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A COMPARISON OF MMPI SCORES OF
GRADUATING HIGH SCHOOL SENIORS
AND THEIR PARENTS

A Thesis Submitted to the Graduate Division in Partial
Fulfillment of the Requirements for the
Degree of Master of Science

By
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ABSTRACT

The purpose of the study was to compare the MMPI scores of graduating high school seniors and their parents. The Minnesota Multi-phasic Personality Inventory was administered to one hundred and twenty subjects (forty students and eighty parents). The students were enrolled in five public schools and three private schools in Southwest Missouri, Central Missouri and Northeast Oklahoma. The volunteer subjects were selected using random sampling procedures. The data were collected during March and April, 1983.

The MMPI protocols were handscored for three Validity Scales (L, F, K), ten Clinical Scales (Hs, D, Hy, Pd, Mf, Pa, Pt, Sc, Ma, Si) and ten Research Scales (A, R, Es, Ca, Dy, Do, Re, Pr, St, Cn). The major hypothesis was there are no significant differences between high school students' and their parents' MMPI scores using the Validity, Clinical and Research Scales. A three way analysis-of-variance factorial design was used to test the hypothesis.

The results of the statistical analyses showed significant differences between students and parents using the Clinical Scales at the .005 level and the Research Scales at the .01 level. No significant differences were found between students and parents using the Validity Scales.

Same-sex and different-sex comparisons were analyzed by a paired t-test for the students and parents. Significant mean differences were found among the Clinical and Research Scales between the father-daughter and father-son comparisons. No significant mean differences were found for the mother-daughter comparisons. Mother-son comparisons yielded significant mean differences among the Validity, Clinical and Research Scales.

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CHAPTER I

INTRODUCTION

The importance of parent-child relationships have long been recognized. Traditionally, the mother-child relationship received the primary attention from researchers. The belief that maternal behavior was the only important source of influence in the development of the child is no longer a plausible one. More recently, the family as an entity has become the focus of research.

The family has been defined as the basic unit of society having as its nucleus two or more adults living together and cooperating in the care of their own or adopted children (Webster, 1977). The nuclear family mother, father and child provides the basis for mutual interdependence with each family member interacting in a complex relationship with one another. Kolb (1973) noted "the psychological fate of the child is to a considerable extent determined by the emotional health of the parents and by the complex forces interacting within the family" (p. 535).

The Minnesota Multiphasic Personality Inventory (MMPI) has been used in the past three decades by investigators to examine parent-child relationships in order to define specific parent or family characteristics as they relate to child development. Hafner, Butcher, Hall and Quast (1969) stated that parental MMPIs generally reflect a map of the child's psychological environment as it is determined by the parent's personality.

Statement of the Problem

The purpose of the study was to compare the MMPI scores of graduating high school seniors and their parents using Validity, Clinical and Research Scales.

Rationale for the Study:

Parent-child research will contribute to the knowledge of family dynamics and can be of benefit to therapists involved in counseling and psychotherapy. Examination of family relationships could assist in the development of new techniques in assessment, evaluation and treatment of the family dysfunction and childhood psychopathology. In addition, such research could play a significant role in enhancing the quality of parenting skills of the non-dysfunctional family.

It has been hypothesized that males identify with fathers more than with mothers, while females identify more with their mothers than with their fathers (Sopchak, 1958). The past quarter century has seen major changes in previously held masculine-feminine stereotypes and a blurring of sex roles. A transition from same-sex to different-sex identification would be anticipated in light of the previously discussed changes.

There is little evidence in the literature which utilize the three scales, Validity, Clinical and Research, simultaneously in parent-child research. Lachar and Sharp (1979) suggested Research Scales such as (Es) Ego Strength (Barron, 1953) and (A) Conscious Anxiety (Welsh, 1956) be included in parent-child studies using the MMPI. The authors contend that stable and pragmatic correlates, i.e. parental adjustment and parental interaction, will be found for these scales. Therefore, the employment of Research Scales used in combination with the tradi-

tional MMPI scales (Validity and Clinical) is a legitimate area of investigation which could yield more relevant and pertinent information about parent-child relationships.

The decision to study "normal" high school students and their parents was prompted by several considerations. Henderson (1981) observed the emergence of a new description of the family in child development literature which is based on the concepts of reciprocity and mutuality. Therefore, family interaction is viewed as a mutual process in which influence is exerted by both parents and children. There is a need for more parent-child studies which utilize normal subjects to explore the full range of normal behavior. Studies in normal populations will increase the understanding of psychopathology in the same way research in patient populations will shed light on psychopathology of everyday life (Offer, Sabshin and Offer, 1966).

Several researchers (Hafner, et al., 1969; Lachar and Sharp, 1979) have concluded that future studies which examine parent-child relationships as measured by the MMPI consider the following recommendations:

1. The method of comparing MMPI scores for parents needs further clarification.
2. Development of parent code-types (high, low and combinations) of normal and abnormal is needed in order to define a "cookbook" typology for parent personality.
3. Inclusion of large reference groups of parents of normal children is needed to provide adequate comparative groups for clinical samples.
4. Utilization of an interprofile analysis of parental MMPIs is needed.

Hypotheses

The following four hypotheses were investigated in this study:

Hypothesis I. There are no significant differences between high school students' and their parents' MMPI scores using the Validity, Clinical and Research Scales.

Hypothesis II. There are no significant differences in MMPI scores between parents of male students and parents of female students using the Validity, Clinical and Research Scales.

Hypothesis III. There are no significant differences between mother-daughter and father-son MMPI scores using the Validity, Clinical and Research Scales.

Hypothesis IV. There are no significant differences between father-daughter and mother-son MMPI scores using the Validity, Clinical and Research Scales.

The .05 level of significance was prescribed for all four hypotheses.

Delimitations

The study was limited to five public and two private high schools in Southwest Missouri, one public high school in Northeast Oklahoma and one private high school in Central Missouri.

Twenty male and twenty female graduating high school seniors and their parents volunteered to participate in this study. The students were seventeen years old or older. The parents were biological, adoptive, divorced and remarried if married five years or more. The families who participated in this study were intact (i.e. not disrupted by death, separation or divorce) at the time of testing. The data used in the study were collected in March and April, 1983.

