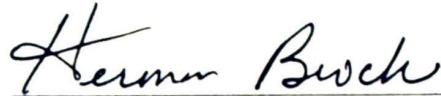


**PSYCHOLOGICAL PROFILE DIFFERENCES, AS MEASURED
BY THE MMPI-A, BETWEEN SCHOOL REFERRED 'AT RISK'
STUDENTS AND JUVENILE COURT REFERRED ADOLESCENTS**

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To the Graduate Council:

I am submitting herewith a thesis written by Gina Denise Davidson Beard entitled "Psychological Profile Differences, as Measured by the MMPI-A, between School Referred 'At Risk' Students and Juvenile Court Referred Adolescents." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Masters of Arts, with a major in psychology.




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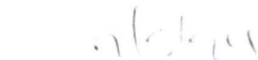
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Psychological Profile Differences, as Measured by the MMPI-A,
between School Referred "At Risk" Students and Juvenile Court Referred Adolescents

A Thesis Presented for the Master of Arts Degree

Austin Peay State University

Gina Denise Davidson Beard

August, 1994

DEDICATION

This thesis is dedicated to my husband, Morris Beard, my parents, Mr. Gene Davidson and Mrs. Rose Davidson, and my sister, Ginger Davidson, for their constant love, support and guidance. This thesis is also dedicated to the children who participated in the study and all other Primary Prevention participants with whom I have worked for the last several years. I will never forget you and what you have taught me.

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I would like to thank Dr. Herman Brock for all his work and kindness over the last two years. The commitment and care Dr. Brock has directed toward my education has made him a permanent factor in my professional growth. I would also like to thank Dr. Charles Grah and Dr. Garland Blair for serving on my committee and sharing their knowledge.

ABSTRACT

The identification of the differences in psychological characteristics which exist between "at risk" school referred and juvenile court referred adolescents, as measured by the Minnesota Multiphasic Personality Inventory for Adolescents (MMPI-A) Content and Supplemental scales, is the focus of this research. To identify the differences between the two groups and genders a multivariate analysis of variance (MANOVA) was employed. Z-tests were used to examine the differences between the two groups and the MMPI-A normative sample.

The findings indicate that, although the groups did show the tendency to differ from the MMPI-A normative sample in the areas of alcohol and drug related problems and difficulties in school, the two groups did not appear to have widespread differences between each other. Significant differences between the genders on the Adolescent-Health Concerns (A-hea) and the Adolescent-School Problems (A-sch) scales were found.

The conclusions which are generated by this research are as follows: the school referred and juvenile court referred groups do not appear to be distinct groups, instead, it would seem that they are subtypes of delinquents; the differences between the genders indicate that, while both are experiencing some level of difficulty in the areas of school and community, females are experiencing difficulties in an internalizing fashion and the males are experiencing their difficulties in an externalizing fashion; and the MMPI-A Content and Supplemental scales may not be successful at differentiating between closely related groups.

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CHAPTER 1

LITERATURE REVIEW

"Children are ever the future of a society. Every child who does not function at a level commensurate with his or her possibilities, every child who is destined to make fewer contributions to society than society needs, and every child who does not take his or her place as a productive adult diminishes the power of that society's future" (Horowitz & O'Brien, 1989, p. 445). Problems that children face at times seem insurmountable. Societal issues that are of utmost concern today, such as crime, poverty and drug use, impact and are impacted by adolescents. Therefore, additional resources must be devoted in the areas of prevention and intervention. Problems, such as behavioral and adjustment problems, poor educational achievement, interpersonal difficulties, delinquency, mental illness and substance abuse, plague adolescents and decrease their contribution to society. "If we can prevent the problem from occurring, we spend less resources and injure fewer children and families in the long run" (Liss, 1993, p. 1). Research devoted to identifying the development of problems in adolescents' lives, and thereby contributing to early diagnosis and intervention, saves monetary resources. More importantly, however, this research helps spare human misery by increasing the chances for prevention.

The field of psychology has been quick to identify the contribution that it can make to help children and, therefore, help society by conducting research and developing measures that can identify distress, and ultimately better treat this distress. However, in spite of these contributions, it appears that we put less emphasis on research regarding adolescents than we do toward adults and, therefore, know less about them (Williams &

Butcher, 1989; Williams, Butcher, Ben-Porath & Graham, 1992) and we more often treat than prevent (Steinberg & Silverman, 1987).

"In the United States, the first children referred to be systematically examined for emotional difficulties were those who were repeatedly in trouble with the law" (Combrinck-Graham, 1990, p. 204). Although we often begin our services at the stage of crisis, we in the helping professions are never satisfied with only identifying individuals who are experiencing difficulties. Instead, we desire the ability to predict, intervene or prevent the development of problems. This is the case with psychology's study of delinquents. Much research has been devoted to differentiating and identifying the differences which lie between the delinquent child and the non-delinquent child.

"Behind the act of delinquency, however, lies the construct 'proneness.' Proneness can be thought of as a kind of aptitude to become delinquent which is measured by estimates of the probability that an individual will become delinquent" (Hathaway & Monachesi, 1963, p. 77). Hathaway and Monachesi also believed that there were varying degrees of delinquent propensity, with some children being low in proneness for delinquency while others have higher levels of propensity for delinquent acts. Children who were lower in their proneness were felt to "become delinquent only under the most provocative situations". However, the "highly delinquency-prone children...will tend to remain delinquent even under the most extreme measures of suppression" (1963, p. 78). In 1953, Hathaway and Monachesi stated, "we shall assume that delinquency is a symptom rather than a personality trait. This means that we expect to find a number of personality types among whom the symptom of delinquency is common" (p. 7). Hathaway and

Monachesi began to focus on identifying the personality differences that exist between those types of adolescents which develop delinquency and those who do not, and they concluded:

If delinquency is symptomatic of neurotic or psychotic personality syndromes, then one would expect groups of juvenile delinquents to show significant elevations on scales of the MMPI. If, on the other hand, delinquency results from patterns of personality not represented in psychiatric practice, then MMPI scales will not show significant relationships to the occurrence of delinquency. (1953, p. 9)

The identification of children and adolescents who are prone or at risk of becoming delinquents is of utmost importance if states, such as Tennessee, are going to implement prevention programs which are designed to decrease the number of law offending young people. If programs are to be successful, the correct identification of children who experience additional risk factors must occur. Pruitt (1993) maintains that if every child is targeted as an at risk child then the term at risk is meaningless, and if children who are not at risk are targeted then the governments' money will be wasted and eventually run out. Additionally, "until practical methods of prediction are found, prevention programs cannot be highly efficient" (Hathaway & Monachesi, 1963, p. 86).

The study of delinquency has been a long standing practice by psychologists. Farrington and West studied delinquency through the longitudinal approach and discovered a great deal about delinquents and their development into adult offenders (Brambring, Losel & Skowronek, 1989). This research involved 441 males who lived in

London. These males were mostly British, white, from an urban area and from working-class families. The subjects were followed from an average age of 8-9 years until their average age was 32. At the time of the last interview, 378 or 93.8% of the original men were interviewed. They found adverse family background factors (including poverty, large families, and ineffective parenting techniques) to be associated with adolescents who commit criminal acts. These investigations found significant differences which existed between delinquent males and nondelinquent males in late adolescents and young adulthood. Some of the things more associated with delinquents are: consumption of alcohol, cigarette smoking, use of illegal drugs, heavy gambling, sex with multiple partners without the use of contraceptives, not getting along well with their parents or children and the involvement in group violence. Men who were convicted for the first time at a later age were less likely, however, to differ significantly from men who offended at an earlier age (Brambring et al., 1989).

