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Use of Selected MMPI-A Factors in the Prediction of Clinical Outcomes in a Community-Based Treatment Program for Juvenile Sexual Offenders

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USE OF SELECTED MMPI-A FACTORS IN THE PREDICTION OF

CLINICAL OUTCOMES IN A COMMUNITY-BASED TREATMENT PROGRAM

FOR JUVENILE SEXUAL OFFENDERS

by

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B.A., May 1986, Grinnell College

A Dissertation Submitted to the Faculties of

The College of William and Mary
Eastern Virginia Medical School
Norfolk State University
Old Dominion University

In Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PSYCHOLOGY
in CLINICAL PSYCHOLOGY

THE VIRGINIA CONSORTIUM PROGRAM IN CLINICAL PSYCHOLOGY
August 1999

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ABSTRACT

USE OF SELECTED MMPI-A FACTORS IN THE PREDICTION
OF CLINICAL OUTCOMES IN A COMMUNITY-BASED TREATMENT PROGRAM
FOR JUVENILE SEXUAL OFFENDERS

Linda Marks Hunter
The Virginia Consortium Program in Clinical Psychology, 1999
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This study was designed to evaluate the use of MMPI-A factors to make
predictions about clinical outcomes within a community-based treatment program for
juvenile sexual offenders. Specifically, selected MMPI-A factors were used to predict
client acceptance into the program and client compliance with program expectations over
a 12-month period. Results showed that program acceptance was best predicted by the
MMPI-A factor, "Immaturity." No MMPI-A factors were found to be statistically
significant in the prediction of program compliance. A high degree of collinearity was
found between MMPI-A factors, raising questions about their discriminative utility.
Results are discussed with regard to the limited utility of the MMPI-A, and factor scores,
in making predictions about specific clinical outcomes.

For Isabelle,

who was with me every step of the way.

ACKNOWLEDGMENTS

I am grateful to many people who have contributed to the successful completion of this dissertation. I want to first thank the members of my committee. It has been a pleasure working with each of them. Special thanks go to Ellen Rosen, my chair, who was always generous with her time and patience. Her careful guidance and confidence in my ability were truly appreciated. I am grateful to Barbara Winstead for her helpful feedback throughout the many phases of this project, and for her help in sorting out all the practical matters in the end. I am indebted to Delanyard Robinson, whose persistent support and encouragement helped to sustain me through some of the more difficult moments. I am also grateful for the generous support given by Lou Janda, as a reader on my committee. Finally, I extend many thanks to A.J. Figueredo, who provided the primary consultation and guidance regarding the statistical analyses and research design. Although situated on the opposite coast of the country, he was always accessible, and very generous with his time. His guidance and instruction were invaluable.

I would also like to acknowledge the gracious support that was extended to me by the staff at the RJSOP outpatient office, where I collected my data. Special thanks go to Gail Castonguay, who took time from her busy schedule to provide the additional clinical information that was unavailable from my chart review. Sandy Wright and Kathy Hulderman, were extremely gracious, and helped make my work there go as smoothly as possible.

Several people provided helpful tips regarding the word processing program utilized in typing this manuscript. Carol Strattner was extremely knowledgable, and consistently offered creative solutions to my formatting "dilemmas". I am also grateful

to both Carol Smith and Vonnie Calland for their patience and generosity in providing needed advise.

I would also like to thank Eric Imhof, for his advise and assistance regarding the computerized scoring system utilized in this study. He also helped by gathering and scoring several MMPI-A's that were not available in the charts.

Last, but certainly not least, I extend my gratitude to my friends and family, who have provided me with unwavering support during my graduate years, and especially throughout the process of my dissertation. I want to specifically acknowledge my parents, Noel and Ruth Marks, for their generous assistance with child care, and all the moral support they have provided over the years. I am also grateful to my sister, Terry Marks, and grandmother, Mary Marks, who have always been extremely supportive and encouraging.

My husband, John Hunter, deserves very special recognition, for putting up with me throughout the entirety of this project, and for never letting me give up. I will be eternally grateful for his consistent support and encouragement, as well as patience and understanding.

Finally, I will be forever grateful to my daughter, Isabelle, who is a huge source of motivation and inspiration. I will always remember with fondness her generous "assistance" in typing this manuscript (with her feet) and her ability, generally speaking, to help me keep things in perspective.

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INTRODUCTION

Overview of Juvenile Sexual Offending

Juvenile sexual offending is recognized as a major problem in current society. Statistics reveal that the number of youths arrested for sexual offenses steadily increased from the mid-1980's to the mid-1990's (Snyder & Stickmund, 1995). It is estimated that juveniles presently account for approximately 20 to 30 percent of the rapes, and 30 to 60 percent of the cases of child sexual abuse, committed in the United States each year (Becker, Kaplan, Cunningham-Rathner, & Kavoussi, 1986; Brown, Flanagan, & McLeod, 1984; Deisher, Wenet, Paperny, Clark, & Fehrenbach, 1982; Fehrenbach, Smith, Monastersky, & Deishner, 1986). While an increasing number of female and prepubescent youths have been identified as having committed a sexual offense, the majority of the sexual crimes of juveniles are accounted for by adolescent males (Davis & Leitenberg, 1987).

While these data are certainly alarming and cause for great public concern, arrest statistics do not reflect the full scope of the problem. For instance, it has been estimated that fewer than 50 percent of all rapes are ever reported to the police (Amir, 1971), and that only 35 percent of sexually victimized children report their abuse to anyone (Finkelhor, 1979). Clearly, a substantial number, and what may even be argued to be the vast majority of sexual assaults that occur, remain undetected. Furthermore, only a small

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The model used for this dissertation was <u>The Publication Manual of the American Psychological Association</u> (4th ed.).

fraction of those offenses that are reported to police ever result in an arrest or a conviction (Dean & deBruyn-Kops, 1982; Groth & Birnbaum, 1979).

Statistics obtained from multiple victim studies supplement arrest data in underscoring the seriousness of the problem of juvenile sexual offending. For example, Deisher, et al. (1982) examined the reports of children treated at two sexual assault centers and found that the offender was an adolescent in 42 percent of the cases. Similarly, Finkelhor (1979) revealed, in a general survey of New England college students, that 34 percent of women and 39 percent of men who recalled having been sexually molested in childhood reported that their perpetrator was between the ages of 10 and 19.

Of additional concern is the tendency for this problem, left untreated, to persist and perhaps even worsen as offending adolescents enter adulthood (Abel et al., 1987; Knight & Prentky, 1993). Retrospective studies have estimated that up to 60 percent of adult sex offenders report having committed their first sexual offense during their adolescent years (Abel et al., 1987; Abel, Mittelman, & Becker, 1995; Becker & Abel, 1985; Gebhard, Gagnon, Pomeroy & Christenson, 1965; Groth, Longo, & McFadin, 1982). A juvenile onset to child molestation has, in particular, been associated with adult patterns of pedophilia, especially those involving selection of victims of the same gender (Marshall, Barbaree, & Eccles, 1991). Recent data also suggest that rape may have a developmental onset prior to adulthood (Elliott, 1994).