Limitations

This study is limited in the following:

1. The results of this study may not be generalized to students who are mentally retarded or illiterate.
2. The sample in this study does not include profiles of students and their parents who did not volunteer to participate.
3. A larger sample would have been preferred for the purpose of making the subjects more representative of their respective populations.

Definition of Terms

K-corrected Profile: After the raw score for each scale has been listed, consult the K-fraction table and enter the value beneath the raw scores for the following five scales: Hs, Pd, PT, Sc and Ma (Dahlstrom and Welsh, 1960).

T-score: Raw scores for each of the three Validity Scales, ten Clinical Scales and ten Research Scales are converted to T-scores. A T-scale has a mean of 50 and a standard deviation of 10. A T-score of 50 for any scale is equal to the average or mean score. T-scores greater than or equal to 70 are regarded as an indicator of abnormality (Graham, 1977).

Code Type: All scales in numerical combinations with a T-score 70 or above of Clinical Scales listed from the highest to the lowest score. Configural interpretation of MMPI profile which stresses relationship among the scales rather than independent examination of single scales (Graham, 1977).

Normal: Characterized by average intelligence, average development and free from mental disorder (Tabor, 1970). Subjects used in this study had no history of referral, diagnosis or treatment for any psychological problems. The students had average or above average grades and normal grade placement.

Clinical Scales: The MMPI profile is composed of ten Clinical Scales, each with a number, abbreviation and formal name (Duckworth, 1979). The Clinical Scales are referred by number and abbreviation in this study.

- 1 Hs Hypochondriasis - 33 items dealing with bodily complaints.
- 2 D Depression - 60 items measures sadness and pessimism.
Mood scale.
- 3 Hy Conversion Hysteria - 60 items measures denial of emotional and interpersonal difficulty.
- 4 Pd Psychopathic Deviate - 50 items deal with general social maladjustment.
- 5 Mf Masculinity-femininity - 60 items measures sophistication and aesthetic interest.
- 6 Pa Paranoia - 40 items measures suspiciousness and sensitivity.
- 7 Pt Psychasthenia - 48 items relates to anxiety symptoms.
- 8 Sc Schizophrenia - 78 items measures mental confusion.
- 9 Ma Hypomania - 46 items measures mental activity and physical energy.
- 0 Si Social Introversion - 70 items deals with social participation.

Validity Scales: Four scales which measure the test taking attitude of the subject. The scales include:

? (Cannot Say) scale is the number of omitted items and items answered both true and false.

L (Lie) scale detects a deliberate and rather unsophisticated attempt by the student to present himself in a favorable light (Meehl and Hathaway, 1946). This scale reflects rigidity or naiveté.

F (Frequency or Confusion) scale detects deviant or atypical ways of responding to test items (Meehl and Hathaway, 1946). This scale reflects confused thinking or self-depreciation.

K (Correction) scale is a measure of test distortion and defensiveness, i.e. denial of psychopathology, which makes the subject appear in favorable light and exaggeration of psychopathology which makes the subject appear in a very unfavorable light (Meehl and Hathaway, 1946).

Research Scales: Researchers have developed these new experimental scales to be used in conjunction with Validity and Clinical Scales. (Duckworth, 1979; Dahlstrom, Welsh and Dahlstrom, 1972; Graham, 1977; Gilberstadt and Duker, 1965). The ten Research Scales are:

A Conscious Anxiety - measures overt anxiety at time of testing. (Welsh, 1956).

R Conscious Repression - measures the use of denial and rationalization as coping behavior and a lack of effective self-insight. (Welsh, 1956).

Es Ego Strength - measure of ego-resiliency. (Barron, 1953).

Ca Caudality - differentiates between focal cerebral damage in the parietal area and focal lesions in the temporal areas. (Williams, 1952).

Dy Dependency - assesses the strength of dependency needs.

(Navran, 1954).

Do Dominance - measures persons ability to take charge of his life. (Gough, McClosky and Meehl, 1951).

Re Social Responsibility - measures acceptance or rejection of previously held value system. (Gough, McClosky and Meehl, 1952).

Pr Prejudice - measures prejudice and the rigidity in thinking. (Gough, 1954).

St Status - measures socioeconomic status the person desires. (Gough, 1948).

Cn Control - assesses control over the expression of pathology. (Cuadra, 1953).

Neurotic Triad: The covariation among the first three Clinical Scales (Hs, D, Hy) and their various combinations. Code types 3-1-2 and 1-3-2 are designated as the "Conversion V". The 3-2-1 pattern is commonly called the "hysterectomy profile". These scales do not differentiate neurotics from other diagnostic groups (Duckworth, 1979).

Psychotic Tetrad: Designation of patterns and relationships among the last four psychotic scales (Pa, Pt, Sc, Ma). Scales 6, 8 and 9 are referred to as the "psychotic triad". Sharp elevations on scales 6 and 8 with scales 7 and 9 relatively lower is called the "paranoid valley" (Dahlstrom and Welsh, 1960).

Elevation: Refers to the absolute value of the T-score scaled along the vertical lines on the profile. T-score level of 50 is a horizontal line which represents the mean score obtained on each of the basic scales by the normal Minnesota reference group (Dahlstrom and

Welsh, 1960). Elevations are divided into three categories: marked elevations (T-score of 70 or above), moderate elevations (T-score of 60-70) and low elevations (T-score of 45 or below).

CHAPTER II

REVIEW OF LITERATURE

Family: An Overview

The nuclear family, as a psychodynamic unit of father-mother-child, is a universal phenomenon found in all societies dating back over a million years (Farber, 1964; Encyclopaedia Britannica, 1983). The function of the family plays a significant role in the development of a child's personality. Chapman (1971) stated the first twenty-five percent of a person's life he is socially and biologically tied to his parents and his home. Personality development occurs during the first ten to twenty years of an individual's life and his mental health is due in great part to the types of relationships he has had during those formative years. Haley reported

there are several basic assumptions to family study:

a) family members deal differently with each other than they do with other people, b) the millions of responses which family members meet over time within a family fall into patterns, c) these patterns persist within a family for many years and will influence a child's expectation of, and behavior with, other people when he leaves the family and d) the child is not a passive recipient of what his parents do with him but an active co-creator of family patterns (Handel, 1967, p. 55).