The work of Farrington and West indicated that delinquents and nondelinquents do significantly differ, and this lends support to the belief that identification of differences may contribute to the identification of individuals at risk for becoming delinquents. However, "the process involved in risk are...both external and internal, both objective and subjective, and both consciously and unconsciously determined" (Anthony & Cohler, 1987, p. 4). Therefore, not only may it be possible to identify external risk factors but also internal risk factors, as suggested by Hathaway and Monachesi. Such identification of internal, or psychological factors, which contribute to the development of delinquency is one of the goals of psychometric instruments, such as the Minnesota

Multiphasic Personality Inventory (Williams & Uchiyama, 1989).

The use of the Minnesota Multiphasic Personality Inventory with adolescents has been abundant (Colligan & Offord, 1989; Williams & Butcher, 1989; Pancoast & Archer, 1988; Butcher & Pope, 1992; Archer, 1984). More specifically, the application of the Minnesota Multiphasic Personality Inventory (MMPI) with adolescents who are exhibiting delinquent behaviors has also been extensive. The Minnesota Multiphasic Personality Inventory (MMPI) has shown itself to be useful in identifying problems, such as delinquency, in adolescents. The MMPI was administered to 15,000 adolescents in the United States and "a close association between high scores on the Pd [Psychopathic deviate] scale and convictions for delinquency" was found, and "high scores were also found to precede the onset of delinquent behaviour [*sic*]" (Davies & Maliphand, 1971, p. 36). Hathaway and Monachesi (1953, p.10) concluded, after examining the research that had been done up to that point, that the Minnesota Multiphasic Personality Inventory (MMPI) had been successful at making "predictive statements and in general for preliminary differentiation of delinquents from nondelinquents."

In 1945, Dora Capwell attempted to identify personality differences between nondelinquent and delinquent girls. A group of 101 delinquent girls at the Minnesota State School for Girls were compared to 85 non-delinquents in the Public Schools. A psychological assessment battery, consisting of the Minnesota Multiphasic Personality Inventory (MMPI), the Washburne Social Adjustment Inventory and the Pressey Interest-Attitude Test, was completed twice. The delay between the two batteries ranged from 4 to 15 months. Two other tests of personality, the Vineland Social Maturity Scale and the

Terman-Miles Test of Masculinity-Femininity, were administered only once. Also administered just once, to determine intelligence and academic achievement, were the Kuhlmann Tests of Mental Development and the Stanford Achievement Test. The MMPI differentiated between the two groups for each scale, except for the Hysteria scale. The greatest difference between the groups was found on the Psychopathic Deviant scale. The Minnesota Multiphasic Personality Inventory was found to differentiate between the two groups better than any other of the tests administered by Capwell. In general, she concluded that personality measures, specific to the MMPI, can distinguish differences between the two groups, with delinquents demonstrating more significant levels of psychological difficulty (Capwell, 1945).

The phenomenon of some children responding more favorably to behavioral techniques than others was the emphasis of research conducted by Davies and Maliphant (1971). This study examined the differences between psychopathic children and children who were "refractory", which was defined by the researchers as "the sort of boy who constantly needs correction, seems indifferent to the threat of punishment as far as his behaviour is concerned, and who carries a chip on his shoulder" (Davies & Maliphant, 1971, p. 37). Each boy who was identified as refractory by his teachers and other school staff was paired with another same-aged boy who had not been nominated by his teachers as being refractory. This pairing formed an additional group to whom the refractory boys were compared. The differences between the two groups were examined by the administration of the Psychopathic Deviant scale of the Minnesota Multiphasic Personality Inventory. The age range of the subjects was 11-16 years, and the size of the

sample of boys was 25 in each group. The difference in the Psychopathic Deviant scale score for the two groups was significant. This significance was determined by the completion of a sign test. The results of this study were taken by Davies and Malipant to indicate that boys who exhibit problem behaviors, but are not identified as delinquents, score significantly higher on this measure than boys who are not identified as exhibiting behavioral problems (Davies & Malipant, 1971).

Klinefelter, Pancoast, Archer and Pruitt conducted research in 1990, which focused on the use of the aging Minnesota Multiphasic Personality Inventory (MMPI) with adolescents and this measure's ability to discriminate between groups of adolescents in "inpatient, outpatient and normal settings" using multivariate statistical techniques. Fifty male and 50 female subjects were included in each group with the mean age of the inpatient group being 15.05, the mean age of the outpatient group being 15.58 and the mean age of the normal adolescent sample being 16.98. Each subject completed the MMPI and each was scored using the following adolescent norms: (a) Marks and Briggs, (b) Gottesman et al., and (c) Colligan and Offord (Klinefelter et al., 1990). A significant main effect was found for these norms on all 13 MMPI scales. This finding indicated the caution which must be used when choosing the use of above mentioned adolescent norms. A significant difference between each of the groups was found for all MMPI scales except the Masculine-Feminine and Mania scales. The inpatient subjects displayed the most elevated scores for each of the scales except the validity scales of L (Lie) and K (Defensiveness), and the normal subjects possessed the lowest scores on all clinical scales. Additional support, therefore, lies in the use of the MMPI to distinguish

between groups who are experiencing difficulty and those who are not.

In addition to attempts at differentiating between groups, the MMPI has also been used to attempt to identify different personality subtypes of delinquent adolescents. One such study in 1984, conducted by Lueger and Hoover, applied the MMPI to distinguish among subtypes of delinquents. The 50 males included in this study were between the ages of 12 and 17 years, and were admitted into a 30-day inpatient screening facility for adolescents. The MMPI was completed by each boy before the fifth day of attendance at the facility, and the Marks, Seeman and Haller norms were used to score the measure.

The Behavior Problem Checklist was completed by the child's social worker approximately three weeks after admission to classify the child as conduct problem type, anxious-withdrawal type or as neither type. Adolescents were given the neither type classification if they did not score significantly on the anxious-withdrawal or conduct problem scales of the Behavior Problem Checklist. A separate one-way analysis of variance for each validity and clinical scale of the MMPI was computed. The conduct problem and anxious-withdrawal groups differed significantly only on the Hysteria scale. The anxious-withdrawal group differed significantly from the neither group only on the Hysteria subscale, and the conduct problems and neither type groups differed in respect to the Mania subscale (Lueger & Hoover, 1984).

To determine if the MMPI clinical scales could accurately classify the subjects according to their delinquency subtype, a step-wise discriminant analysis was computed. The discriminant function could accurately separate only the neither type from the other two types, however, the MMPI could not discriminate between the anxious-withdrawal

and behavior problem groups. Lueger and Hoover (1984) took this to indicate that the MMPI is not successful at differentiating between subtypes of delinquents, and they suggest that additional information be included before the MMPI is used to classify or diagnose an adolescent. The use of multiple measures is a caution which must be heeded by every assessor.

Another study concerned with the different subtypes of delinquency was conducted by Genshaft (1980). The subjects were fifty seven males who were temporarily confined to a juvenile facility due to their illegal activities. All of the boys had past history of criminal activity, and the mean age for the group was 15.5 years. The Personal Opinion Survey was administered to classify the boys into three groups based on their highest T-score. The three groups were: unsocialized-psychopathic delinquents (PD), neurotic-disturbed (ND) and socialized-subcultural delinquents (SD). The MMPI was administered to act as the dependant variable in the study. Both the Clinical and Harris-Lingoes subscales were scored using adolescent norms. A separate one way analysis was used to examine the differences on the MMPI among the three subgroups of delinquents. A replication study was conducted using 51 delinquents, who were all within their first month of attendance at a long-term facility for delinquents.