Although typological classification is still in the formative stage, available data suggest that adolescent male sex offenders can be clinically differentiated into two primary subtypes: those who offend against children (victim ≥ 5 years younger than

themselves), and those who offend against peers or adults (Hunter, Hazelwood, & Slesinger, in press). Hunter et al. (in press) found that juveniles who target peers or adults typically assault females & individuals who are either strangers or acquaintances. Furthermore, these youths are more likely to commit sexual offenses in association with other types of criminal activity (e.g. burglary), and have histories of non-sexual criminal behavior. Juveniles who target peers and adults typically display higher levels of aggression and violence in their sexual offenses than those youths who offend against children, and are more likely to use a weapon and cause injury to their victim. In contrast, juveniles who offend against children tend to have both a higher number of male victims and victims to whom they are related. Furthermore, the sexual crimes of youths who target children reflect a greater reliance on opportunity and guile than injurious force.

A number of variables have been studied in an attempt to understand the causes and developmental onset of juvenile sexual offending. Factors that have received the most attention to date, include: childhood maltreatment, substance abuse, and exposure to both pornography and violence.

High incidence rates of both sexual and physical abuse have been found in samples of juvenile sex offenders. A history of physical abuse has been found in 20 to 50 percent of these youths, and a history of sexual abuse in 40 to 80 percent of the population (Kahn & Chambers, 1991). By contrast, the incidence of childhood sexual victimization in the normal (non-offender) male population in the United States is about 10-15 percent (Finkelhor, 1979). Clearly, having a sexual victimization history is overrepresented in the population of adolescent sexual offenders. The likelihood of a

preceding history of sexual abuse appears to be inversely related to age of onset of the offending behavior, and positively related to overall level of psychosexual and psychological maladjustment (Becker & Hunter, 1997). Hunter and Figueredo (in press) found that adolescent males with histories of sexual abuse who went on to sexually perpetrate could be differentiated from those victims who did not later perpetrate on the basis of four variables: age at time of first abuse, length of time that elapsed from the first incident of abuse to first report of the same, number of incidents of experienced abuse, and perception of familial support following revelation of the abuse. Youths who went on to sexually perpetrate were those who were younger at the time of initial sexual victimization, experienced a greater number of incidents of abuse, waited a longer period of time to report their abuse, and perceived their families as having been less supportive of them once the abuse was made known.

Violence and abuse need not be experienced first hand, however, in order to have a negative and lasting impact on a child's future behavior. Studies of male children who have witnessed domestic violence indicate that such exposure is positively correlated with the likelihood of their sexually perpetrating as a juvenile (Fagan & Wexler, 1988; Smith, 1988). These results may be due to modeling.

Two additional factors that have been investigated as potentially influential in the development of sexual aggression in juveniles are substance abuse and exposure to pornography and violence. While alcohol intoxication is frequently implicated in the commission of violent offenses, the link between sexual offending and substance abuse has not been well established. In their review of the literature, Lightfoot and Barbaree (1993) report wide discrepancies between estimates regarding the extent of substance

abuse in the juvenile sexual offender population. Part of the problem is that most studies have tended to rely on subjective self-reports by offenders, and it has been suspected that they may exaggerate the role of alcohol and other substances in order to reduce their own sense of culpability.

Similarly, the influence of pornography in the development of sexual aggression by adolescent males has been a heavily debated issue. There is some evidence (e.g., Ford & Linney, 1995) that juvenile sex offenders are exposed at an earlier age to pornography and to more explicit, "hard core" pornography than is the experience for non-sex offending controls. However, additional research is needed in this area in order to establish a clear link between exposure to pornography and juvenile sexual offending.

The development of specialized treatment programs to address the problem of juvenile sexual offending is made more complex by the heterogeneity of this population. Adolescents who have sexually offended represent the full range of individual differences regarding level of intelligence, social class, economic status, and racial boundaries (Barbaree, Hudson & Seto, 1993). They vary on numerous important dimensions, including: manifest level of delinquency/criminality (Davis & Leitenberg, 1987); nature and degree of sexual maladjustment (Hunter & Becker, 1994); overall psychological adjustment (Becker & Hunter, 1997); and capacity for and interest in forming and maintaining healthy interpersonal relationships (Carpenter, Peed & Eastman, 1995). These youths also range in their amenability to treatment. Clinical observation suggests that some are clearly able to benefit from therapeutic interventions, while others remain refractory to treatment efforts due to more serious underlying pathology and sexual maladjustment issues (Becker & Hunter, 1993; France & Hudson,

1993). Yet another subgroup of treatment failures are impervious to therapeutic intervention due to their own lack of motivation and/or the appropriate support and supervision from their family members. (Borduin, Henggeler, Blaske, & Stein (1990).

The number of programs providing treatment services to juvenile sexual offenders has increased dramatically over the past 15 years. A recent survey of sex offender treatment programs in the United States estimated an increase from 20 programs in 1982 to over 800 programs in 1992 (Knopp, Freeman-Longo & Stevenson, 1992). This growth in programming reflects both increased societal concern about rising rates of juvenile sexual aggression, as well as the professional belief that early intervention may help stem the emergence of chronic patterns of sexual offending. A review of issues believed to be important to the development of successful community-based treatment programming for juvenile sexual offenders follows.

Most treatment specialists (National Task Force on Juvenile Sexual Offending, 1993) are of the opinion that successful juvenile sexual offender programming requires a coordination of effort between criminal justice system actors and providers. In order for juveniles to meaningfully participate in treatment programming, they must be willing to address their problems and comply with therapeutic directives. Adjudication and supervision typically prove to be useful tools in ensuring client accountability and compliance with treatment.

Clinical experience has shown that the suspension of the juvenile's sentence, contingent upon his successful completion of a treatment program, can be a particularly effective strategy for motivation (Becker & Hunter, 1997). Under such collaborative arrangements with the courts, the treatment specialist provides on-going progress reports

to the court on the youth's participation in the program. Youths who fail to comply with program expectations can be brought back before the court for review. In many programs, probation officers play an integral role in assisting the treatment provider in addressing critical issues and supervising the youth's activities in the home and community.

It is professional consensus that the planning and implementation of treatment services should reflect the collaborative involvement of the youth, his family, and all agencies involved in his care (National Task Force on Juvenile Sexual Offending, 1993). This may be best accomplished through the formation of an advisory board that oversees the operation of the program and serves as an interface between the program and the community. Such boards typically consist of representatives from public institutions serving the youth and his family, including: the local juvenile court, the Department of Social Services, the Prosecutor's Office, the Public Defender's Office, and parents of youthful perpetrators. The advisory board can help to ensure that the treatment program is fully serving the needs of its clients while also meeting community safety standards (Becker & Hunter, 1997; National Task Force on Juvenile Sexual Offending, 1993).

Clinical programming for juvenile sexual offenders typically includes a combination of individual, group, and family therapies. Additionally, many programs offer supportive psycho-educational groups to the parents of these youths (Becker & Hunter, 1997; Hunter, 1999). Individual therapy can provide the client with an opportunity to explore, in an integrated manner, all personal issues that have potential relevance to a clear understanding his sexual behavior problem. It can also serve as a time for the client to reflect on his sense of self and relationships with others, and

develop personal goals. Group therapy is the major modality for the introduction of didactic material and focused instruction in therapeutic skills and techniques in most treatment programs, and is viewed by most authorities as critical to program success. Besides being a forum for imparting information and teaching skills, it can also provide the youth with an opportunity to receive needed support, confrontation, and guidance from peers.

