minnesota Multiphasic Personality Inventory - 2 (MMPI-2), a revised and updated form of the MMPI.

The MMPI-2 consists of 83.6% of the original MMPI items (Lived, 1990). Ben-Porath and Butcher (1989) compared the MMPI and the MMPI-2 to determine if the revised MMPI items affected the stability of the validity and clinical scales. None of the test-retest correlations on the validity or clinical scales for men's scores were significant. For women, only the F Scale of the MMPI-2 was found to be less stable. These findings suggested the two forms of the instrument are compatible. Lived (1990) found validity, clinical, and various subscales of the MMPI to remain intact in the MMPI-2. The revision also
increased face validity and decreased objectionable language (Ben-Porath & Butcher, 1989).

Despite the improvement of the MMPI-2, criticisms remain. Helmes and Reddon (1993) claimed that the MMPI-2 retains many problems identified in the original MMPI because of the revision committee's focus on continuity. Such problems include the retention of outdated psychiatric terms, lack of focus on advanced personality theories, item overlap between scales, complex interpretive processes, and excessive length of the test. They further suggested that critics of the original MMPI may be unwilling to accept the MMPI-2 as an improved instrument due to these weaknesses.

**MMPI Special Scale: Sexual Deviation Scale**

The MMPI and MMPI-2 consist of literally hundreds of derived scales. Some of these scales are appropriately used with the sex offender population. One of these special scales, the Sexual Deviation Scale, was created by Marsh, Hillard, and Liechti (1955) to determine whether individuals with a history of sex offenses could be distinguished from individuals with no prior sex offenses using an objective measure of personality (Langevin, Wright, & Handy, 1990). Marsh et al. suggested if the Sexual Deviation Scale could distinguish between these groups, it could provide important information to be
considered in addition to the information provided by other procedures.

The Sexual Deviation Scale consists of 100 MMPI items derived by contrasting a group of hospitalized sex offenders' MMPI responses with those of college students and statistically analyzing the results using a chi square test. Any item that determined differences significant at the .01 level or lower between the sex offender group and the comparison group was selected for the scale (Marsh et al., 1955).

Sex offenders may tend to minimize or deny having sexual disorders or other forms of psychopathology (Grossman & Cavanaugh, 1988, 1990; Lanyon & Lutz, 1984). The items of the Sexual Deviation Scale include content reflecting moods, attitudes, and personality traits, not exclusively content related to sexual attitudes or disorders. Therefore, the scale's developers contended responses to the items of the Sexual Deviation Scale may be less susceptible to defensiveness or false response patterns than other, more blatant items (Marsh et al., 1955).

Marsh et al. (1955) used a raw cut off score of 30 deviant responses out of 100 to differentiate between sex offender and comparison groups. Their results indicated a 12% false negative rate among sex offenders and 11% false
positives among the group with no sex offenses. Further research suggested a cut off score of 42 was more effective (Peek & Storms, 1956).

Persons scoring significantly higher relative to lower on the Sexual Deviation Scale had less education, tended to be older, and scored higher on F, D, Pa, and Sc scales. The highest scaled scores were produced by convicted child molesters (Marsh et al., 1955). However, the Sexual Deviation Scale did not effectively differentiate between sex offenders and hospitalized mental patients suggesting the scale may be a measure of some type of personality integration or gross maladjustment (Marsh et al., 1955; Peek & Storms, 1956). Wattron (1958) later suggested neither cut off score of 30 or 42 was effective in significantly discriminating between sex offenders and other felons (Wattron, 1958).

In more recent research on various special scales of the MMPI, Langevin et al. (1990) used Cronbach's alpha to determine the internal consistency of 15 sexual pathology scales. Of these scales, only the Sexual Deviation Scale had sufficient internal consistency (reliability of .84) to be clinically useful. The Sexual Deviation Scale also distinguished repeat sexual offenders from first time offenders (Langevin et al., 1990).
Lanyon (1993) attempted to validate certain MMPI sexual deviance scales on men who either admitted or denied their sexual offenses. The Sexual Deviation Scale successfully differentiated between these two groups. The Sexual Deviation Scale also discriminated between defensive nonadmitters and non-offenders based on sexual deviance rather than levels of defensiveness. Lanyon, therefore, suggested that the Sexual Deviation Scale could identify sex offenders regardless of whether they admit to their offenses.