The ND groups scored significantly higher than the other two groups on the following scales: Depression, Conversion Hysteria, Psychopathic deviate, Masculinity-femininity, Paranoia and Psychasthenia. The ND group also scored higher than the SD group on scales Hypochondriasis, Paranoia and Schizophrenia. The two groups, SD and PD did not differ significantly on any of the clinical scales. The examination of the

Harris-Lingoes scales indicated that the ND group had more feelings of worthlessness and unhappiness, the PD expressed more difficulty dealing with authority figures and the SD group indicated greater need to be liked and greater social introversion (Genshaft, 1980). The replication study also conducted by Genshaft yielded MMPI results "essentially equivalent to those found with the first sample" (1980, p. 283). These results are interpreted by Genshaft to indicate the support for differing programs and therapies servicing delinquents due to the differences that exist within this group of young people (1980).

The purpose of a study conducted by Westendorp, Brink, Roberson and Ortiz (1986) was to identify which variables best determined whether youth would be placed in the juvenile court or mental health setting. The hypotheses of the investigators were, first, that the demographic variables of race, gender, socioeconomic status, and parental marital status would differentiate between the juvenile justice and mental health groups of adolescents; and second, that the level of psychopathology and personality patterns, as measured by the MMPI, would not significantly differentiate between the two groups. In essence, it was believed that the circumstance of the child had more impact on the placement than did the level of mental illness or delinquent behaviors. This was in part believed due to the past research which indicates that there is little personality difference between adolescents served in a mental health setting and those placed in a treatment facility as a result of their illegal activities.

The subjects included in this study formed two groups. The first sample group consisted of 107 male and 114 female subjects who were admitted into various treatment

programs in a mental health agency. The second group of subjects were 51 male and 4 female adolescents who were placed in specific programs for those referred by the juvenile court. The mean age of both groups was 15.2 years. The mental health group received treatment services which took place in settings ranging from a state hospital to outpatient. The juvenile court referred adolescents were placed in either a "rehabilitation program, probation, foster home, group treatment home, youth camp, private institution" (Westendorp et al., 1986, p. 26). The demographic information of the subjects was gathered through the use of a structured interview schedule, and the MMPI, short form R, was administered and scored using adolescent norms.

The results of the study supported the researchers' hypotheses, therefore, more demographic variables successfully differentiated between the two groups than did the personality measure. The following demographic variables yielded significant chi-square tests: gender, ethnicity, drug use, previous mental health history of subject and marital history of parents. The only scale on the MMPI to be successful at differentiating between the two groups was Depression (Westendorp et al, 1986).

The differences which exist within more specific groups of delinquents become more difficult to identify. This tendency is supported by research involving adolescents who had committed homicide and those imprisoned for the nonviolent act of larceny. Adolescents charged with larceny were selected as a comparison to the homicide group due to the nonviolent nature of their crime. The violent, homicide group was further divided into two groups. This division occurred by the application of the simple typology developed by Cornell and colleagues in 1987. Two main groups were included in this

typology, with the first being "conflict group-adolescents who were engaged in an interpersonal conflict with the victim" and, secondly, the "crime group-adolescents who committed homicide in the course of another crime such as robbery or rape" (Cornell, Miller & Benedeki, 1988, p. 402). The mean age for all subjects was 17, and 18 subjects in each group were included in the final sample.

The psychological profile differences which existed between the groups were measured by the MMPI, and computed by a multivariate procedure, profile analysis. The differences between the nonviolent and the two homicide groups were not significant. However, the profile differences between the conflict and crime groups were significant. The differences between the two groups on individual subtests were also examined using t-tests. The groups differed significantly on the Frequency, Hysteria and Schizophrenia scales; with the crime group having more extreme scores on each. These findings suggest that the "seriousness of the crime does not correspond to severity of the psychopathology as assessed by the MMPI" (Cornell et al., 1988, p. 405). The profiles of the crime group indicate that they tend to take less responsibility for their actions, exhibit impulsive behavior and have violent tempers. However, the conflicts 4-6-8 (Psychopathic deviate-Paranoia-Schizophrenia) profile indicates "less severe disturbance" (Cornell et al., 1988, p. 406). These results indicate that it is possible to identify subsets of violent offenders, which may better prepare us to treat them with more specialized and effective methods.

A similar study conducted by Spirito, Faust, Myers and Bechtel (1988) investigated the MMPI's ability to differentiate between suicide attempters and other

adolescents with emotional difficulties. The subjects were 20 females who had attempted suicide and were hospitalized on a general pediatrics ward to treat short-term conditions resulting from the attempt. The majority of the administrations were completed one to three days following the suicide attempt. These girls had an average age of 15.8 years. The comparison group was comprised of 20 females who were referred to the child psychiatric services for psychiatric evaluations by their pediatricians when it became suspect that their medical conditions were being brought about by, or exacerbated by, psychological factors. A multivariate analysis of variance (MANOVA) was computed to examine the differences between the groups, as measured by the MMPI. Only the K (Defensiveness) scale means for the two groups proved to be significantly different when a univariate analysis of variance was computed; however, this scale was not significantly different when the MANOVA was computed. This lends to the data which supports the notion that, for some groups of adolescents, the MMPI is not successful at identifying differences which may exist in psychological characteristics (Spirito et al, 1988).

Some research has been devoted to identifying the success at which an individual scale has at discriminating between two groups of adolescents. This is the case for Ganter, Archer and Graham (1992). The MacAndrew scale scores for 443 adolescents were examined by a discriminant function analysis to determine the scale's ability to discriminate between three groups: residential substance abusers, psychiatric inpatients and high school students. The mean age for the sample was 15.9. The results of the study demonstrate that significant mean MacAndrew scale raw score differences existed

between the three groups. The direction of scores was as anticipated, with substance abusers receiving the highest scores, then psychiatric inpatients and lastly school students. Significant gender differences were also found, with males producing higher MacAndrew scale scores than females. "The overall classification accuracy obtained using the discriminant function analysis was significantly better than chance assignment" (Ganter et al., 1992, p. 135). It was concluded by the authors of this research that the MacAndrew scale, on the MMPI, and the MacAndrew-Revised scale, on the MMPI-A, are comparable due to the retention of 45 items of the original scale and the addition of four new items. Therefore, the success of this research, in most likelihood, will also be enjoyed by the MMPI-A's MacAndrew scale (Ganter et al., 1992). The MacAndrew-Revised scale is designed to identify adolescents who may be experiencing substance abuse problems (Butcher et al., 1992).

As shown by the above research, the MMPI has been used frequently with adolescents; and, although this instrument was developed to be used with adults, it has been one of the measures most frequently administered to children (Colligan & Offord, 1989; Williams & Butcher, 1989; Pancoast & Archer, 1988; Butcher & Pope, 1992; Archer, 1984). Although the research involving the MMPI and delinquents has shed light on the fields of criminology and psychology, the instrument's ability to be effective when used with adolescents is not as definitive. Some research has shown teacher ratings to be better predictors of delinquency than elevated MMPI scale scores (Hathaway & Monachesi, 1963; Burchard & Burchard, 1987). In addition to the questions regarding the predictability of the MMPI-A, the use of adult norms is questionable, especially when

the norms are antiquated. A study involving the MMPI and its use with adolescents has shown that delinquents consistently score higher on the Schizophrenia, Depression, Hysteria, Masculinity-Femininity, Psychasthenia and Psychopathic Deviant scales. However, adolescents in general, consistently receive higher Psychodeviant scale scores than do adults (Colligan & Offord, 1989; Williams, 1986; Butcher & Williams, 1992; Williams et al., 1992). This trend of elevated scores for adolescents is also the case for F (Frequency), 8 (Schizophrenia), and 9 (Mania) scales (Williams, 1986; Klinefelter et al, 1990; Pancoast & Archer, 1988; Archer, 1984; Herkov & Gordon, 1991). "This pattern of 'over-pathologizing' adolescents' responses is a marked liability connected with the use of adult norms" (Pancoast & Archer, 1988, p. 694). Adolescent norms have been established and researched with mixed reviews (Williams & Butcher, 1989; Klinefelter et al, 1990; Williams, 1986; Archer, 1984; Butcher & Williams, 1992; Pancoast & Archer, 1990); however, "changes have occurred in the adolescent MMPI response patterns over the past 40 years, and results would appear to support the need for development of contemporary adolescent MMPI norms" (Pancoast & Archer, 1988, p. 703). Therefore, additional information regarding delinquents and their psychological dimensions might be gained by the employment of instruments, such as the MMPI-A, which has contemporary and age appropriate norms.