Family therapy is essential to the treatment of youthful offenders who remain in the care of their parents, or who will return to the residence of their family following clinical and legal intervention. It is critically important that the youth's parents fully understand his sexual behavior problem and its treatment, and that family system issues relevant to the management of the problem be identified and addressed. Family therapy can also provide the offender with an opportunity to demonstrate empathy, and make reparations for offenses he has committed against family members. It is important that the therapists of victimized younger siblings be consulted prior to their inclusion in family sessions (Becker & Hunter, 1997; Hunter, 1999).

As an adjunct to more primary therapies, psycho-educational parent groups are often provided. These groups can serve to provide the youths' families with a better understanding of the following: the nature of juvenile sexual offending and its etiology; the importance of treatment and the role of the criminal justice system in supervising this process; the philosophy of the program and the role of the family in treatment; the purpose of each therapeutic modality of treatment; and the specific objectives of treatment and clinical approaches to the accomplishment of therapeutic objectives (Becker & Hunter, 1997; Hunter, 1999).

Youths who display more extensive psychiatric or behavioral problems (e.g., substance abuse) may require additional adjunctive therapies (e.g. drug/alcohol treatment; psychiatric care, etc.) (Becker & Hunter, 1997; Hunter, 1999). All therapies provided to the youth should be carefully coordinated within the treatment agency and with external agencies providing case management and oversight.

The following areas have been found by many providers to be important to the treatment of the juvenile sexual offender: the establishment of positive self-esteem and pride in one's cultural heritage; the teaching and clarification of values as they relate to a respect for self and others; the promotion of a healthy sense of masculine identity; the provision of sex education, with an emphasis on promoting an understanding of healthy human sexuality; the enhancement of social skills; the teaching of impulse control and coping skills; the teaching of assertiveness skills and conflict resolution; the enhancement of empathy for others; and the teaching of relapse prevention. This latter intervention includes teaching offenders to understand the cycle of thoughts, feelings, and events that can trigger sexual acting-out, identify environmental circumstances and thinking patterns that should be avoided because they increase the risk of re-offending, and identify and practice coping and self-control skills necessary for successful behavior management (Hunter, 1999).

Outcomes research is critical to the identification of interventions that are both clinically and cost effective in attenuating patterns of sexual offending in juveniles. While funding and ethical issues have made it difficult to conduct carefully controlled treatment outcome studies (see Becker & Hunter, 1997), a number of encouraging clinical reports on the treatment of juvenile sexual offenders have been published. While

these studies are not definitive, they provide empirical support for the belief that the majority of juvenile sexual offenders are amenable to treatment and achieve positive treatment outcomes.

In perhaps the best controlled study to date, Borduin, Henggeler, Blaske, and Stein (1990) compared multisystemic therapy with individual therapy in the outpatient treatment of 16 adolescent sex offenders. Using rearrest records as a measure of recidivism (sexual and non-sexual), the above two groups were compared at a three-year follow-up interval. Results revealed that youths receiving multisystemic therapy had recidivism rates of 12.5% for sexual offenses and 25% for non-sexual offenses, while those receiving individual therapy had recidivism rates of 75% for sexual offenses and 50% for non-sexual offenses.

Program evaluation data suggest that the sexual recidivism rate for juveniles treated in specialized programs ranges from approximately 7% to 13% over follow-up periods of two to five years. Studies suggest that rates of non-sexual recidivism are generally higher (25-50%) (Becker, 1990; Kahn & Chambers, 1991; Schram, Milloy, & Rowe, 1991). If findings from future treatment outcome studies on juvenile sexual offenders parallel those for adult offenders, sexual recidivism rates will be higher in individuals who fail to successfully complete treatment programs (Marques, Day, Nelson, & West, 1994). In Hunter and Figueredo's study (1999), the authors found as many as 50% of youths entering a community-based treatment program were expelled during the first year of their participation. Program failure was found to be largely attributable to failure to comply with attendance requirements and/or therapeutic directives. Youths failing to comply with the program were found to have higher overall levels of sexual

maladjustment (as measured on assessment instruments), and were judged to possibly be at greater long-term risk for sexual recidivism. In this study, lower levels of client denial at intake best predicted successful program compliance. Higher levels of denial were found in non-adjudicated youths.

Adult sex offenders have been studied for a longer period of time than have juveniles. While there appear to be important differences between the juvenile and adult sex offender populations, the outcomes literature on predictors of recidivism in adults may offer insight into an understanding of risk assessment and treatment effectiveness with juveniles.

Two influential meta-analytic studies of treatment outcome in adult sex offenders have been published in recent years. In the first study, Hall (1995) reviewed data from 12 studies of outcome involving 1,313 predominantly adult male sex offenders. Approximately one-half of the sample was outpatient and the remainder inpatient. The mean length of treatment was 18.5 months and the mean follow-up period was 6.8 years. A small, but robust treatment effect was found: 19.9% of the treated versus 27% of the untreated sex offenders re-offended. Cognitive-behavioral and hormonal therapies were found to be superior to behavioral therapies, and recidivism rates were found to be lower in outpatient samples.

Hanson and Bussiere (1998) examined data from 61 studies on 28,972 predominantly adult male sex offenders. The larger sample consisted mostly of Caucasians, those from lower SES backgrounds, and offenders derived from institutional settings. The mean follow-up period was 4-5 years. The overall sexual recidivism rate was 13.4%; rapists recidivated at a slightly higher rate than child molesters: 18.9% versus

12.7%. Non-sexual recidivism rates (i.e., other delinquent behavior) were higher: 48.2% for rapists and 36.9% for child molesters. Sexual recidivism was predicted by the following variables: sexual deviancy (particularly a sexual preference for male children); sexual criminal history (prior sex offenses, stranger victim, male child victim); psychological maladjustment (especially personality disordered); failure to complete treatment; and general criminality.

The MMPI-A

The MMPI-A was developed in 1992 following considerable discussion by clinicians and researchers of the need for a special version of the MMPI for adolescents (Archer, 1997). Specifically, the original version of the MMPI was judged to be too lengthy for use with adolescents, and the reading level was thought to be too high (Archer, Maruish, Imhof, & Piotrowski, 1991). Moreover, the MMPI contained a number of items judged to be inappropriate or outdated, and was thought to be lacking in items of specific relevance to adolescent experiences. Finally, the original norms (based on data samples collected in the late 1940s through the mid-1960s on Caucasian adolescents) were believed by researchers to be in need of updating (Archer et al., 1991). Hence, revisions were made in instrument content and scale organization, and comprehensive normative data were collected. The revised instrument includes the thirteen standard scales of the original MMPI, four new validity scales, fifteen content and six supplementary scales, twenty-eight Harris-Lingoes scales, and three subscales of the SI scale (Archer, 1997). It is currently widely used in clinical settings and also has served as a research instrument in the study of adolescents with emotional and behavioral problems.

Compared to its parent measure, the MMPI-A has a significantly larger number of scales and subscales (69, in total) that require special integration when interpreting profiles. Test interpretation is further complicated by the substantial degree of item overlap and inter-correlation found among and between various MMPI-A scales (Archer, 1997). In an effort to organize the test interpretation process, Archer, Belevich, and Elkins (1994) conducted extensive studies of the underlying factor structure of the MMPI-A using a sample of 1,620 adolescent males and females between the ages of 14 and 18. A principal factor analysis procedure on scale raw scores revealed eight primary factors that accounted for 94% of the total variance. These factors were labeled as follows: "General Maladjustment," "Immaturity," "Disinhibition and Excitatory Potential," "Social Comfort," "Health Concerns," "Naivete," "Family Alienation," and "Psychoticism."