**MMPI Special Scales and the MMPI-2**

Research has been conducted on the comparability of the various scales of the MMPI as applied to the MMPI-2 (Lived, 1990; Lived, Browning, & Freeland, 1992). Lived (1990) stated the developers of the MMPI-2 were unnecessarily pessimistic when they viewed many of the MMPI special scales as damaged by the instrument's revision. In fact, Lived et al. (1992) concluded after studying 29 special scales derived from the MMPI that a majority of the MMPI special scales may be considered intact when scoring and interpreting from the MMPI-2. The MMPI-2 and MMPI are viewed so similarly in item content that clinicians who choose to continue using the MMPI over the MMPI-2 may conceivably apply scales specifically
developed from the MMPI-2 item pool to the MMPI (Lived, 1990).

In his study of MMPI sexual deviance scales, Lanyon (1993) attempted to determine to what extent these scales would be scorable using item responses from the MMPI-2. Only the Sexual Deviation Scale was considered to have potential for validity. He determined that of the 100 items composing the Sexual Deviation Scale, 79 remained intact in the MMPI-2 (Lanyon, 1993).

As indicated by a review of the literature, the Sexual Deviation Scale has been found to effectively discriminate between sex offending populations and non-sex offending populations. It has been presented as a reliable and valid measure of sexual deviance, and may be potentially transferable to the MMPI-2. Such a measure is needed by clinicians in the assessment of sex offenders, yet a limited amount of research has utilized the Sexual Deviation Scale. The purpose of this study was to validate the Sexual Deviation Scale for use with the MMPI-2. Sex offenders were predicted to score significantly higher on the Sexual Deviation Scale than non-sex offending groups. The scale was revised using items from the Sexual Deviation Scale of the original MMPI. Such a study was necessary as an attempt to bring more objective measures into the process of clinically assessing sex offenders.
CHAPTER 2

METHOD

Sample

The research compared samples of men incarcerated for criminal sexual offenses, men incarcerated for non-sexual offenses, and non-incarcerated men. The incarcerated participants men housed in correctional facilities in the Kansas Department of Corrections (KDOC). The non-incarcerated group attended a small, co-educational state university in the Midwest.

Due to limited availability and access to the incarcerated population, a convenience sample was drawn using only male inmates in the KDOC system. Data were collected from three different samples with 30 men in each group. The first group included men who had been incarcerated for a violent sexual offense against another person. A sexual offense of this type in this research was defined as any charge involving rape, sodomy, child molestation, and/or incest. The second group included men who had been incarcerated for non-sexual, violent offenses against another person. These offenses included such charges as murder, assault, and aggravated robbery. The third group included male volunteers from a university population.
The original Sexual Deviation Scale consisted of 100 true-false MMPI items. The scale used in this study was the newer, MMPI-2 form of the Sexual Deviation Scale consisting of the 79 items of the original scale that remained intact in the MMPI-2 (Lanyon, 1993). Lanyon, however, had counted one of the items twice, thus only 78 items of the Sexual Deviation Scale from the MMPI were retained in the MMPI-2. These 78 statements were manually located on the MMPI-2, and the corresponding MMPI-2 item numbers for each of the 78 statements were included in a scoring key, or template, for the new Sexual Deviation Scale. This template was then used to determine the participants' raw scores on the Sexual Deviation Scale of the MMPI-2.

Langevin et al. (1990) determined the original Sexual Deviation Scale to have sufficient internal consistency with reliability of .84. Lanyon (1993) further suggested the Sexual Deviation Scale could be considered potentially valid when applied to the MMPI-2.

Procedure

Each incarcerated participant had on file MMPI-2 data and demographic information which was collected in a standard manner at the KDOC diagnostic center as he entered the KDOC system. A list of the inmates with a
sexual offense on their record was retrieved from facility computers. A separate list of all inmates with violent, non-sexual offenses was retrieved by computer as well. The files of the offenders from each list were manually checked for valid MMPI-2 profiles. A pool of participants from each group who fit these criteria was developed, and each eligible participant's name was drawn randomly from their pool and numbered in the order chosen. The eligible participants from each group were approached in numerical order and asked to complete consent forms permitting information from their files to be used in the study (see Appendix A). The first 30 consenting inmates from each group participated in the study.