The MMPI Restandardization Committee began its efforts to revise and extend the MMPI to be used with adolescents in 1982. The emphasis of this committee was upon developing a scale which would retain the original validity and standard scales of the MMPI, while adding supplemental "scales directly relevant to adolescent

development and expression of psychopathology" (Williams et al, 1992; Archer, 1992, p. 51). Other goals were, the shortening of the measure and, in general, creating an instrument which would "help standardize assessment practices with adolescents" (Archer, 1992, p. 51). In 1989, the MMPI Adolescent Project Committee was appointed to develop the MMPI-A. Form TX contained 704 items, including the original 550 MMPI items and additional items which were written to further investigate areas of adolescents, such as eating problems, alcohol and drug use and potential for suicide (Archer, 1992; Williams et al, 1992). Form TX was used for the adolescent normative data collection with 805 boys and 815 girls, who were "chosen to maximize the likelihood of obtaining various subgroups" (Butcher et al., 1992, p. 10). The clinical sample was also collected and administered Form TX. Parent-rating, treatment-staff rating, and hospital and school records were also used as criterion measures for the validity analysis. The clinical sample was comprised of 420 boys and 293 girls, ages 14 to 18, who were patients at several treatment facilities in the Minneapolis area. Of the clinical sample, 299 boys and 163 girls were residents of alcohol and drug treatment facilities, 67 boys and 96 girls were clients of inpatient mental health facilities, 13 boys and 24 girls attended day treatment programs, and 41 boys and 10 girls attended special school programs.

The MMPI-A continues to use the linear T-scores for the validity scales, for scales 5 (Masculinity-Femininity) and 0 (Social Introversion) of the clinical scales, and for the supplementary scales. The other eight clinical scales of the MMPI-A and all of the content scales use the uniform T-score transformation procedure (Butcher et al., 1992;

Williams et al., 1992; Archer, 1992).

Uniform T-scores do not, however, have major effects on the underlying distribution of raw scores, and do not serve to 'normalize' the underlying raw score distribution. This is important in that the 'true' distribution of scores on the MMPI scales may in fact not be normal and, therefore, a normalizing procedure may actually serve to distort T-score values by artificially lowering those in the higher range. (Archer, 1992, p. 147)

The advantages of the MMPI-A, as seen by Butcher & Williams (1992) are as follows: assessment of a wide range of areas in relatively little time, true/false format, items unique to adolescents were added, scales which assess areas of difficulty for adolescents were included, current and more representative norms, relative ease of interpretation due to scale descriptors and a standard cut-off score of 65 for each scale.

The purpose of the current research will be to identify the differences in psychological characteristics which exist between the Primary Prevention participants, who are school referred, and the Early Intervention participants, who are referred by the juvenile court system. Group and gender differences on the MMPI-A Content and Supplemental scales will be examined for the school referred and juvenile court referred groups. The differences between the two groups and the MMPI-A normative sample on these MMPI-A scales will also be examined.

A better understanding of the development of delinquency will be gained when the two groups are compared to each other and, additionally, when the two groups are compared to the MMPI-A normative sample. This increased understanding into the

development of delinquency will be gained by the identification of profile differences between the two groups and the MMPI-A group. The purpose of this study will be to provide additional information as to the "at risk" status of the Primary Prevention participants. The newness of the MMPI-A adds to the importance of its inclusion in research. Therefore, another goal of this study will be to add to the knowledge base which exists for the MMPI-A.

CHAPTER 2

METHODOLOGY

Subjects

Subjects included two samples: (a) Sixteen school referred (SR) adolescents (8 males, 8 females) who were referred by school personnel or themselves to participate in the Primary Prevention Program conducted in their school, and (b) 14 (7 males, 7 females) juvenile court referred (JCR) adolescents who have been ordered to attend a program offered at a mental health center due to criminal behavior or their parents' voluntary contact with the court to ask for additional help in managing their child's behavior. Both groups consist of adolescents from small to moderate sized cities in central Tennessee. The mean age for the SR subjects is 13-9, and the mean age for the JCR subjects is 16-9.

The SR subjects were referred to participate in the Primary Prevention Program which is offered to those students who are referred by school personnel or themselves. To participate in the program each child must be "at risk" for using drugs and alcohol. The determination of "at risk" is made by the child meeting two of the seven criteria established by the State of Tennessee. A structured interview is completed to establish whether or not the child meets the criteria. The seven criteria are as follows: (a) youth age 10 - 18 at time of admission, (b) has used alcohol or other drugs, including tobacco, (c) has a parent or sibling with a history of alcohol/drug abuse or lives in a house hold with an alcohol/drug abuser, (d) is or has been a victim of physical or sexual abuse or resides in a domestically violent situation, (e) has an identifiable pattern of parent/child

problems not due to a mental disorder of the youth, (f) is associated with a primary peer group that exhibits use of alcohol or other drugs, and (g) exhibits a pattern of discipline problems at school.

The JCR group was in attendance of a program designed for those referred or ordered to attend by the juvenile court system. Weekly meetings are held to discuss issues such as anger control and peer pressure. The offenses for which the adolescents were referred include the following: first time and repeated runaways, unruly charges (filed by parents and schools for uncontrollable behavior), first time and repeated shoplifting, reckless driving and bringing a potential weapon to school. Some children were also referred with no formal charges pending. This is most often due to the courts willingness to dismiss the charges if court specifications are met.

Instruments

The Minnesota Multiphasic Personality Inventory for Adolescents (MMPI-A) was administered by being read to both groups to assure consistency in administration. Both groups were also informed as to the intent of the research, the nature of the measure and the efforts to insure anonymity. The MMPI-A is a 478 item, self-report, true/false format measure, which is normed for adolescents ages 14 to 18. However, children as young as 12 are appropriate candidates for the instrument, with additional caution being used in the interpretation of their scores (Butcher et al., 1992).

Procedure

The subjects completed the MMPI-A in a regularly scheduled group session held at their school, for SR subjects, or the mental health center, for JCR subjects. Both

groups received instructions to complete the measure as honestly as possible. Additional information regarding the nature of the measure and the research was also shared with the subjects. The steps to protect the subjects anonymity were also explained to each group. Two female SR group profiles were excluded from the analysis due to excessive scores on the F (Infrequency), VRIN (Variable Response Inconsistency) and TRIN (True Response Inconsistency) validity scales. No JCR profiles were excluded from the analysis due to scores on the validity scales.

Design

A multivariate analysis of variance (MANOVA) was performed with adolescents (SR, JCR, and gender) as the independent variable and the MMPI-A Content and Supplemental scales as the dependent variables. The SAS statistical package was utilized in the analysis (SAS Institute, 1988). The differences by gender between the SR, JCR groups and the MMPI-A normative sample group were examined through the completion of a Z-test. The significance level of .05 will be utilized in both statistical procedures.