The healthy development of children appears to be associated with their relationship to both their mother and father. Rutter (1971) noted that both parents importance to the child's development varies with each

individual situation. The maternal influence is predominant with very young children primarily because her extensive contact with them. The father-child relationship is emerging as an equally important relationship as the mother-child relationship. In some circumstances the father-child relationship may be more crucial (Anderson, 1969; Mlott, 1972; Sopchak, 1952, 1958; Johnson and Lobetz, 1974). Rutter's (1971) research indicated a tendency for males to be more affected by family disharmony than females.

Children and adolescents have a basic tendency to develop into well-adjusted adults if they are exposed to healthy interpersonal relationships (Chapman, 1971). Single, isolated incidents do not cause damage to a child's personality. A sound parent-child relationship will not be significantly harmed by an occasional outburst by an angered child or exasperated parent. In an attempt to define parent or family characteristics as it relates to child behavior, researchers have used the MMPI to examine parental personality of various child groups i.e. emotionally disturbed, physically disabled, mentally impaired, behaviorally deviant and normal children.

Minnesota Multiphasic Personality Inventory

The Minnesota Multiphasic Personality Inventory (MMPI) has been used extensively as a clinical and research instrument. Reasons for its wide application include ease in administration for individuals and groups, objective scoring, availability of different test forms, a volume of data demonstrating its validity and automation of interpretation (Butcher and Telegen, 1978; Graham, 1977). Graham (1977) stated

the Minnesota Multiphasic Personality Inventory has not been successful in terms of its original purpose (differential

diagnosis of clinical groups believed in the 1930's to be discrete psychiatric types) it has proved possible subsequently to use the test to generate descriptions of and inferences about individuals (normals and patients) on the basis of their own MMPI profiles (p.6).

The MMPI is used in various settings i.e., schools, industry, employment agencies, universities and mental health centers with individuals who are not usually psychotic or neurotic. These individuals function adequately but have problems due to situational pressures and stresses ranging from mild to severe (Duckworth, 1979). Duckworth further explained that the MMPI has expanded from its diagnostic origins to include an individual's behavior, attitudes, thought patterns and strengths.

Parent-Child Research

This section will review and summarize MMPI research which examined parent-child relationships. The five areas of parent-child studies discussed are disabled children, emotionally disturbed children, psychiatrically deviant children, adolescent children, and familial studies. Each area will provide an historical review, a listing of general findings and recommendations for future studies.

Disabled Children

A number of studies have evaluated parental adjustment in parents of disabled children: Williams (1951) parents of cerebral palsied children; Grossman (1951), Goodstein (1956), Goodstein and Dahlstrom (1956) parents of stuttering children; Goodstein (1960 a, 1960 b) parents of children with cleft palates; Stehbens (1970) mothers of enuretic children; Dee and Dee (1972) parents of motor dysfunctional child-

ren; Alley, Snider, Forsyth and Opitz (1974) parents of minimal cerebral dysfunction children; Routh (1970), Miller and Keirn (1978), Erickson (1968, 1969) parents of mentally retarded children; Fitzelle (1959) parents of asthmatic children and Pinneau and Hooper (1958) mothers of gastro-intestinal disturbed infants.

Generally, these studies revealed no major significant MMPI differences between parents of handicapped children and parents of non-handicapped children. Several studies (Erickson 1968, 1969; Miller and Keirn 1978; and Fitzelle, 1959) found increased parental MMPI elevations are associated with various child handicaps as compared to the general population. In reference to specific scale elevations, a significantly higher Pa scale was reported for enuretic mothers (Stehbens, 1970), parents of stuttering children gave more atypical responses on the F scale (Grossman, 1951) and parents of asthmatic children had significantly higher Pd scale (Fitzelle 1959).

Dee and Dee (1972) commented that a major difficulty in MMPI research has been the choice of a comparison control group for parents of developmentally disabled children. Control groups have been of three types: the original MMPI norm groups, volunteers solicited from the community and parents of referred children found to be normal. Erickson (1969) and Miller and Keirn (1978) discussed the inappropriateness of using MMPI norm groups due to regional differences, sample size and inclusion of non-parents. Dee and Dee (1972) postulated that the optimum comparison group are parents of referred children found to be normal because these parents motivations would be similar to parents of disabled children. This rationale is questionable in that the referred parents would most probably consider their children deviant in some area which prompted their evaluation at child clinic. The majority of re-

searchers (Pinneau and Hooper, 1958; Goodstein, 1960a, 1960b; Goodstein and Dahlstrom, 1956a; Miller and Keirn, 1978) have made appeals for volunteers within the community. This procedure would insure parents were from the same geographic region and would be statistically similar in sample size.

There was a preponderance of male children and one parent usually mother-only in parent-child studies. Alley, Snider, Forsyth and Opitz (1974) observed that the sex distribution in clinic population is three boys to one girl; this may account in part for the lack of female children subjects. Miller and Keirn (1978) noted a prevalence of mother-only families who participated in their study. They noted a significant difference for both parents may be evidenced in other MMPI studies when more fathers are represented.

Overall, the studies which have examined parental MMPIs of disabled children have obtained control comparison group by solicitation for volunteers within the community. There was a notable lack of intact families, absence of father participation and predominance of male rather than female children. The parental MMPIs were scored for the three Validity Scales (L, F, K) and nine of the Clinical Scales, the Si scale was omitted in approximately fifty percent of the studies cited. Three Research Scales, the Do scale, the St scale (Goodstein and Dahlstrom, 1956a) and the A scale (Pinneau and Hopper, 1958) were used in these studies. Goodstein and Dahlstrom (1956a) noted a significantly higher Do scale for parents of nonstuttering children but were unable to interpret these findings due to a lack of specific information about the Do scale which was developed in 1951.

Generally, parents of disabled children and parents of nondisabled children were comparable in age, sex, socioeconomic status and geo-

graphic region. This did not hold true for the children of those parents. Erickson (1969), for example, studied MMPI profiles of parents of young retarded children, age three or below; no data about the sex of the children were included. Over half of these studies failed to provide either data concerning the child's age or sex. When age information was available, the parameters were open (i.e., age three or below, over or under age 5, ages 5 through 14).