The non-incarcerated participants voluntarily completed sign-up sheets and were limited to men enrolled in an introductory psychology course. These non-incarcerated participants completed a consent form (see Appendix B) and a demographic sheet (see Appendix C). Each participant was administered the MMPI-2 using the standard instructions.

In the standard administration, each participant was provided an MMPI-2 test booklet, answer form, and pencil. He was asked to read the printed instructions, then completed the inventory at his own pace. Profiles considered valid in this study had T-scores on the L (lie)
and K (defensiveness) scales of less than 65, and a T-score on F (infrequency) of less than 100. The first 30 students had valid profiles.

Each participant's responses were scored by hand. Because Marsh et al. (1955) reported raw scores rather than T-scores in their research, each participant received a raw score indicating the number of items responded to in the deviant manner. This raw score was entered into an SPSS data file for statistical analysis.
CHAPTER 3

RESULTS

Raw scores of three groups of adult male participants on the 78 items of the Sexual Deviation Scale from the MMPI-2 were analyzed using a one-way analysis of variance (ANOVA). The participants in the first group were incarcerated male sex offenders. The mean age of this group was 29.27 years (SD = 7.07) with the participants' racial breakdown as follows: White, $n = 16$; Black, $n = 10$; Hispanic, $n = 3$; and Native American, $n = 1$. The second group was limited to incarcerated men with violent, non-sexual offenses. Their mean age was 29.30 years (SD = 8.71) with the following racial breakdown: White, $n = 12$; Black, $n = 16$; and Hispanic, $n = 2$. The participants in the third group were university students enrolled in an introductory psychology course. The mean age of this group was 21.50 years (SD = 3.62) with the racial breakdown as follows: White, $n = 25$; Black, $n = 4$; and Hispanic, $n = 1$.

Means, standard deviations, and the range of scores on the Sexual Deviation Scale of the 30 sex offenders, 30 violent non-sexual offenders, and 30 university students are found in Table 1. The ANOVA performed on the three group means showed statistical significance, $F(2, 87) = 10.15$, $p < .0001$, with $\eta^2 = .17$. 
Table 1

Means, Standard Deviations, and Range of Scores on the Sexual Deviation Scale from the MMPI-2

<table>
<thead>
<tr>
<th>Group</th>
<th>M</th>
<th>SD</th>
<th>Range of Scores</th>
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<tbody>
<tr>
<td>Sex Offenders</td>
<td>36.40</td>
<td>7.66</td>
<td>22 to 52</td>
</tr>
<tr>
<td>Violent Offenders</td>
<td>31.70</td>
<td>7.56</td>
<td>14 to 48</td>
</tr>
<tr>
<td>University Students</td>
<td>27.87</td>
<td>6.79</td>
<td>13 to 42</td>
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</table>
A Tukey honestly significant difference procedure was calculated to find specific differences between the three groups of participants. The Tukey procedure found the sex offender group to score significantly higher at the .05 level than both the violent offender group and the university student group. No significant difference was found between the violent offender group and the university student group.
CHAPTER 4
DISCUSSION

The results of this study supported the hypothesis that incarcerated sex offenders would score higher on the Sexual Deviation Scale from the MMPI-2 than would incarcerated violent offenders and university students. This result was found despite the loss of 22 of the original 100 items of the scale when transferring its items from the MMPI to the MMPI-2. Such a finding suggests the Sexual Deviation Scale, when applied to the MMPI-2, maintained the content validity of the original scale.

While the result was statistically significant, the differences between groups were actually quite small. Sex offenders endorsed an average of four more items on the scale than did violent, non-sexual offenders, and an average of eight items more than male university students. These slight differences in scores between the groups provided little support for setting a cut off point to differentiate sex offenders from comparison groups as was suggested by Marsh et al. (1955) and Peek and Storms (1956). Rather, the present result supports the research of Wattron (1958), who suggested a cut off point that attempted to differentiate sex offenders from non-sex offenders could not be effective for the Sexual Deviation
Scale. The small differences between the three groups as well as the high variability within groups supports earlier research that the scale simply measures some type of gross maladjustment or personality integration rather than sexual deviance (Marsh et al., 1955; Peek & Storms, 1956).