The differences between genders will be examined due to the presence of research which has indicated differences between male and female delinquents' MMPI profiles (Butcher & Williams, 1992; Hathaway & Monachesi, 1963; Capwell, 1945).

CHAPTER 3

RESULTS

A multivariate analysis of variance (MANOVA) was performed with the two groups and gender serving as the independent variables while the Minnesota Multiphasic Personality Inventory for Adolescents (MMPI-A) Content and Supplemental scales served as the dependent variables. Additionally, Z-tests were computed to identify differences between the school referred (SR) group, juvenile court referred (JCR) group and the MMPI-A normative sample by gender. The means and standard deviations for the school and juvenile courts on the MMPI-A Content and Supplemental scales are listed in Table 1. The means and standard deviations for genders and the three groups are listed in Table 2 and Table 3.

One purpose of this study was to identify differences which exist between the genders and SR and JCR groups on the MMPI-A scales. A MANOVA revealed a significant difference to exist for gender on the Adolescent-Health Concerns (A-hea) scale ($F M = 63.61$, $M M = 54.26$), $F(1,24) = 6.51$, $p < .05$. A significant difference between genders was also found to exist on the Adolescent-School Problems (A-sch) scale ($F M = 60.07$, $M M = 73.20$), $F(1,24) = 4.51$, $p < .05$. Additionally, a significant difference between groups was found on the Adolescent-Social Discomfort (A-sod) scale ($SR M = 53.28$, $JCR M = 45.42$), $F(1,24) = 4.75$, $p < .05$. No significant differences were found for group or gender on any of the other MMPI-A Content and Supplemental scales. Table 4 summarizes the MANOVA findings, with the F values for the MMPI-A Content and Supplemental scales for genders, group and gender/group being given. Figures 1 and 2 illustrates the statistically significant MANOVA findings.

Table 1
Group T-score Means and Standard Deviations (SD) for MMPI-A Content and Supplemental Scales

| | SR GROUP (n=14) | | JCR GROUP (n=14) | |
|-------|--------------------|-------|---------------------|-------|
| | Mean | SD | Mean | SD |
| A-anx | 61.64 | 15.11 | 57.28 | 14.92 |
| A-obs | 56.50 | 11.48 | 56.42 | 9.83 |
| A-dep | 61.28 | 12.50 | 58.64 | 12.50 |
| A-hea | 60.71 | 10.66 | 56.50 | 10.63 |
| A-aln | 64.00 | 12.91 | 60.64 | 14.36 |
| A-biz | 60.71 | 10.09 | 57.07 | 11.49 |
| A-ang | 58.92 | 15.54 | 61.85 | 14.28 |
| A-cyn | 58.21 | 14.02 | 61.07 | 9.42 |
| A-con | 59.50 | 13.28 | 70.00 | 15.85 |
| A-lse | 64.14 | 13.00 | 55.07 | 12.87 |
| A-las | 59.07 | 15.36 | 56.92 | 15.44 |
| A-sod | 53.28 | 7.54 | 45.42 | 10.44 |
| A-fam | 66.92 | 15.68 | 65.00 | 20.88 |
| A-sch | 67.50 | 17.52 | 66.71 | 17.04 |
| A-trt | 62.28 | 14.88 | 57.50 | 12.37 |
| MAC-R | 61.85 | 16.22 | 66.00 | 9.03 |
| ACK | 56.21 | 11.23 | 58.14 | 11.94 |
| PRO | 61.71 | 17.08 | 65.78 | 18.24 |
| IMM | 62.00 | 11.57 | 62.92 | 12.21 |
| A | 57.28 | 10.11 | 56.50 | 5.24 |
| R | 49.28 | 12.30 | 52.21 | 11.49 |

Table 2
Raw Score Means and Standard Deviations (SD) for MMPI-A Content Scales by Gender and Group

| | SR Females (n = 6) | SR Males (n = 8) | JCR Females (n = 7) | JCR Males (n = 7) | MMPI-A Females (n = 815) | MMPI-A Males (n = 805) |
|-------|--------------------------|------------------------|---------------------------|-------------------------|--------------------------------|------------------------------|
| A-anx | | | | | | |
| Mean | 13.28 | 12.00 | 13.66 | 9.75 | 9.03 | 7.84 |
| SD | 5.73 | 4.50 | 7.31 | 3.19 | 4.40 | 4.09 |
| A-obs | | | | | | |
| Mean | 9.14 | 9.42 | 10.16 | 9.00 | 7.88 | 6.91 |
| SD | 4.59 | 2.29 | 3.54 | 2.67 | 3.23 | 3.32 |
| A-dep | | | | | | |
| Mean | 14.14 | 12.57 | 13.50 | 11.37 | 9.17 | 7.59 |
| SD | 8.25 | 1.81 | 7.55 | 4.40 | 5.08 | 4.57 |
| A-hea | | | | | | |
| Mean | 18.71 | 10.14 | 14.16 | 10.37 | 9.03 | 7.88 |
| SD | 5.25 | 3.13 | 7.27 | 4.43 | 5.53 | 5.31 |
| A-aln | | | | | | |
| Mean | 9.85 | 10.57 | 9.66 | 8.62 | 5.62 | 5.95 |
| SD | 4.05 | 3.82 | 4.67 | 4.56 | 3.49 | 3.36 |
| A-biz | | | | | | |
| Mean | 7.85 | 6.85 | 7.66 | 5.25 | 4.05 | 4.00 |
| SD | 3.48 | 3.07 | 4.22 | 2.71 | 3.09 | 3.13 |
| A-ang | | | | | | |
| Mean | 9.14 | 11.57 | 11.66 | 11.00 | 8.51 | 7.04 |
| SD | 4.48 | 3.50 | 4.27 | 1.85 | 3.09 | 3.23 |
| A-cyn | | | | | | |
| Mean | 15.14 | 15.71 | 16.83 | 16.75 | 12.34 | 12.36 |
| SD | 6.03 | 3.68 | 4.40 | 2.12 | 4.72 | 4.51 |
| A-con | | | | | | |
| Mean | 9.71 | 14.85 | 14.33 | 16.37 | 8.15 | 9.62 |
| SD | 4.02 | 4.18 | 7.11 | 2.92 | 3.85 | 4.03 |
| A-lse | | | | | | |
| Mean | 9.85 | 9.71 | 5.16 | 8.00 | 5.83 | 5.00 |
| SD | 3.89 | 3.14 | 4.35 | 3.33 | 3.46 | 3.21 |
| A-las | | | | | | |
| Mean | 7.57 | 8.42 | 7.83 | 7.37 | 6.00 | 5.85 |
| SD | 4.57 | 2.50 | 5.19 | 1.84 | 2.72 | 2.63 |
| A-sod | | | | | | |
| Mean | 10.00 | 10.00 | 5.16 | 5.87 | 7.19 | 8.33 |
| SD | 3.87 | 3.10 | 6.43 | 2.41 | 4.31 | 4.36 |
| A-fam | | | | | | |
| Mean | 18.28 | 19.42 | 19.83 | 17.25 | 12.53 | 11.37 |
| SD | 8.71 | 6.39 | 11.25 | 8.20 | 5.67 | 5.62 |
| A-sch | | | | | | |
| Mean | 8.28 | 13.57 | 9.16 | 12.25 | 5.83 | 6.32 |
| SD | 4.42 | 3.45 | 6.11 | 2.96 | 3.15 | 3.37 |
| A-trt | | | | | | |
| Mean | 11.42 | 15.71 | 12.33 | 12.25 | 9.30 | 9.11 |
| SD | 6.55 | 2.13 | 5.27 | 3.49 | 4.41 | 4.21 |