Emotionally Disturbed

The second area of investigation by MMPI researchers was an examination of parental personality and emotionally disturbed children (Adrian, Vacchiano and Gilbert, 1966; Goodstein and Rowley, 1961; Hanvik and Byram, 1959; Kalhorn, 1947; L'Abate 1960; Lauterbach, London and Bryan, 1961; Liverant, 1959; Marks, 1961; Stennett, 1966; Tom, 1955; Wolking, Quast and Lawton, 1966; Friedman, 1974; Verinis, 1976; Griffin, Finch, Edwards and Kendall, 1976).

Overall, these studies have three consistent findings: 1) parents of emotionally disturbed children have deviant MMPI profiles as compared to parents of non-disturbed children when group means were examined, 2) parents of disturbed children frequently have elevated Hy and Pd scales and 3) the elevated mean MMPI profiles of the disturbed children's parents were below that of psychiatrically disturbed population (Hafner, Butcher, Hall and Quast, 1969).

The MMPI studies which evaluated parental personality of disturbed children as measured by the MMPI expanded areas of consideration in parent-child research, not previously addressed by studies that examined parents of disabled children. L'Abate (1960) questioned the importance of the absence or presence of a father as it relates to the child's mal-

adjustment and the mother's level of emotional disturbance. The majority of these studies employed pairs of parents from intact families rather than mother-only families. Researchers (Marks, 1961; Liverant, 1959; Lauterbach, London and Bryan, 1961; Wolking, Quast and Lawton, 1966) reported high point elevations and code-types for parents of disturbed and normal children. An attempt was made by Griffin et. al. (1976) to use the Midi-Mult (86 item short form of the MMPI) as screening instrument for parents of emotionally disturbed children. Although not successful, valid information can be gleaned from this study, that being abbreviated forms of the MMPI have serious deficiencies, i.e. overestimation of the Validity Scales and four Clinical Scales which could omit or mask significant findings in parent-child MMPI studies.

Similarities are present in studies which examined parents of disabled children and parents of disturbed children. More male children participated in these parent-child studies. Generally, the age range for the children was extremely broad, i.e. ages 6 to 15 with the majority 11 or under, age 4 through 17, preschool group through age 15, etc. Even though an effort was made to involve both parents in the research studies, more mothers actually participated. The majority of studies including parents of disturbed children were compared with parent volunteers recruited from the community having children classified as normal based on the following criteria: physically healthy, absence of known behavioral disturbance, intact family, (Liverant, 1959) no history of psychiatric care (Verinis, 1976). None of the ten Research Scales (A, R, Es, Ca, Dy, Do, Re, Pr, St, Cn) were used in these studies as was the case with studies which examined the parents of disturbed children.

Psychiatrically Deviant Children

The third area of investigation in the parent-child MMPI research focused on parents of psychiatrically deviant children (Wolff and Morris, 1971; Bradley, Wakefield, Yom, Doughtie, Cox and Kraft, 1974; Hanvik and Byram, 1959; Liverant, 1959; Wolking, Dunteman and Bailey, 1967; Goodstein and Rowley, 1961). Children were divided into diagnostic categories and comparisons were made between the parental MMPIs and the child's diagnoses. The following three studies cited typify the type of research done in this area.

Hanvik and Byram (1959) studied MMPI profiles of parents of child psychiatric patients classified into twelve primary problem categories. No relationship was found between the fathers' MMPI and children's problems. There was a predominance of Hy and Pd elevations in the parents' MMPIs. They noted as a group fathers had elevated Mf scores and mothers had depressed Mf scores. A relationship was found between mothers with a high Hy score and low Mf score and children who were rebellious at school or home. They observed parents presenting with severe marital conflict had elevations on the Si and D scales in profiles with high Pd and low Ma scores. The authors concluded that low Mf scores in females indicated emotional disturbance and was associated with high scoring tendencies on other MMPI scales.

Wolking, Dunteman and Bailey (1967) studied mean MMPI profiles of parents based on six psychiatric diagnoses of their children. The K-corrected MMPI profiles were scored for three Validity Scales and ten Clinical Scales. The six psychiatric diagnostic groups were organic brain syndrome, psychosis, conversion reaction, anxiety reaction, behavior disorder and mental deficiency. Four multivariate analyses were completed based on the sex of the child in diagnostic groups and

the sex of the parent. They found significant differences between mothers of male children based on the psychiatric diagnostic groups. They concluded significant MMPI profile differences were found among the various parent groups but the differences were too small to distinguish parents of normal children and clinic patient children.

Bradley, Wakefield, Yom, Doughtie, Cox and Kraft (1974) compared parental MMPIs and pathological problems in children. Six behaviors (excessive rocking, excessive headbanging, rigidity, pica, excessive breath-holding and trichotillomania) and parental personalities as measured by the MMPI were evaluated by canonical correlational analysis. Significant relationships were found between both parents' MMPI scales and their children's pathological behaviors. The parental Sc, D and F scales were associated with the pathological behaviors. Pica was associated with the Sc scale for both parents. Pica and breath-holding was associated with the Sc and Pa scales for the mothers; the D and F scales were associated with rigidity for the mothers.

Lachar and Sharp (1979) questioned the methodological approach of dividing children into groups by psychiatric diagnosis, symptomatology or the researcher's individual criteria. They suggested a loss of potential linear relationships between parental personality and the child's behavior. Anderson (1969) noted problems in comparability and reproducibility due to wide variety of research methods and classifications of subjects in these parent-child studies.

There was a predominance of male children and mother participants in the area of parent-child research. Generally age information was not given for the children. A larger proportion of fathers and pairs of parents participated in these studies. Parental MMPIs were evaluated

based on the Validity and Clinical Scales; no Research Scales were used in any of the analyses.

Adolescent-Child Studies

Sopchak (1958) was one of the earliest published researchers who examined comparisons of adolescent and parental MMPIs. He studied the relationship between college students and their parents using rank - order correlations based on raw MMPI scores. No data were included for the Validity Scales and one Clinical Scale, the Si scale. The mean age of the students was 19.9 years. He reported the subjects were "normal" according to the criteria of the authors of the MMPI. Same-sex comparisons yielded more significant correlations than different-sex comparisons. "It appears that males "identify" with their fathers more than with their mothers, while females "identify" much more with their mothers, than with their fathers" (Sopchak, 1958, p. 207).