Archer (1997) has described in detail the psychological characteristics associated with each of the eight factors. A brief summary of Archer's description follows. The General Maladjustment Factor (F1) is associated with a significant degree of general emotional distress, depressed mood, and poor social adjustment. Individuals with high scores on this dimension typically experience social problems of a global nature with both adults and peers. Adolescents who score high on the Immaturity Factor (F2) are described as egocentric, and self-centered, with a limited capacity for insight and self-awareness. They are likely to demonstrate poor judgment and impulse control, with social/familial relationships impaired by defiance, bullying, cruelty, and general delinquency. The Disinhibition/Excitatory Potential Factor (F3) relates to attitudes and behaviors characterized as impulsive, attention-seeking, and excessive. Teenagers with

high scores in this dimension typically experience conflict with authority figures, and are dominant and aggressive with peers. In contrast, individuals who score high on the Social Discomfort Factor (F4) have a low probability of "acting-out", tending instead to display a variety of internalizing behaviors. These adolescents are described as withdrawn, self-conscious, passive, and easily dominated, socially. They may experience loneliness, somatic complaints, and suicidal ideation. Individuals with high scores on the Health Concerns Factor (F5) are also likely to present as sad, with somatic complaints, and are socially dependent, shy, and isolated. They may be likely to have histories of weight loss issues, and/or sexual abuse.

The Naivete Factor (F6) is the only factor characterized by healthy social relationships and mental/emotional adjustment. Adolescents who produce elevations on this dimension are likely to be optimistic, trusting, and socially conforming, while denying the presence of hostility or negative impulses. Adolescents who obtain high scores on the Familial Alienation Factor (F7) are described as typically rebellious, hostile and aggressive by their parents. An extreme level of conflict and dysfunction, which may include intense arguments, running away, sexual abuse and alcohol/substance abuse, marks the home life of these youths. Finally, teenagers with high scores on the Psychoticism Factor (F8) are characterized as socially disengaged and disliked. They may be somewhat obsessive and paranoid, with poorly modulated emotions. In addition, they are prone to aggression and violence.

Traditional use of the MMPI as a research instrument has involved the employment of its main clinical scales (individually and in code type combination) to describe the personality characteristics of studied clinical populations. To a more limited

extent, and with mixed results, scale scores and code types have also been used as predictors of treatment outcomes. For example, Marshall and Roiger (1996), examined MMPI-2 protocols to develop a model to identify chemically dependent patients likely to drop out of treatment. Their data indicated elevated T-scores on Scales 7 and 8 were related to treatment non-completion. However, when compared to the mixed results found in other studies, they concluded that the MMPI-2, as a single measure, may be insufficient in attempting to construct a predictive model. Similar conclusions were reported by Schubert and Gantner (1996), regarding the use of MMPI test interpretations to predict missionary performance. Data indicated that the MMPI is inadequate as a sole evaluation of individuals in this particular population.

Positive results were obtained, however, in one study (Fals-Stewart, & Schafer. 1993) evaluating treatment compliance with a behavior therapy program and personality characteristics of obsessive-compulsive disordered patients, as measured by the MMPI. Results indicated that higher scores on Scales 8, 2, and 0 contributed significantly to the prediction of compliance among participants (measured by number of scheduled appointments canceled or missed). Similarly, data from a study utilizing the MMPI to predict treatment attendance and participation within a group of convicted rapists (Kalichman, Shealy, & Craig, 1990), indicated that several MMPI scales had some predictive utility.

Relatively few studies have utilized the MMPI-A to describe specific clinical populations. For example, Pena, Megargee, and Brody (1996) compared the base rates, patterns, and configurations of all MMPI-A scales and subscales of a sample of juvenile delinquents to the non-delinquent standardization sample of male adolescents. They

found that the most prominent clinical scales for the delinquent population were 4, 6, and 9, with 49/94 being the most frequent 2-point code. The study also confirmed several significant differences between the two groups on various validity, clinical supplementary, and content scales. The data from this study suggested the potential utility of all three MMPI-A substance abuse scales, as well as Scale IMM for assessing juvenile delinquents.

Hume, Kennedy, Patrick and Partyka (1996) evaluated the usefulness of the MMPI-A for classifying adolescent offenders on the dimension of psychopathy. Using the Hare Psychopathy Checklist as the criterion instrument, they compared the MMPI-A Scale scores of youths judged to be psychopathic to those who were non-psychopathic. Finding no significant differences between these groups, on any MMPI-A scales, they concluded that the ability of the MMPI-A to differentiate chronic delinquents from normal adolescents is questionable.

In summary, the potential utility of the MMPI-A as a predictor of treatment outcomes remains to be established. Archer (1997) has commented that the MMPI-A main scales may not be particularly sensitive to the detection of psychopathology in adolescents, as many of the scales appear to be highly correlated with one another. It has, therefore, been suggested that the MMPI-A Structural Summary (Archer & Krishnamurthy, 1994), which is organized around its eight scale-level factors, may have better clinical discrimination and predictive utility. Thus, examination of the MMPI-A factors' predictive value regarding treatment outcomes appears to be a logical direction for further study. To date, however, there have not been any published studies that used the empirically derived MMPI-A factors as predictors of adolescent treatment outcomes.

Specific Aims of Current Study:

A primary concern of the juvenile justice system is the determination of the most appropriate disposition for any given offender. For example, how is it best determined whether a particular youth should be incarcerated or placed in treatment? Furthermore, once the treatment route has been affirmed, how can professionals accurately determine what level of treatment (outpatient vs. residential) will be appropriate on a case-by-case basis? Decision-making is made relatively complex by virtue of the heterogeneity of the juvenile offender population, and compounded still further by issues of community safety and finite public resources. (Hunter & Figueredo, 1999).

When making disposition decisions, errors in judgment in either direction carry significant social consequences (Hunter & Figueredo, 1999). Placement of high-risk youths in community-based treatment programs carries the potential for further victimization of the public. Conversely, the inappropriate commitment of low to moderate risk youths into correctional centers exacerbates the problems of overcrowding, and the soaring public costs of operating those programs. Of additional concern, such misplacement "may deprive these lesser-disturbed youths of normalizing familial and community socialization experiences, and ultimately contribute to their delinquency by virtue of their confinement in an environment with predominantly antisocial individuals" (Hunter & Figueredo, 1999).

Certainly, there is a need for specialized treatment programs to address the specific needs of this population. However, the mere provision of the opportunity for treatment is not a guarantee that the necessary therapeutic changes will take place. Offenders obviously need to complete treatment entirely and satisfactorily in order to

prevent recidivism. The need to identify those who are resistant to treatment or who are less likely to comply with treatment objectives in order to complete treatment successfully, is paramount to future developments within treatment programs, as well as to aid clinicians, social services, and the judicial system in more appropriately making disposition decisions. At present, there are no objective measures available for assessing, within any specific treatment setting, the likelihood of treatment compliance and program completion vs. treatment failure. As such, the judicial system is dependent upon the subjective clinical assessment of amenability to treatment and appropriateness of community-based care (Hunter & Figueredo, 1999).

The present study was designed to evaluate whether MMPI-A factor scores would accurately predict clinical judgments of program acceptance and client compliance with program requirements. This study was developed in support of an effort to develop a methodology for objectively evaluating juvenile sexual offenders and accurately making disposition decisions .