Table 3
Raw Score Means and Standard Deviations (SD) for MMPI-A Supplemental Scales by Gender and Group

| | | SR | SR | JCR | JCR | MMPI-A | MMPI-A |
|-------|--|---------|---------|---------|---------|-----------|-----------|
| | | Females | Males | Females | Males | Females | Males |
| | | (n = 7) | (n = 7) | (n = 6) | (n = 8) | (n = 815) | (n = 805) |
| MAC-R | | | | | | | |
| Mean | | 22.57 | 28.57 | 25.66 | 28.62 | 19.73 | 21.07 |
| SD | | 6.18 | 7.45 | 5.31 | 2.72 | 4.14 | 4.44 |
| ACK | | | | | | | |
| Mean | | 4.00 | 6.71 | 5.83 | 5.75 | 3.68 | 3.90 |
| SD | | 2.58 | 2.36 | 3.65 | 2.31 | 2.38 | 2.45 |
| PRO | | | | | | | |
| Mean | | 19.71 | 23.85 | 22.33 | 25.37 | 16.74 | 16.55 |
| SD | | 7.73 | 6.91 | 10.38 | 4.53 | 4.17 | 4.42 |
| IMM | | | | | | | |
| Mean | | 17.28 | 23.00 | 16.83 | 22.00 | 11.75 | 13.47 |
| SD | | 9.12 | 4.96 | 19.68 | 7.36 | 6.31 | 6.29 |
| A | | | | | | | |
| Mean | | 22.00 | 20.57 | 21.50 | 188.50 | 16.90 | 14.59 |
| SD | | 10.11 | 5.19 | 10.03 | 4.47 | 7.67 | 7.17 |
| R | | | | | | | |
| Mean | | 13.71 | 11.28 | 12.00 | 12.50 | 13.33 | 13.41 |
| SD | | 4.46 | 3.35 | 3.57 | 1.41 | 3.50 | 4.37 |

Table 4
F Values for the MMPI-A Content and Supplemental Scales for Gender, Group and Gender/Group

| | GENDER | GROUP | GENDER/GROUP |
|-------|--------|-------|--------------|
| A-anx | 0.62 | 0.48 | 0.18 |
| A-obs | 0.06 | 0.00 | 0.23 |
| A-dep | 0.01 | 0.28 | 0.01 |
| A-hea | 6.51* | 0.95 | 1.42 |
| A-aln | 0.00 | 0.39 | 0.26 |
| A-biz | 2.12 | 0.63 | 0.32 |
| A-ang | 0.13 | 0.24 | 1.48 |
| A-cyn | 0.04 | 0.39 | 0.02 |
| Acon | 1.11 | 3.33 | 1.03 |
| A-lse | 1.88 | 3.98 | 0.75 |
| A-las | 0.02 | 0.12 | 0.39 |
| A-sod | 0.09 | 4.75* | 0.09 |
| A-fam | 0.18 | 0.06 | 0.15 |
| A-sch | 4.51* | 0.08 | 0.64 |
| A-trt | 0.93 | 1.01 | 1.29 |
| MAC-R | 1.78 | 0.55 | 0.55 |
| ACK | 1.16 | 0.14 | 1.90 |
| PRO | 0.97 | 0.28 | 0.19 |
| IMM | 0.82 | 0.02 | 0.29 |
| A | 0.00 | 0.06 | 0.17 |
| R | 1.73 | 0.56 | 0.23 |

* p. < .05

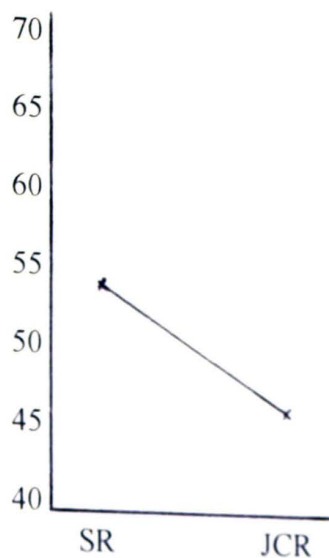


Figure 1

Mean T-score for School Referred (SR) and Juvenile Court Referred (JCR) Groups on the Adolescent Social Discomfort (A-sod) Scale

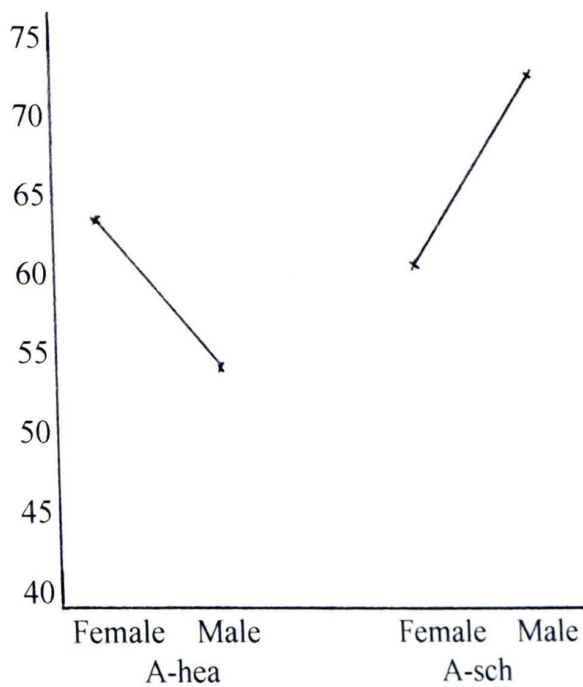


Figure 2
Mean T-scores for Genders on the Adolescent-Health Concerns (A-hea) and Adolescent-School Problems (A-sch) Scales

The results for the MANOVA indicate that the two genders differed significantly in their endorsement of items on the A-hea scale. High scores on the A-hea scale indicate physical problems which result in school interferences and absences. High scores in the normative sample were associated with both academic and behavioral problems in school for adolescents in a non-clinical setting (Butcher et al., 1992; Butcher & Williams, 1992).

A significant difference between genders was found on the A-sch scale which indicates an adolescent's reported functioning in school. High scores on this scale are associated with poor grades, suspensions and negative attitudes toward school (Butcher et al., 1992; Butcher & Williams, 1992).

The results of the MANOVA also yielded the finding of a significant difference between groups on the A-sod scale. The A-sod scale indicates the level to which an adolescent feels comfortable interacting with others. High scores on this scale are associated with the preference of being alone, the dislike of parties and social events, and having difficulty making friends.

Two MMPI-A profiles were not included in the analysis due to elevated F (Infrequency), TRIN (True Response Inconsistency) and VRIN (Variable Response Inconsistency) scores. These elevations indicated that the response set of the subjects produced invalid results. Both of these profiles belonged to female SR (school referred) subjects. None of the JCR (juvenile court referred) profiles were found to be invalid due to elevated validity scales.

The results of the Z-tests indicated that both the SR and JCR groups, except

female SR, show the tendency to differ from the MMPI-A normative sample in the areas of alcohol and drug related problems and acting-out behaviors. School and family difficulties appear to be areas which are experienced by all of the SR and JCR groups more than the MMPI-A normative sample. Due to the limited number of subjects in the SR and JCR groups the findings of the Z-tests are included primarily for their heuristic value. Table 5 summarizes the findings of the Z-tests.