Scores for parents of males correlated significantly on five Clinical Scales: Hs, Hy, Pa, Sc and Ma, but no significant correlations were obtained for parents of females. Sopchak (1958) suggested that future studies investigate the discrepancy in correlations between parents of males and parents of females. Scores for mothers and fathers were more similar to each other than they were to the scores of the students. Correlations significant at the .01 level were obtained for nine MMPI scales (Hs, D, Hy, Pd, Mf, Pa, Sc, Pt, Ma) between the scores of female students and their mothers. More significant correlations were found between male and female students and both parents on the "psychotic triad" scales than on the "neurotic triad" scales.

Other studies which investigated comparisons of adolescent and parental MMPI include Mlott, 1972; Archer, Sutker, White and Orvin, 1978;

Armentrout, 1975; Vogel and Lauterback, 1963; Butcher and Messick, 1966; Sopchak, 1952; Lauterback, Vogel and Hart, 1962; Anderson, 1969.

Butcher and Messick (1966) studied the relationship between parent-child similarity and adolescent aggression. Eighth grade boys were rated on manifest aggression and divided into three groups. They found high aggression boys were more similar to fathers whereas low aggression boys were more similar to the mother. The middle-aggression group showed the greatest similarity to their parents than the other two groups.

Lauterbach, Vogel and Hart (1962) studied the father, mother and behaviorally disturbed son referred to an Army neuropsychiatric outpatient service. The twenty-four families were administered the shortened group form of the MMPI. The sons showed more psychopathology than either their mother or father. The sons' highest mean T-scores were on the Sc and Pd scales. The fathers' highest mean T-score was on the Pd scale and the mothers highest mean T-score was on the Hy scale. Fewer significant correlations were found among members of disturbed families than Sopchak found among members of normal families.

Anderson (1969) investigated personality characteristics of parents of preadolescent boys, classified as neurotic, aggressive and normal. The parental MMPIs were compared by a multivariate analysis-of-variance. Females were higher than males on the Pa scale whereas males were higher on the Ma than females. Significant differences were found on scales Hs, D, Hy and Pd between parents of normal boys and parents of neurotic and aggressive boys. Parents of neurotic boys scored higher on the K scale whereas parents of aggressive boys scored higher on scales Hs, Pd, Pt, Sc and Ma.

Anderson (1969) found fathers of aggressive sons scored highest on

the Pd and Sc scales and mothers of aggressive sons scored higher on scales Hs, Pd, Pt, Sc and Ma. She stated "the most important clinical implication in this research is the necessity of including the father in the assessment and treatment of boys, particularly aggressive boys" (p. 580). She further recommends inclusion of fathers in further parent-child personality research.

Archer, Sutker, White and Orvin (1978) examined personality characteristics between hospitalized adolescents and their biological parents. The MMPIs were scored for the three Validity Scales and ten Clinical Scales. The adolescent psychiatric inpatients protocols were classified as invalid, normal, psychotic and character disorder. Pearsen product-moment correlations were performed on K-corrected T-scores for each MMPI scale. The greatest dissimilarity was found on adolescent MMPI protocols classified as either invalid or psychotic. Few significant relationships were shown between parental and adolescent personality characteristics among families seeking psychiatric treatment in familial comparison on the MMPI. The investigators suggested that the more severe the adolescent's psychological disturbance, the more dissimilar personality characteristics of parent and child. They concluded that failure of psychiatrically disturbed adolescents to copy parental personality characteristics, with the exception of sociopathy, lead to their abnormal psychological functioning.

Mlott (1972) compared male and female adolescent psychiatric inpatients' admission and dismissal MMPI profiles with their parents' profiles. He found a reluctance of parents of daughters as compared to the willingness of parents of sons to complete the MMPI. He suggests that there is a greater "psychological distance" between parents and male adolescents. Therefore, these parents are more likely to become in-

volved in the son's treatment because they perceive themselves apart from their sons' problems and can see the area of treatment in a more unemotional manner.

Sopchak (1952) studied the relation between the tendency towards identification with parents and tendencies toward specific types of abnormalities as measured by the MMPI. There was greater identification with the parent of the same sex than the parent of the opposite sex. He concluded that identification with parents is associated with normality and good adjustment. He found normal males identify more with their fathers than with their mothers. Failure to identify with the fathers produced more tendencies toward abnormalities on the psychotic triad for both men and women.

Several conclusions can be drawn from these adolescent studies regarding parent-child research. The importance of father's inclusion in parent-child research has been well documented. The family unit of father-mother-child as an entity warrants further investigation. Researchers (Sopchak, 1958; Mlott, 1972) postulated that parents of male and parents of female adolescents differ significantly from one another and suggested that further studies explore this area.

Familial Studies

MMPI researchers have focused on familial relationships such as family interaction, marital adjustment, parental personality characteristics and impaired parenting practices. Jacob (1975) stated. . .

there are definable family patterns and processes which are crucial to understanding the etiology, development and maintenance of abnormal behavior and that identification of such family pat-

terns might eventually lead to more effective methods of treatment and prevention (p. 33).

Researchers who worked toward the goal of identification of specific family patterns as measured by the MMPI include: Duntzman and Wolking, 1967; McAdoo and Connolly, 1975; Loeb and Price, 1966; Johnson and Lobitz, 1974; Plotkin, Twentyman and Perri, 1982; Paulson, Schwener, and Bendel, 1976; Paulson, Afifi, Thomason and Chaleff, 1974; McAdoo and Roeske, 1973; and Stennett, 1966.

These studies have noted significant differences between divorced or separated mothers as compared to married mothers. Paulson, et. al. (1974) reported coded code-types for abusing females as a 4-9 and 9-4 for abusing males. They stressed that the sex of the parent be considered in the identification and treatment of parental abuse in children. Johnson and Lobitz (1974) found child deviance was significantly correlated with the fathers' Hy, Pd, and Sc scales. They emphasized the role of the father in the development of conduct disorders in male children. No Research Scales were used in any of the above mentioned studies.

New Perspectives

There have been major contributions in MMPI research in the past four decades. The MMPI has been used for over thirty years to examine parent-child relationships in order to define specific parent or family characteristics as they relate to child development. In addition, two significant MMPI developments have been the origination of supplemental MMPI scales, the Research Scales, which give a broader and more complete interpretation of the traditional scales, (Validity and Clinical Scales)

and application of the MMPI scales (Validity, Clinical and Research Scales) to normal populations.