Marsh et al. (1955) created the Sexual Deviation Scale for the MMPI to differentiate between individuals with and without a history of sex offenses using an objective personality measure. Although the present study found the mean score of sex offenders was significantly higher than comparison groups when analyzed statistically, the highly varying scores within all three groups indicated this scale should not be used to identify high-scoring individuals as sex offenders. However, if further researched, this scale may potentially provide useful information to clinicians involved in psychological assessments.

The present research had several limitations. Due to the inaccessibility of large numbers of incarcerated participants, the sample size may be too small to be considered representative of the incarcerated population. Although many accessible inmates had MMPI-2 data in their institutional files, the majority of their profiles were deemed invalid due to elevations on L, F, or K scales and
could not be included in this study. The selected participants in both incarcerated groups may not have been truly representative of the sex offender and violent offender populations. Another limitation involved the racial breakdown of the participants. The prison population traditionally contains a higher percentage of minorities than found in the general population, which was found to be true in the present study as well. Racial differences between groups were not taken into consideration in the development of this research. Although age did not significantly differ between the two incarcerated groups, the university students were, on average, approximately eight years younger than the incarcerated participants, F(2, 87) = 13.09, p < .0001. Such factors may have affected the findings in this study.

Recommendations for future research might include using a larger sample of sex offenders that matches comparison groups on demographic factors, particularly race and age. Additional information on such factors as educational level, gender differences, marital status, geographic location, and type of sexual crime may be beneficial as well. If large enough differences can be found between the scores on the Sexual Deviation Scale of individuals with and without a history of sexual offenses, clinicians could identify a reliable cut off score.
Although the present study successfully transferred the Sexual Deviation Scale to the MMPI-2 with significant results, the present study has minimal practical value in a clinical setting. This study has, however, added to the research base of MMPI-2 special scales and may be considered an initial step in validating the Sexual Deviation Scale for use with the MMPI-2.
REFERENCES


APPENDICES
INFORMED CONSENT

I, __________________________, born on ____________, hereby request and authorize the Kansas Department of Corrections, as well as its principal administrator and its record custodian, to permit access and disclosure to Angela S. Weber, a graduate student at Emporia State University, the following information: My criminal convictions, age, educational level, race, and Minnesota Multiphasic Personality Inventory-2 profile and item response form.

I understand my records contain various types of personal information and they may be protected from disclosure without my consent. There are no physical or psychological risks involved in participating in this study. I understand I may refuse to participate without reprimand, and I may revoke this consent at any time. Further disclosure of my records by those receiving this information may not be accomplished without my further written consent.

The purpose for which the information is to be used is to assess differences between three populations of adult males.

The data which is being released and collected will be destroyed once the study is completed, and my name and records will remain confidential. Results of the study will be available upon request.

Authorized this ___ day of ________________, 19___.

_________________________________   ___________________________________
PARTICIPANT   WITNESS
The Division of Psychology and Special Education supports the practice of protection for human participants taking part in research and related activities. The following information is provided so you can decide whether you wish to participate in the present study.

The findings of this research project will broaden the understanding of personality assessment in different populations of men. The results will increase the knowledge base of psychology and related fields.

You will be asked to complete the Background Information sheet, read the directions for the attached questionnaire, and mark your responses to each item on the provided answer sheet.

There is no risk involved in completing this study. Please be aware that even if you agree to participate, you may withdraw at any time without reprimand.

After fully understanding the procedure and assuming the responsibility voluntarily, please sign below. Thank you for your participation.

Name ___________________________ Date ____________
APPENDIX C
BACKGROUND INFORMATION

What is your age? ______

Which race best describes you?

___ Asian      ___ Black      ___ Hispanic

___ Native American    ___ White

___ Other (please specify)

How many years of college have you completed?

___ less than one year    ___ one year

___ two years    ___ three years

___ more than three years

Have you ever been convicted of a felony?

___ yes    ___ no
I, Angela S. Weber, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author.

Angela S. Weber
Signature of Author

7-25-95
Date

Validity of the Sexual Deviation Scale
from the MMPI-2
Title of Thesis

Signature of Graduate Office Staff Member

July 24, 1995
DateReceived