This study was a follow-up to a more comprehensive investigation of juvenile sexual offender risk profiling conducted by Hunter and Figueredo (1999) under a grant from the Office of Juvenile Justice and Delinquency Prevention. The original study's aim was to identify variables predictive of client response to a community-based treatment program for juvenile sexual offenders. Several constructs were assessed as predictors of treatment outcome, defined as successful program compliance or failure due to non-compliance or delinquency. The independent variables investigated as potential risk factors included: sexual deviancy, attitudes toward treatment, legal status, psychopathy, and general psychological maladjustment. The aim of the present study was to build upon

the initial findings regarding the construct of psychological maladjustment as a predictor of clinical outcomes. The original study utilized data from both the MMPI and the MMPI-A, which were combined and analyzed as a single, global factor of "general psychopathology". The current study was designed to investigate whether discreet MMPI-A factors were helpful in making specific predictions about clinical outcomes.

Synopsis of Original Study:

The original study (Hunter & Figueredo, 1999) aimed to identify factors associated with treatment compliance of 204 juvenile sexual offenders in a community-based treatment program. Constructs assessed (utilizing Structural Equation Modeling) as predictors of outcomes included those related to sexual deviancy, attitudes toward treatment, legal status, psychopathy, and general psychological maladjustment.

Of the variables investigated, several factors associated with risk of program failure and recidivism (sexual and non-sexual), as well as treatment compliance and success were identified. Attitudes of openness and accountability proved to be the best predictors of a positive treatment outcome. Lower levels of client denial at intake strongly predicted successful program compliance. Nearly 75% of those youths who showed no denial at intake successfully complied with program requirements for at least 12 months. In contrast, only slightly more than 25% of those in complete denial at intake successfully complied with the program for the ensuing 12 month period. Attitudes of denial and accountability appeared, however, to be more closely related to external contingencies, rather than underlying psychopathology. Neither level of client denial nor accountability was closely related to level of sexual deviancy, overall psychopathology, or psychopathic deviance, as measured by the MMPI. Instead, these attitudes appeared to

be related to circumstantial variables, such as adjudication status.

Higher levels of denial were found in non-adjudicated youths, while the majority of those who were fully adjudicated completely acknowledged and took responsibility for their offense. However, it was noted that while adjudication status appeared to be associated with attitudes toward treatment, it did not directly predict treatment outcomes. Taken together, this study's findings strongly reinforce the potential value of court involvement in increasing not only client accountability and responsibility, but also receptivity to intervention and motivation for treatment.

While there was no apparent relationship between psychopathic deviance as measured by the MMPI and denial of sexual wrong-doing, denial did appear related to variables indicative of psychopathy. Specifically, those individuals who were high in denial were those who were more likely to have been previously arrested for a non-sexual offense and those who were more likely to have a history of school truancy. While it may be that most youths who manifest denial are not highly psychopathic, and that their denial may be more a function of circumstance than psychological style (no court or familial pressure to admit), it is likely that some of them habitually take little responsibility for their behavior (Hunter & Figueredo, 1999).

Higher levels of sexual maladjustment were also predictive of treatment non-compliance. Results indicated that such youths may be at greater long-term risk for sexual recidivism. Although program attrition was high (50% in the first year), relatively few youths were expelled for sexual (3.4%), or non-sexual delinquency (3.4%) over a 12 to 24 month period. Rather, failure to complete the program was largely attributable (22.6% of clients) to expulsion for failure to comply with attendance requirements and/or

therapeutic directives. It should also be noted that approximately 20% of those youths who did not complete treatment were discharged for reasons extraneous to their behavior and attitudes (e.g., having a parent move from the area, etc.).

HYPOTHESES

Predictors of Program Acceptance:

In the original study, 59.6% of participants were accepted into the program following intake. It is expected that participants included in this study will be accepted into the program at a similar rate as those from the first study. Program acceptance was hypothesized to be predicted by several factors of the MMPI-A, in the following ways:

- low scores on General Maladjustment(F1)

- low scores on Immaturity (F2)

- low scores on Disinhibition/Excitatory Potential (F3)

- low scores on Familial Alienation (F7)

- low scores on Psychoticism (F8).

It was reasoned that participants with high scores on the General Maladjustment and Psychoticism factors would manifest a degree of psychopathology too severe to be deemed appropriate for outpatient care. For example, adolescents with high scores on General Maladjustment are more likely to report suicidal thoughts (Archer, 1997). Similarly, those who score high on Psychoticism are more likely to demonstrate disturbances in thinking (e.g. persecutory ideas) and mood lability (Archer, 1997). Such highly disturbed youths would necessarily be more suited to residential or inpatient care.

Individuals with high scores on the Immaturity factor are likely to be self-centered and have limited self-awareness and insight. They often display poor judgment, and impulse control, and have disturbed interpersonal relationships, marked by cruelty, bullying and threats (Archer, 1997). It was predicted that these adolescents would be

deemed inappropriate for outpatient treatment, as they typically display little remorse for their actions (Archer, 1997). A high degree of denial at the time of intake is one of the criteria for rejection from admission.

Similarly, it was expected that participants with high scores on the Disinhibition/Excitatory Potential factor would be more likely judged unsuitable for outpatient treatment. These adolescents are likely to display an extreme level of impulsivity and may manifest extensive behavioral and disciplinary problems (Archer, 1997). Proper familial support is also crucial for success in outpatient (Hunter, 1999). Familial support is helpful in providing supervision to the youth throughout the course of treatment and maintaining motivation for program participation. Therefore, it was predicted that those adolescents with low scores on the Familial Alienation factor would be treatment more likely to be accepted for outpatient treatment.

Predictors of Treatment Compliance:

It was hypothesized that participants' compliance with therapeutic directives over a 12- month period would be predicted by several factor scores on the MMPI-A, in the following manner:

- low scores on Immaturity (F2)

- low scores on Disinhibition/Excitatory Potential (F3)

- low scores on Familial Alienation (F7)

- high scores on Naivete (F6).

Of those adolescents who were accepted into outpatient therapy, it was predicted that those who displayed a lower level of impulsivity and interpersonal problems (i.e., low scores on Immaturity and Disinhibition/Excitatory Potential), and those who had

supportive familial relationships marked by an absence of conflict (i.e., low scores on Familial Alienation), would be more successful in treatment. Likewise, it was believed that those youths who were more optimistic, socially conforming and age-appropriate (i.e., high scores on Naivete), would be more compliant with therapeutic directives.

METHOD AND PROCEDURE

Participants:

All participants were referred for treatment at the Regional Juvenile Sex Offender Program (RJSOP), operated by the Pines Treatment Center in Portsmouth and Newport News, Virginia. This program was developed with the support of a demonstration grant from the Virginia Department of Criminal Justice Services to provide specialized alternative intervention to less chronically and severely disturbed juvenile sexual offenders in the Hampton Roads area of Virginia (Hunter & Figueredo, 1999).

One hundred and six (106) adolescent males, referred for community-based juvenile sexual offender treatment, served as participants in the study. Seventy of these participants were taken from the subject pool of the original study. Of the original set of 204 participants, the 70 individuals included in this study were those who had been administered the MMPI-A. All 70 participants from the original study had been referred to the treatment program between 1991 and 1995. The 36 new program participants included in the current study were referred to the program following 1995. Three criteria were established for inclusion in the study. First, participants must have begun intake proceedings a minimum of 12 months prior to the time of data collection. Second, all participants must have been administered the MMPI-A as part of their evaluation procedures at intake. Finally, the MMPI-A for each participant must have been valid for interpretation, based on the criteria utilized by Hunter and Figueredo (1999). Specifically, MMPI-A protocols were considered invalid and rejected for use in this study when one or more of the following was determined: L or K > 80; VIN or TRIN >80; or F>90.