There is a conspicuous lack in the MMPI literature focusing on parent-child studies which utilize either the Research Scales or include normal groups either as a comparison sample for clinical groups or an independent sample in which the three member family (father-mother-child) were studied. Several explanations may account for this obvious absence of additional information which could advance a more comprehensive understanding of parent-child relationships.

More than 550 experimental scales have been constructed by various recombining of the 556 MMPI items using item analytic, factor analytic or intuitive procedures (Graham, 1977; Duckworth, 1979). These experimental scales are referred to in the literature as Special MMPI Scales, New Scales, Frequently Scored Research Scales and Research Scales.

Limited research information has been available in the literature. Graham (1977) stated interpretative data is almost nonexistent for some of the Research Scales. Duckworth (1979) has utilized Research Scales with mentally healthy persons, therefore an expanded knowledge of the Research Scales application to the Validity and Clinical Scales and interpretative information about normal individuals is now available.

Normality is a difficult concept to define. Normal populations, in the literature, are referred to as non-dysfunctional, non-psychiatric, non-clinical, non-handicapped, etc, but normality is more than possessing a lack of negative characteristics, attributes or qualities. Offer, Sabshin and Offer (1974) stated "for too long theories of normal development have been extrapolated from studies of patients or deviant populations" (p. 139). This procedure has been used in some effect in MMPI parent-child research. No study to date has defined specific par-

ental profiles or parental code types for an intact family of normal subjects using the MMPI scales (Validity, Clinical and Research).

Research Scales

The ten Research Scales used in this study were A, R, Es, Ca, Dy, Do, Re, Pr, St and Cn. These scales were scored according to the norms of the original MMPI standardization group, therefore comparisons can be made with the traditional MMPI scales (Validity and Clinical Scales). In addition, computer and interpretative services are available for the Research Scales. Several researchers (Graham, 1977; Duckworth, 1979; Good and Brantner, 1974) have recommended that the Research Scales be utilized in future MMPI studies in order that a broader and a more comprehensive knowledge of them can be obtained.

Three criteria should be followed when using the Research Scales to assure an accurate interpretation: 1) each scale needs an individual interpretation, 2) a comparison of the Research Scale with other scales and 3) emphasis on the person's present life situation must be acknowledged (Duckworth, 1979). Unlike the Validity and Clinical Scales, an elevation on the Research Scales can yield a positive interpretation. Duckworth (1979) reported that elevations (T-scores = 55 or above) on the Es, Do and St scales, and low scores (T-scores = 50 or below) on the R scale and (T-scores = 45 or below) on the A, Dy and Pr scales indicates a good mental health profile. She further found low scores (T-scores = 45 or below) on the Es and Do scales and high scores (T-scores = 55 or above) on the A, R, Dy and Pr scales indicate a poor mental health profile.

Each of the Research Scales will be discussed and summarized in this section. The A (Conscious Anxiety) scale was developed by Welsh

(1956). The A scale consists of 39 items and is a measure of conscious anxiety of a situational nature. Graham (1977) reported Gough found for normal subjects the A scale scores are negatively correlated to K, L, and Hs scales and positively correlated F, Ma and Si scales. There are two measures of anxiety on the MMPI, scale A and Pt. The Pt scale assesses long-term characterological anxiety, whereas the A scale indicates anxiety in response to a particular situation (Duckworth, 1979). Graham (1977) described a high A scoring normal individual as a miserable, unhappy person. High A scorers are characterized as pessimistic, lacking poise, upset easily, suggestible, resistant, vacillating, and low A scorers are described as not consciously anxious, extroverted, verbally fluent and confident (Duckworth, 1979; Graham, 1977). Duckworth (1979) cautioned high and low scores may be appropriate or inappropriate given the individual's present circumstance.

The R (Repression) scale consists of 40 items and was developed by Welsh (1956). The R scale measures conscious repression. Graham (1975) stated Welsh (1956) found the R scale scores were positively correlated with scales, L, K, Hy, D and negatively correlated with the Ma scale for normal subjects. High R scorers are described as conventional, formal, clear-thinking, painstaking, slow, whereas low R scorers were outgoing, emotional, spontaneous in lifestyle (Graham, 1977; Duckworth, 1979). Duckworth (1979) noted the R scale measures the use of two coping behaviors, denial and rationalization and a lack of effective self-insight. Additional information can be obtained from scales A and R when these scales are considered conjointly. Duckworth (1979) has provided an accurate reference for interpretations of A-R combinations.

The Es (Ego-Strength) scale consists of 31 items developed by Barron (1953). Barron noted that the Es scale is useful outside the

clinical setting in normal populations because it measures the constructive forces in personality (Welsh and Dahlstrom, 1956). For normal persons, the Es scale has a high negative correlation on the D, Si, A, Ca, Dy, Pr scales and has a high positive correlation with scales Do and St (Duckworth, 1979). Graham (1977) reported sex differences in Es scale scores with males obtaining higher scores than females. He explained this may be due to the fact that several items in the scale deal with masculine role identification. Good and Brantner (1974) stated Barron found some high Es scorers had higher levels of aggression and hostility which appear to be related to pathological childhood experiences such as a mother lacking in emotional warmth, poor relationship with parents and friction in the home. Duckworth (1979) noted that the Es scale is one of the best indicators on the MMPI of psychological health. A high Es scorer would be characterized as spontaneous, strong sense of reality, able to share emotionally, permissive morality and feelings of personal adequacy (Good and Brantner, 1974; Welsh and Dahlstrom, 1956). Low Es scorers are described as having feelings of worthlessness, poor self-concept, inhibited, moralistic, rigid, withdrawn and characterological problems rather than situational (Graham, 1977).

The Ca (Caudality) scale consists of 37 items developed by Williams (1952) which differentiated between frontal and parietal brain damage. Duckworth (1979) observed that elevations on the Ca scale seems to measure general conscious anxiety, as does the A scale. In normal populations, the Ca scale is positively correlated with scales F, D, Pt, A, Dy, Pr and negatively for K, Es, Do and St scales. A high Ca scorer is described as poor self-attitude, lacks enthusiasm, and fears a loss of control whereas a low Ca scorer usually has little anxiety, feels com-

fortable in social situations and is in control of his own actions (Duckworth, 1979).