Table 5

Z-scores for Differences Between Female SR and Female MMPI-A Group, Male SR and Male MMPI-A Group, Females JCR and MMPI-A Group, and Male JCR and MMPI-A Group on the MMPI-A Content and Supplemental Scales

| | FSR | MSR | FJCR | MJCR |
|-------|--------|--------|--------|--------|
| A-anx | 2.52** | 2.69** | 2.54** | 1.32 |
| A-obs | 1.03 | 2.00* | 1.73 | 1.78 |
| A-dep | 2.58** | 2.88** | 2.08* | 2.34* |
| A-hea | 4.63** | 1.12 | 2.27* | 1.32 |
| A-aln | 3.20** | 3.63** | 2.83** | 2.25** |
| A-biz | 3.25** | 2.41* | 2.86** | 1.12 |
| A-ang | -1.79 | 2.13* | -0.34 | 1.91 |
| A-cyn | 1.57 | 1.96* | 2.33* | 2.75* |
| A-con | 1.07 | 3.43** | 3.93** | 4.74** |
| A-lse | 3.07** | 3.88** | -0.46 | 2.64** |
| A-las | 1.52 | 2.62** | 1.65 | 1.67 |
| A-sod | 1.72 | 1.01 | -1.14 | -1.59 |
| A-fam | 2.68** | 3.79** | 3.15** | 2.95** |
| A-sch | 2.06* | 5.69** | 2.59** | 4.97** |
| A-trt | 1.27 | 4.15** | 1.68 | 2.10* |
| MAC-R | 1.81 | 4.46** | 3.51** | 4.81** |
| ACK | 0.35 | 3.03** | 2.26* | 2.13* |
| PRO | 1.88 | 4.37** | 3.28** | 5.64** |
| IMM | 2.32* | 4.00** | 1.97* | 3.83** |
| A | 1.75 | 2.2* | 1.46 | 1.54 |
| R | 0.28 | -1.28 | -0.93 | -0.58 |

** p. < .01 * p. < .05

CHAPTER 4

DISCUSSION

Although significant findings between genders and one significant finding between groups were yielded, the results fail to indicate widespread differences between the two groups or genders. The results of this study may lead to the following closely related and interactionary conclusions: (a) the two groups may be more accurately viewed as sub-groups of delinquents rather than two distinct groups, (b) additional measures may be needed to distinguish accurately between the two groups, and (c) males may be experiencing more externalizing problems while females may be experiencing more internalizing difficulties. However, the present study must be reviewed carefully due to the small sample size.

One of the possible conclusions which may be considered as a result of this research is the prospect that the school referred and juvenile court groups may be sub-groups of delinquency rather than two distinct groups. The difficulty in establishing differences between subgroups of delinquency has been long standing. Lueger and Hoover's (1984) research indicated that the MMPI is not successful at differentiating between subtypes of delinquents. Each of the three groups studied in this research differed from each other on only one scale. Lueger and Hoover (1984), therefore, suggested that additional information be gathered to better distinguish between subtypes of delinquency. Similar findings surfaced when Cornell (1988) studied the differences in MMPI profiles between homicide and nonviolent offenders and between crime and conflict groups. No difference was found to exist between the homicide and the nonviolent offenders on any of the MMPI scales. However, significant differences

between the crime group and the conflict group on the Frequency, Hysteria and Schizophrenia scales were found. The crime group consisted of offenders who committed homicide in the context of another crime, while the conflict group subjects had a conflict with the person whom they killed. Cornell concluded that the lack of significant difference between the nonviolent group and the homicide group indicates that the more serious crimes are not necessarily committed by the more disturbed individuals. The results are similar to the present research in that the juvenile court group, which would be expected to receive more elevated scores on the MMPI-A, scored significantly higher than the school referred group on only one of the scales. Spirito et al. (1988) also attempted to use the MMPI to distinguish between similar but seemingly psychologically different groups. Suicide attempters and other adolescents with emotional difficulties differed significantly on only the K scale when a univariate analyses of variance was computed, however, this significant difference did not exist when a MANOVA was computed. It was concluded that the MMPI was not successful at identifying some psychological differences in adolescents. Genshaft (1980) also attempted to use the MMPI to distinguish between subtypes of delinquency. When subjects were divided into three groups based on scores on the Personal Opinion Survey no significant differences between the socialized-subcultural delinquents and the unsocialized-psychopathic delinquents were found on any of the scales. However, there were significant differences found between the other groups. These studies and the present lend support to the conclusion that the MMPI and MMPI-A may not be successful at differentiating between similar groups or subtypes of delinquency.

If the MMPI-A does have the difficulty of differentiating between closely related groups, as suggested by the present research, the use of additional measures or sources of information may be beneficial and/or necessary to achieve this. Some research has shown that teacher rating scales are better predictors of delinquency than the MMPI (Hathaway & Monachesi, 1963; Burchard & Burchard, 1987). The tendency for teachers to accurately predict delinquency may be influencing the current research. The participants of the school referred group were referred primarily by teachers, with approximately twenty-five percent self-referrals. It may be the case that the teachers' reliable prediction of delinquency is also being demonstrated in this research. This may also support the concept that the school referred group is not that different from the juvenile court group, but instead a subtype of delinquency.

The difference between the SR and JCR groups, with the SR group scoring significantly higher, on the A-sod scale appears to be incongruent with the "at risk" for alcohol and drug use label which is placed on the SR group. The research conducted in the development of the MMPI-A indicated that high A-sod scores in normative boys and girls were associated with a decreased likelihood for alcohol and drug use. This tendency was also the case for clinical sample girls. No descriptors for clinical boys were found for the A-sod scale. This is believed to be the case by Butcher and Williams (1992) due to the few high scores on the A-sod scale found in clinical boys. High scorers on this scale have the tendency to be withdrawn, avoid participation in social and school activities, and report having few friends. This difference between the two groups in respect to the A-sod scale may be influenced by the difference in referral sources and

referral questions for the two groups. The SR, being referred primarily by teachers, may also be identified for the program due to difficulties with peers and other signs of withdrawal as well as for acting out. However, the JCR adolescents are referred primarily due to externalizing problems. Although this difference does appear to be consistent with the referral source, the SR's significantly higher score and the behavioral correlates of this scale are not consistent with the labeling of these children as "at risk" for alcohol and drug use (Butcher et al., 1992; Butcher & Williams, 1992).

The significant difference between the genders, with the males scoring significantly higher, on the A-sch scale suggests that the males have a higher rate of difficulties with school. Poor grades, truancy, suspension and negative attitudes toward school and teachers are associated with this scale. The avoidance of school sponsored activities and frequent boredom in school are also indicated by high scores on the A-sch scale. Elevations in this score tend to be associated with difficulties in the setting of school only. "Interestingly, the A-sch correlates are pretty much limited to school and do not include the asocial activities covered by A-con, the anger-control problems associated with A-ang, or the family discord assessed by A-fam" (Butcher & Williams, 1992, p. 284). However, more general problems may also be associated with high scores on this scale. Association with a negative peer group, run away behavior, alcohol and drug use, swearing and stealing are other behaviors that may be associated with elevated scores on the A-sch scale (Butcher et al., 1992; Butcher & Williams, 1992). This trend is demonstrated somewhat by the males who are included in the SR group (according to the criteria for Primary Prevention participation) and more so by the JCR group. The JCR

males, in particular, are demonstrating the tendency for elevated scores on the A-sch scale to be associated with both school difficulties and more generalized difficulties.