The participants ranged in age from 13 to 18 years, with the mean age being 14.9 years at the time of evaluation. The ethnicity of individuals in the group studied was as follows: 49.1% were Caucasian; 46.2% African American; 3.8% Hispanic; and .9% were of "other" minority groups (e.g., Asian, Native American). At the time of referral, approximately 81% of the participants were court adjudicated, while 19% were without court involvement.

The reference offense for these juveniles was child molestation ($\geq$ 5 years older than victim) in 79.2% of the cases. Rape of a peer or older individual was the reference offense in 17.9% of the cases. A relatively small number (approximately 2.8% of the cases) were referred for engagement in some other, "hands-off" form of sexual misconduct (e.g., exposure, peeping). Approximately 73.6% of the offenses were committed against a female victim, while 26.4% involved a male victim. When more than one offense was noted as the reason for referral, the offense involving the youngest victim was chosen for this description.

Of the evaluated youths, 73.6% (N=78) were accepted for admission to the program. Of the 78 accepted, 40% (N=31) were compliant for 12 months. Thirty-seven percent (N=29) were discharged due to non-compliance with therapeutic directives (including non-attendance of scheduled sessions), and 23% (N=18) were discharged for non-clinical reasons (e.g., family moved from area).

Procedure

At intake, each youth was comprehensively evaluated to determine his appropriateness for admission into the program. Admission decisions were based on clinical judgment following a standard assessment procedure. Clinical assessment typically included record review, clinical interviewing, and administration of objective

measures of psychosocial and psychosexual functioning, including the MMPI-A. Specifically, the MMPI-A soft-cover answer sheet hand-scoring form was administered consistent with publisher standardization guidelines, including client age and reading ability. The MMPI-A was administered to adolescents 13 years of age or older who evidenced sufficient reading ability (based on records review and observation).

Demographic and clinical data on all participants were compiled and coded for analysis based on a review of client charts and information supplied directly by the clinical supervisor of the outpatient treatment program. Each MMPI-A protocol was evaluated as to its validity (see Archer, 1997), with those judged as invalid being rejected from inclusion in the study. Specifically, MMPI-A protocols were eliminated where one or more of the following criteria were met: L or K > 80; VIN or TRIN > 80; or F >90.

Because the hand-scored version of the MMPI-A was utilized, T-scores from each of the 69 basic validity, clinical, and supplementary scales on each protocol were hand-entered into a computer for use with a computerized scoring system (Archer, 1995). This computerized scoring system produced factor scores based on the entered T-scores following an algorithm produced by the previously discussed Archer et al. (1994) factor analytic study. It is noted that factors containing both positive and negative scale loadings were computed separately within this scoring system. Therefore, for purposes of statistical analysis these scores were combined into one factor (see Data Analytic section for details). All data were entered into an Access database and exported to SAS for statistical analysis.

Measures:

> *Demographic and Clinical Data Form*

All demographic, clinical background and outcomes data were recorded on a form, similar to that used in the original study. Information recorded included reason for referral, nature of presenting offense, and treatment outcome. A copy of this instrument can be found in the Appendix.

> *MMPI-A*

The MMPI-A soft-cover answer sheet hand-scoring form was used. This measure is deemed appropriate for individuals ranging between 12-18 years of age, who possess at minimum a 6th grade reading level. (Archer, 1997). As the normative sample for this instrument was restricted to adolescents between the ages of 14-18, caution must be exercised regarding administration to 12 and 13 year-olds.

The instrument has a total of 69 scales, including 7 validity scales, 10 basic clinical scales, 15 content scales, 6 supplementary scales, 28 Harris-Lingoes subscales and 3 subscales of the SI scale. The validity scales include the three traditional validity scales (F (Frequency), L (Lie), and K (Defensiveness)) of the MMPI, as well as four new scales developed specifically for the MMPI-A. The additional validity scales, include: the Variable Response Inconsistency (VRIN) scale, the True Response Inconsistency (TRIN) scale, and the F1 and F2 subscales. The Cannot Say (?) scale, from the original MMPI, is also included in the MMPI-A, although this scale is not considered a formal scale, as it lacks a consistent or fixed item pool (Archer, 1997).

The ten basic clinical scales of the MMPI-A are the same as those of the original MMPI, and are as follows: Hypochondriasis (scale 1), Depression (scale 2), Hysteria

(scale 3), Psychopathic Deviant (scale 4), Masculinity-Femininity (scale 5), Paranoia (scale 6), Psychasthenia (scale 7), Schizophrenia (scale 8), Hypomania (scale 9), and Social Introversion-Extroversion (scale 0).

Data Analytic Strategy:

The study's hypotheses were tested using the logistic regression procedure available in the SAS statistical software program. The logistic procedure fits linear regression models for binary (e.g. program acceptance/non-acceptance) response data by the method of maximum likelihood. To test the hypotheses, Archer et al.'s (1994) eight factors of the MMPI-A were used as predictors. Both "complete model" and "forward" selection procedures were used. The latter was used to force from significant models the identification of the best predictor(s) of the dependent variables. Separate analyses were performed on program acceptance and program compliance data. Factor scores were used as predictor variables as specified in the stated hypotheses. It is noted that weighted negative and positive sub-factors were algebraically combined in SAS to create single, integrated factor scores (e.g., $F3 = (F3a(8) + F3(-4)) / 12$). Product-moment correlations were computed in SAS between each of the predictor variables (selected factors) and the respective outcomes.

RESULTS

Prediction of Program Acceptance

Logistic regression procedures within SAS (Proc logistic) were used to assess the degree to which program acceptance was predicted by the following MMPI-A factors: General Maladjustment (F1), Immaturity (F2), Disinhibition/Excitatory Potential (F3), Familial Alienation (F7), and Psychoticism (F8). These regressions were run using both the "entire model", and the "forward" procedures. As previously explained, the latter approach was used so as to "force" from significant models the factor(s)that accounted for the greatest degree of variance in the dependent variable.

The entire model (see Table 1) was significant, X^2(5, N=106)=15.494, p=.0084; however, no individual factor was significant (p> .05) using this method. The forward selection procedure (see Table 2) showed that F2 (Immaturity) entered the model in Step 1, X^2 (1, N=106)=13.418, p=.0002. No other factors entered the model using the forward procedure (p>.05).

As depicted in Table 3, all of the MMPI-A factors used in the prediction of program acceptance were highly statistically significant (p< .01), and correlated with program acceptance in the hypothesized direction.

Prediction of Program Compliance

The following factors were used to predict program compliance: Immaturity (F2), Disinhibition/Excitatory Potential (F3), Naivete (F6), and Familial Alienation (F7). It should be noted that participants who were not accepted into the program (N=28), as well as those who were accepted but who were discharged for non-clinical reasons (i.e., circumstances beyond their control) (N=18) were necessarily excluded from this analysis.

Logistic regression, using the entire model procedure (see Table 4), did not produce a significant X^2 (4, N=60) =6.061, p=.1946. As depicted in Table 5, none of the MMPI-A factors used in the prediction of program compliance was statistically significant.