The Dy (Dependency) scale developed by Navran (1954) consists of 57 items which assesses dependency needs. Duckworth (1979) reported that mentally healthy individuals have T-scores of 50 or below on the Dy scale. A high Dy scorer may have severe emotional problems leading to feelings of dysphoria and unhappiness because his strong dependency needs are not met, unlike the low Dy scorer who does not admit to strong dependency and is well adjusted psychologically, feels happy and confident (Graham, 1975).

The Do (Dominance) scale is a 60-item scale developed by Gough, McClosky and Meehl (1951). This scale measures a person's ability to take charge of his life (Duckworth, 1979). Domineering behavior may be evidenced when the T-score is above 75. High Do scorers display self-confidence and are self-assured in handling life's problems. Low Do scorers prefer others to take charge of their lives. It should be noted that additional information is available using Dy-Do combinations (See Duckworth, p. 227-228, 1979).

The Re (Social Responsibility) scale developed by Gough, McClosky, and Meehl (1952) consists of 56 items which measures willingness to accept consequences, dependability, trustworthiness, a sense of obligation to the group and integrity (Good and Brantner, 1974; Graham, 1977). Duckworth (1979) suggested that the Re scale is also a measure of the acceptance (high score) or rejection (low score) of a previously held (usually parental) value system. She cautioned that knowledge of the individual's background is necessary in order to make an accurate determination of what values are being accepted or rejected. For persons over age 25, the present value system may or may not be similar to the

parents. A high Re scorer at any age indicates a rigid person who chooses not to explore other values.

The Pr (Prejudice) scale developed by Gough (1956) consists of 32 items which originally measured anti-Semitic prejudice. Duckworth (1979) noted the Pr scale assesses rigidity in thinking, thus high Pr scores are more rigid and less tolerant of the points of view of others. Graham (1977) reported persons having a high Pr score are less well-adjusted psychologically, have less formal education, obtain lower IQ scores and have a lower socioeconomic status. It should be noted the rigidity in thinking can be either situational in nature or a result of a permanent attitude. Low Pr scorers are openminded, optimistic, and tolerant of the beliefs and opinions of others. The Re and Pr scales should be considered in combination with one another.

The St (Socioeconomic status) scale consists of 34 items and was developed by Gough (1948) to differentiate between persons with high socioeconomic status and low socioeconomic status. Some researchers (Gough, 1949; Duckworth and Duckworth, 1975) noted that the St scale measures the desired social status more than actual status (Graham, 1977). A high St scorer desires characteristics of higher socioeconomic class such as money, power, etc. This also may be a desire to better one's social position. Generally, high scorers are high achievers who make satisfactory adjustments to problems (Graham, 1977).

The Cn (Control) scale of 50 items developed by Cuadra (1953) is a measure of personal control over the expression of pathology. High scorers depend on internal controls and self-direction whereas low scorers are dependent upon social conventions, moralistic rules and stable environments (Good and Brantner, 1974). A constricted person is characterized by elevations on scales Cn, K, Hy, and R (Duckworth, 1979).

A high Cn score and no Clinical Scale elevations are indicative of a person who has no behavior which needs to be controlled. Graham (1977) describes low Cn scorers as conventional, moralistic and unrealistic in self-appraisal as compared to high Cn scorers who are impatient, rebellious towards authority, aware of his weaknesses.

SUMMARY

The field of parent-child MMPI research can yield relevant data considering interfamilial and intrafamilial processes of both theoretical and practical value. This study was designed to incorporate the important components and aspects of the parent-child research cited in the literature review. A need has been demonstrated for whole family i.e. intact family of father-mother-child research. The Research Scales in conjunction with the Validity and Clinical Scales can yield important data about normal individuals and could contribute to the area of parent-child research.

CHAPTER III

RESEARCH DESIGN

This chapter contains information about the design of the study, populations from which the subjects were drawn, subject characteristics, general procedures and statistical analysis used in the study.

Subjects

The one-hundred twenty subjects consisted of forty graduating high school seniors, twenty males and twenty females, scheduled to graduate from high school in May, 1983 and their eighty parents, forty fathers and forty mothers. The students had average grades or above, normal grade placement (no retention or accelerated advancement) and were seventeen years or older. All the students were volunteers enrolled in the following high schools during the school year 1982 - 1983: Parkwood High School, Memorial High School, Central Christian Academy, College Heights Christian School, all in Joplin, Missouri; Neosho High School in Neosho, Missouri; Webb City High School in Webb City, Missouri; Carl Junction High School in Carl Junction, Missouri; Sunnysdale Academy in Centralia, Missouri; and Quapaw High School in Quapaw, Oklahoma.

The forty families studied were intact (i.e. not disrupted by death, separation or divorce) at the time of testing. The students and their parents had no previous history of referral, diagnosis or treatment for any psychological problems. All the subjects displayed adequate reading ability to complete the MMPI. Biological parents, adoptive parents, divorced and remarried (five years or more with the child living in the home) parents were used in the study. The parents

resided in the following cities: Joplin, Missouri; Carl Junction, Missouri; Webb City, Missouri; Neosho, Missouri; and Quapaw, Oklahoma.

Method of Selection

The forty families were recruited by telephone solicitation, local newspapers, referrals from other subjects and appeals for volunteers to public and private high schools, church groups and ministers. At the time of the initial contact, the parents were informed that the purpose of the study was to gain a better understanding of parent-child relationships and each family member was requested to complete a personality inventory, the MMPI. Each family was screened by the previously mentioned criteria (students: grades, grade placement, graduation date, age; parents: marital status; parents and students: previous psychiatric history, adequate reading ability and intact family) prior to inclusion in the study.

A total of one hundred and seven families were asked to participate in the study. Sixty-nine families agreed to participate, fifteen of which did not meet the screening criteria and thirty-eight families refused to participate. The remaining fifty-four families were assigned an identification number. A table of random numbers was then used to select a sample of twenty male and twenty female students and their parents (Asher, 1976). Seven families withdrew from the study after receiving the test materials.