An additional finding of gender differences exists in the area of health concerns, as measured by A-hea. The females were found to have significantly higher scores on this scale. For boys and girls in the normative sample high scores on this scale are related to poor academic performance, general school problems, misbehavior and suspensions. Adolescents in the clinical setting are more likely to report numerous physical complaints, and clinical sample females are more likely to report increasing arguments with their parents. Parents of clinical sample males are likely to report their sons as being accident prone, guilt prone, clinging, fearful, worried, anxious and perfectionistic (Butcher et al., 1992; & Butcher & Williams, 1992). The fact that the females scored significantly higher on this scale than the males, and the fact that the males scored significantly higher on the A-sch scale than the females indicates that the genders in these two groups may be experiencing a slight difference in difficulties. The A-hea scale is associated with academic difficulties, misbehavior and school suspension, as is the A-sch scale. However, the scales differ in that the A-hea identifies these difficulties when they are displaying themselves in an internalizing fashion. The A-sch scale appears to also identify difficulties relating to behavior problems in the school and, although less likely, the community. The A-sch scale is specifically sensitive to externalizing behaviors. Therefore, there are differences between the genders. However, the problems which are identified appear to be done so in an internalizing fashion on the A-hea scale for the females and in an externalizing fashion for the males on the A-sch

scale. This finding Whereas females tend to display difficulties in an internalizing manner has also been found by Capwell (1945) and Monachesi (1953). They found that delinquent females "have more tendency toward sensitivity and feelings that they were unduly controlled" (Butcher & Williams, 1992, p. 206).

Due to the indication that the SR group is not significantly different from the JCR group, except in the area of social discomfort, it appears that prevention program may be more appropriately targeted toward younger adolescents or children. Adolescents who are experiencing difficulties, like the SR Primary Prevention group, may continue to benefit from programs which help deter further difficulties. However, this study does indicate that the employment of preventative measures may need to occur at an earlier age.

CHAPTER 5

SUMMARY

One of the goals of this research was to identify differences between the two groups which may allow for a better understanding of the curriculum which needs to be presented in programs such as Primary Prevention and Early Intervention. Additionally, the knowledge of the differences between the two groups was desired to better understand and prevent the development of delinquency. Although few differences were found, and only one significant difference between groups was found, the results of this research do contribute to the study of delinquency. This contribution is made in the awareness that the two groups do not differ a great deal and, therefore, they may be viewed more appropriately as subtypes of delinquency rather than two diverse groups. This discovery does inform us as to the likely need for prevention programs to focus on younger adolescents and/or children, while adolescents, such as the SR group may benefit more from programs which focus on intervention.

The one difference which was found to exist between the two groups also is of interest due to its indication that the difficulties which the SR group may be experiencing may not put them at additional risk of using alcohol and drugs. The scale which they scored significantly higher on, A-sod, was not found by the MMPI-A normative study to be associated with alcohol and drug use. Therefore, this inconsistency may present the need for additional research in the A-hea scale's association of alcohol and drug use. Further examination into the Primary Prevention inclusion criteria and/or referral questions may also be warranted.

This study's goal to add to the research base involving the MMPI-A has also been

met in a conservative fashion. Further research which utilizes the MMPI-A and larger sample sizes are needed.

One purpose of this study was to identify differences between the two groups and the MMPI-A normative sample. This was done by the completion of Z-tests. However, very limited weight may be placed on these results due to the restricted sample sizes included in the present research. The results of the Z-tests indicate that acting out behaviors and alcohol and drug related difficulties are more common in the SR and JCR groups, except the female SR, than in the MMPI-A normative sample. The SR and JCR groups also appear to experience more school difficulties than the MMPI-A normative sample. These findings also indicate that the SR and JCR groups are subtypes of delinquency.

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APPENDICES

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I would like to ask your permission to include your child in the research that I am doing as part of my Masters of Arts, in School Psychology. I will be looking at the differences that exist between children who participate in the Primary Prevention Program in their school and the children who are recommended or ordered by the courts to attend the Early Intervention Program at the local mental health center.

The children will take a test that will look at different aspects of personality. The test is the Minnesota Multiphasic Personality Inventory for Adolescents. This questionnaire asks the children to rate themselves in different areas of personality. The children's names will not be recorded, instead the only information recorded will be the school that the child attends and the child's birth date and gender. The birth date is needed in case a parent or child changes his/her mind and decides that he/she does not want to participate after the test has already been taken. In that case, I need a way to pick out that child's test and destroy it. The birth date information will not be used in any other way. Participation in this research is completely voluntary. This is also the case for the juvenile court children. No negative consequences will occur if a parent or child decides not to be a part of the research. Nor will any information or data about any child be released to the courts or schools.

The test given to the children will take approximately two hours, total, to complete and is in a true/false format. The test will be taken at school during two regularly scheduled Primary Prevention group session. Early Intervention participants will also complete this measure during their scheduled group time. This research will give additional information on the children that are seen in group and how their needs differ from those in the juvenile court groups. This will help Primary Prevention, the schools and children because of the additional information that we will have about children, the problems they face and what information they need to receive from us to help them deal with these problems. This also may shed light on the development and prevention of problems which children have, that are associated with their involvement in the juvenile court system.

Please complete the informed consent statement attached as **quickly as you can**.
Please return it in the self addressed, stamped envelope attached.

If you have any questions about the research and would like to talk to me, please feel free to call. You may leave a message at **232-6006** and I will return your call. Or you may call me at home, that number is **232-7155**.

Thank you and I appreciate your help.

Gina Denise Davidson Beard,
Primary Prevention Specialist

The purpose of this investigation is to look at the differences in personality characteristics that exist between school and court referred children that participate in the Primary Prevention Program and the Early Intervention Program.

Your responses are confidential. At no time will you be identified nor will anyone other than the investigators have access to your child's responses. There are no foreseen hazards which may occur from participation in this research.

The demographic information collected will be used only for purposes of analysis. Your participation is completely voluntary, and you are free to terminate your participation at any time without any penalty.

The scope of the project will be fully explained to you in a letter upon completion of the research.

Thank you for your cooperation.

I agree to participate in the present study being conducted under the supervision of a faculty member of the Department of Psychology at Austin Peay State University. I have been informed, either orally or in writing or both, about the procedures to be followed and about any discomforts or risks which may be involved. The investigator has offered to answer any further inquiries as I may have regarding the procedures. I understand that I am free to terminate my participation at any time without penalty or prejudice and to have all data obtained from me withdrawn from the study and destroyed. I have also been told of any benefits that may result from my participation.

Please print name

Parent's signature

Please print child's name

Child's signature

Dear Parent:

I want to thank you again for allowing your child to participate in the research I conducted. Your child's participation is appreciated and was very helpful in my completion of my degree. Additionally, your participation helped add to the knowledge regarding delinquency and the development of delinquency.

The results indicate that the school referred and juvenile court referred groups which were included in the research do not have a large number of differences regarding the problems with which they are dealing. There were differences between the genders which suggest that the females are experiencing their difficulties in a more internalizing, or feeling, related way. The males, however, are experiencing their difficulties in an externalizing, or acting-out, manner.

This research does tell us that programs, such as Primary Prevention, may be more effective at preventing difficulties in younger childrens' lives.

If you have any questions about the findings of this research feel free to call me collect at (210) 661-7640. You may also read the thesis in its entirety at the Austin Peay State University Library.

Sincerely,

Gina Denise Davidson Beard

VITA

Gina Denise Davidson Beard was born in Tulsa, OK on June 11, 1970. She graduated from Northside High School in Fort Smith, AR on June 5, 1987. Denise completed degree requirements for her Bachelors of Science, in psychology, at Austin Peay State University on December 15, 1990. While working full-time with adolescents who are "at risk" for using alcohol and drugs, Denise completed her Masters of Arts Degree at Austin Peay State University in psychology with a concentration in school psychology on August 12, 1994.

Denise is now employed by North East Independent School District in San Antonio, TX as an Associate School Psychologist.