Analysis of MMPI-A Factor Intercorrelations

Table 6 depicts the intercorrelations of the eight MMPI-A factors. As shown, there was a high degree of collinearity between the factors. Only factors 3 and 5, 4 and 7, and 5 and 6 were not significantly correlated with one another (p>.05).

Table 1

Prediction of Acceptance Using Logistic Regression (Entire Model) (N=106)

Model	X^2	df	p
Entire Model			
-2 LOGL	15.495	5	.0084
Score	14.636	5	.0120
Factors			
F1 (General Maladjustment)		1	.9902
F2 (Immaturity)		1	.2985
F3 (Disinhibition/Excitatory Potential)		1	.2719
F7 (Familial Alienation)		1	.9997
F8 (Psychoticism)		1	.7391

Table 2

Prediction of Acceptance Using Logistic Regression (Forward Selection) (N=106)

Model	X^2	df	p
Immaturity			
-2 LOGL	13.866	1	.0002
Score	13.418	1	.0002

Table 3

Correlations Between Factors and Acceptance Status (N=106)

	Factors				
	F1	F2	F3	F7	F8
Acceptance	-0.3190*	-0.3558*	-0.3124*	-0.2571*	-0.2918*

Note. In the coding of acceptance, 1= not accepted, 2= accepted

*p<.01

Table 4

Prediction of Compliance Using Logistic Regression (Entire Model) (N=60)

Model	X^2	df	p
Entire Model			
-2 LOGL	6.061	4	.1946
Score	5.760	4	.2178
Factors			
F2 (Immaturity)		1	.1278
F3 (Disinhibition/Excitatory Potential)		1	.4849
F6 (Naivete)		1	.0559
F7 (Familial Alienation)		1	.3186

Table 5

<u>Correlations Between Factors and Program Compliance (N=60)</u>

	Factors			
	F2	F3	F6	F7
Program Compliance	0.0853	-0.0678	0.1881	0.0300

<u>Note.</u> In the coding of compliance, 1= complied for 12 months, 2= did not comply

*p<.05

Table 6

Intercorrelations Between MMPI-A Factors (N=106)

	Factors							
	F1	F2	F3	F4	F5	F6	F7	F8
F1	1.000							
F2	0.869**	1.000						
F3	0.639**	0.672**	1.000					
F4	0.682**	0.525**	0.387**	1.000				
F5	0.529**	0.479**	0.095	0.235*	1.000			
F6	-0.622**	-0.529**	-0.788**	-0.589**	-0.028	1.000		
F7	0.620**	0.714**	0.474**	0.166	0.424**	-0.286**	1.000	
F8	0.802**	0.889**	0.539**	0.551**	0.402**	-0.450**	0.503**	1.000

*p<.05   **p<.01

DISCUSSION

Decision-making regarding the placement of juvenile sexual offenders in community-based treatment programs is a matter of considerable clinical and judicial complexity. Erroneous decisions have implications for both community safety and prudent fiscal management of limited public resources. Such decisions are especially important given the evidence that program failure rates can be very high, and that such failures can undermine the confidence of the judiciary and the public in the effectiveness of mental health interventions for forensic populations (Hunter & Lexier, 1998). The current data indicated that over half of juvenile sexual offenders placed in the studied outpatient program never completed treatment. In the majority of the cases, this was due to poor compliance with attendance and therapeutic directives. These data underscore the urgency of identifying psychometric tools that can assist clinicians in understanding psychological processes and client characteristics predictive of program success and failure. An increased understanding of factors and personality traits associated with successful and unsuccessful clinical outcomes may not only produce better screening procedures, but also result in the identification of areas where clinical programming can be improved.

This study sought to evaluate the utility of MMPI-A factor scores in predicting clinical outcomes for an outpatient juvenile sexual offender population. The MMPI-A was chosen for study because it is one of the most widely clinically used standardized psychological assessment instruments available today, and purportedly represents a recent improvement over use of the original MMPI with adolescents. Factor scores were

used as predictors based on recent research suggesting that the instrument's clinical scales are highly inter-correlated and that analysis of Structural Summary indices may represent an improved approach to clinical interpretation (Archer, 1997). This research, therefore, both addressed an important clinical practice issue (i.e., disposition decision-making for a high-risk clinical population) and helped assess the viability of a new approach to interpretation of the MMPI-A.

The results of this study point to both the utility and the limitations of the MMPI-A, and MMPI-A factor scores, in predicting specific clinical outcomes for a forensic juvenile population. The MMPI-A does appear to be of utility in predicting and understanding clinical decision-making regarding program acceptance. It is noted that clinical decisions regarding the acceptance of high-risk youths into treatment likely reflect consideration of a number of variables, including the youth's and his family's judged motivation for receiving help and making basic life changes, as well as the youth's capacity for accomplishing this task. The latter involves clinical assessment of the youth's coping and self-regulatory skills (e.g., impulse control and judgment), and his capacity for achieving and maintaining emotional and behavioral stability. It seems reasonable to assume that both motivation for treatment and general capacity for change are linked to an individual's level of psychosocial maturation.

The findings of this study suggest that clinical decisions to accept a youth into treatment are closely associated with perceptions of that youth's psychological maturity. A low score on the MMPI-A Immaturity factor was found to be the best predictor of program acceptance. Immaturity was the second dimension found by Archer et al. (1994) in their factor analytic study of the instrument. Fifteen basic, content, and supplementary

scales load on this factor, including Scales F, 6 (Paranoia), and 8 (Schizophrenia). Archer (1997) identified this factor as reflecting self-absorption, with individuals who score high on Immaturity tending to have poor self-awareness and insight, and difficulties with judgment and impulse control. High scorers are also characterized as prone toward aggressive and disruptive behavior, while lacking empathy for others and remorse for wrongdoing.

Although not assessed in this study, high scores on Immaturity may relate to initial attitudes of denial and accountability for sexual misbehavior. The latter were found, in the original study by Hunter and Figueredo (1999), to be the best predictors of treatment compliance. In the original study, juveniles who acknowledged all of what they had been accused at intake were nearly three times more likely than those in full denial to remain compliant during the first 12 months of participation in community-based treatment. Clinicians may perceive psychosocially immature and self-centered youths as defensive and lacking in sufficient remorse for their sexual misbehavior to meaningfully participate in treatment. However, a formal assessment of the relationship between high scores on Immaturity and offense specific attitudes of denial and accountability will have to await further research.

Although Immaturity was the only factor assessed to achieve statistical significance in the conducted logistic regression analysis, the other assessed factors were all significantly correlated with program acceptance in the hypothesized directions. The absence of their statistical significance in the logistic regression procedure appears to be a function of the high degree of collinearity that exists between these factors. Inter-correlations between the eight MMPI-A factors were generally in the .50 to .90 range.

Thus, once the variance of the most highly correlated of these factors is removed from a regression equation, the other factors tend to "drop out". However, inspection of the individual correlations of these factors with program acceptance supports the study's hypotheses. Namely, program acceptance was found to be associated with low scores on General Maladjustment, Disinhibition/Excitatory Potential, Familial Alienation, and Psychoticism. Therefore, youths who were not accepted into the program were those who demonstrated more pronounced general maladjustment, including problems with impulse control, affect modulation, aggressive and delinquent conduct, and difficulty responding to authority and maintaining harmonious social/familial relationships.

The high degree of collinearity between the MMPI-A factors raises questions as to whether they meaningfully tap into separate psychological domains. It should be noted that in their factor analysis, Archer et al. (1994) utilized an oblique rotation, which assumes that the factors are intercorrelated. Thus, the findings from the current study are not inconsistent, or contradictory to Archer et al.'s findings (A. J. Figueredo, personal communication, June 24, 1999). It is further noted that the Archer et al. (1994) factor analytic study demonstrated that the factor accounting for most of the variance in the MMPI-A was General Maladjustment. General Maladjustment was also found to be the largest factor in previous factor analytic studies of adolescent responses to the MMPI (Archer, 1997). The original study by Hunter and Figueredo (1999), using the basic scales of the MMPI and MMPI-A, also only produced one global MMPI factor score: "General Psychopathology". Thus, it appears that the MMPI-A factors, which are composed of basic and supplementary MMPI-A scales, may suffer from the same problem of redundancy that Archer (1997) commented on in his discussion of the

limitations of scale interpretations of the MMPI-A. The MMPI-A, like its predecessor, and in spite of approach to interpretation, may most reliably assess global psychopathology and be of more limited utility in assessing specific domains of personality and psychological functioning.

The results of this study did not support the utility of the assessed MMPI-A factors in predicting program compliance for juvenile sexual offenders treated on a community-based level. This finding may be a function of at least three circumstances: 1) personality and psychopathology as measured by the MMPI-A factors may not make a significant contribution to explaining why some youths are compliant with treatment and others are not; 2) the contribution of personality and psychopathology to understanding treatment compliance may have been attenuated by range restriction imposed by the admission selection process; and 3) there may not have been sufficient power in the conducted analysis to detect the influence of personality and psychopathology because of the low sample size (N=60).

Relating to the first of the possible explanations, personality and psychopathology as measured by the MMPI-A may not significantly influence whether a youth is compliant with treatment expectations. This may be especially true if one considers that treatment compliance with adolescents is undoubtedly a product of both the individual youth's motivation for help and that of his family's. Clinical observation would suggest that many of the parents of these youths lack sufficient motivation for ensuring the compliance of the youth, or are unable due to extenuating circumstances to enforce the same. Many of the parents of juvenile sexual offenders are described as themselves being in denial about the youth's sexual misbehavior, or as prone toward minimization of

its significance (Becker & Hunter, 1997). Their denial or minimization has been speculated to impede the youth's ability and willingness to fully confront his problems and make a commitment to treatment. Other families are described as beset by a multitude of problems that hinder the parents' ability to exercise proper control over their children and adequately provide for their emotional and physical needs. The MMPI-A could only be expected to indirectly, at best, measure such familial contributions to program non-compliance. Furthermore, the previously discussed tendency for the MMPI-A to assess global psychopathology may render it less useful in discerning the nuances of personality's influence on the motivational process. The second possible explanation proposes that the admission selection process, itself, attenuates the influence of personality and psychopathology on treatment compliance. As demonstrated in this study, more psychologically dysfunctional and disturbed youths are screened out as unacceptable for program admission, especially those youths who are highly immature and less responsible. This would serve to create greater range restriction on psychopathology in youths that are admitted to the program. It may well be that the influence of personality and psychopathology on motivation and capacity for treatment compliance is seen in its more extreme form in those youths who are, for example, too depressed or antisocial to be able to fully participate in counseling. Thus, the contribution of personality and psychopathology to an understanding of treatment compliance may have been already partialed out from the total population of youths referred for treatment.

The third explanation relates to the relatively small sample of 60 youths on whom the regression analysis was conducted. There may not have been sufficient power in the

conducted analysis to detect the actual effect of personality and psychopathology on the treatment compliance process. Insufficient power in analyses relative to the actual effect size has been cited by several researchers as reasons for negative findings in many clinical research studies (Barbaree, 1997).

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

In conclusion, the results of this study suggest that the MMPI-A factor scores may be of limited utility in making predictions about specific clinical outcomes for juvenile sexual offenders referred for community-based treatment. The instrument's usefulness may be limited to screening youths for global psychological immaturity and maladjustment. The MMPI-A may be less useful in making distinctions between less psychologically impaired youths who are more or less motivated and capable of committing themselves to a sustained program of clinical intervention.

In this study, clinical decisions regarding program acceptance were best predicted by the MMPI-A Immaturity factor. Other factor scores were significantly correlated with program acceptance in the hypothesized directions; however, they did not incrementally increase discrimination between those accepted and those not accepted for treatment. This appeared to be a function of the high degree of collinearity between the factors. No MMPI-A factors were found to be statistically significant in the prediction of program compliance. Several explanations for this negative finding are offered, including low statistical power in the assessed model.

The finding that the MMPI-A Immaturity factor was useful in making predictions about program acceptance seems to warrant additional exploration. As low scorers on this factor were clinically judged to be appropriate for outpatient treatment, it may be that the influence of this dimension is determining psychological "readiness" for treatment. For example, high scores on Immaturity may relate to initial attitudes of denial and accountability for sexual misbehavior. Future research should explore

whether the MMPI-A factors have any predictive utility regarding these constructs (denial, accountability, adjudication status), or whether in combination with these constructs they may be useful in making predictions about clinical outcomes.

It is also suggested that future research examine the utility of the Immaturity factor in making predictions about program acceptance and compliance with other clinical populations. It seems reasonable to assume that youths who are defensive, self-centered, and lacking in judgment and impulse control would not make good candidates for therapy of any kind. Conversely, a healthy dose of self-awareness and insight, coupled with an age-appropriate ability to delay gratification and experience empathy for others, would seem to be important in meeting all types of therapeutic challenge. A better understanding of the relationship between this factor and therapeutic readiness may be achieved by comparing clinical populations that are self-referred to those that are mandated into treatment (e.g., delinquents, and other forensic populations).

Finally, it is suggested that a Structural Summary approach to interpretation of the MMPI-A may not overcome all of the previously discussed limitations of scale interpretation. It will be important to examine the intercorrelation of MMPI-A factors in other clinical populations to determine if the current findings are unique or suggestive of inherent instrument limitations.

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APPENDIX

DEMOGRAPHIC AND CLINICAL DATA FORM

1)Participant ID #: (001 - 106)

2)Age: (13 – 18)

3)Race:

    1= Caucasian

    2= African American

    3= Hispanic

    4= Other

4) Adjudication Status:

    1= Non-adjudicated

    2= Adjudicated

5) Date of Intake:

6)Date of Termination/Discharge (if applicable):

7)Reference Offense:

    1= Child Molestation

    2= Rape(Peer/Adult)

    3=Other(Hands-off)

8) Victim Gender:

    1= Female

    2= Male

9)Program Acceptance:

    1= No

    2= Yes

10)Disposition(12month period):

    0= Not Accepted

    1= Complied 12 mos.

    2= Did Not Comply

    3= Other (e.g., moved)

VITA

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Linda Marks Hunter was born in New York City, New York in 1963. She received her B.A. degree from Grinnell College, with a major in Psychology, in 1986. In August 1999, she will obtain her Psy.D. degree in Clinical Psychology from The Virginia Consortium Program in Clinical Psychology. She completed her one-year Clinical Internship Program at the Virginia Treatment Center for Children, located in Richmond, Virginia. She currently resides in Charlottesville, Virginia, with her husband, and daughter.