Subject Characteristics

The forty mothers had a mean age of 42.8 years, and the forty fathers had a mean age of 46.4 years. The mother's education ranged from eighth grade to advanced degrees, (M.S., Ph.D., M.D., D.D.S.), 2.5 percent completed the eighth grade, 5 percent attended high school, 40

percent were high school grades, 32.5 percent had attended college, 10 percent were college graduates and 10 percent had advanced degrees. The fathers education ranged from eighth grade to advanced degrees, 2.5 percent completed the eighth grade, 7.5 percent attended high school, 25 percent were high school graduates, 15 percent had attended college, 17.5 percent were college graduates and 32.5 percent had advanced degrees.

The forty student's mean age was 17.5 years (47.5 percent were eighteen years and 52.5 percent were seventeen years). All the students were native-born white American parentage with 92.5 percent living with natural parents, 2.5 percent living with adoptive parents and 5 percent living with one biological parent married five years or more. The student sample included 32.5 percent first born children, 25 percent second born, 12.5 percent third born, 15 percent fourth born and 5 percent fifth born.

The median family had 3.08 children. Sixty-two point five percent of the forty families had urban residences and 37.5 percent had rural residences. Of the forty families who expressed a religious preference 10 percent were Roman Catholic, 5 percent were Presbyterians, 20 percent were Methodist, 20 percent were Baptist, 7.5 percent were Christian, 5 percent were Lutheran, 15 percent were Protestant, 5 percent were Pentecostal, 2.5 percent were Full Gospel, 2.5 percent were Seventh Day Adventist and 2.5 percent were Independent Bible.

Materials

The following materials were used in the study:

1. The group form MMPI test booklet (Catalog no. 47-181 TB); The Psychological Corporation, 522 Fifth Avenue, New York, New York

(Catalog no. 27199); and NCS Interpretive Scoring System, A Division of National Computer System, Inc., P.O. Box 1416, Minneapolis, Minnesota.

2. Group form IBM 805 answer sheets (Catalog no. 1100 A 2414-2); The Psychological Corporation.

3. Group form basic profile sheets (Catalog no. 51-125 S); The Psychological Corporation. Profile forms for MMPI special scales (Catalog no. 401-PF); Psychological Assessment Resources, P.O. Box 98, Odessa, Florida.

4. Group form hand-scoring templates (Catalog no. 5-0705); The Psychological Corporation. Group form frequently scored Research Scales (Catalog no. 110-SK); Psychological Assessment Resources.

Procedure

The group form of the MMPI was given to the students and their parents. Each of the forty families received a packet of test materials which contained three test booklets, three answer sheets, three volunteer forms (See Appendix A), test instructions and sign-up sheet (See Appendix B). The test materials were delivered to the home of each family and was picked up approximately one week later by the researcher. The data were collected in March and April, 1983. Each family was cautioned about discussing the MMPI until each family member had completed the personality inventory. The MMPI protocols were hand-scored for the four Validity Scales (V, L, F, K), ten Clinical Scales (Hs, D, Hy, Pd, Pf, Pa, Pt, Sc, Ma, Si) and ten Research Scales (A, R, Es, Ca, Dy, Do, Re, Pr, St, Cn).

The identifying information was removed from each hand-scored profile and was replaced with a code number. Male students and their parents were coded in odd numbers (i.e. Smith Family: 1F, 1M, 1S) and

female students and their parents were identified by even numbers (i.e. Jones Family: 2F, 2M, 2D). The researcher transferred the names and corresponding numbers into a ledger which was kept in a locked file cabinet.

The subjects were informed of the availability of individual interpretations. Twenty-six families requested an interpretation and fourteen families declined. The individual interpretations were given on May 21, 1983 at St. John's Regional Medical Center's Conference Room by the researcher and another psychologist.

Statistical Analysis

A three way analysis-of-variance was employed to test Hypothesis I. A two way analysis-of-variance tested Hypothesis II. The paired t-test was employed to test Hypothesis III and Hypothesis IV. The Code-types were determined for each individual MMPI profile, by computing the frequencies with which each Clinical Scale appeared as the highest and second highest T-score.

CHAPTER IV

ANALYSIS OF DATA

The purpose of the study was to compare the MMPI profiles of graduating high school seniors and their parents. The one-hundred and twenty volunteer subjects were selected using random sampling procedures. The MMPI protocols were hand scored for three Validity Scales (L, F, K), ten Clinical Scales (Hs, D, Hy, Pd, Mf, Pa, Pt, Sc, Ma, Si) and ten Research Scales (A, R, Es, Ca, Dy, Do, Re, Pr, St, Cn). The study was conducted during March and April 1983. The students were enrolled in five public and three private high schools in Southwest Missouri, Central Missouri and Northeast Oklahoma.

The K-corrected raw scores for the twenty-three MMPI scales: the three Validity Scales, ten Clinical Scales and ten Research Scales were computed individually for each student and parent (Appendix C and Appendix D). The ? (cannot say) Validity Scale data were within acceptable limits but were deleted from any statistical consideration in the study. T-scores were used in the analysis of code-types and because data were combined from both sexes. The K-corrected raw scores were transformed to T-scores from the conversion tables found in Appendix E and Appendix F for the respective scales.

Results

A three way analysis-of-variance was used to analyze data between students and parents. The three main effects were Scales (Validity, Clinical and Research), sex (male and female), and subjects (student, mother and father). All computations are based on K-corrected raw scores converted to T-scores in the three ANOVAs which tested Hypo-

thesis I: There are no significant differences between high school students' and their parents' MMPI scores using the Validity, Clinical and Research Scales.

Table 1 presents data from a 3x2x3 analysis-of-variance factorial design using the Validity Scales.

TABLE 1
ANALYSIS OF VARIANCE BETWEEN PARENTS AND
STUDENTS ON VALIDITY SCALES

Source	SS	df	MS	F	p
TOTAL	31735.9885	359			
Validity Scales (V)	3607.67236	2	1803.84	23.857	.001
Males (M) vs Females (F)	160.000	1	160.00	2.12	NS
Student (S) vs Mother (Mo) vs Father (Fa)	10.555	2	5.278	.0698	NS
V x M, F	202.82	2	101.41	1.341	NS
V x S, Mo, Fa	1216.61	4	304.153	4.0227	.005
M, F x S, Mo, Fa	100.07	2	50.333	.6617	NS
V x M, F x S, Mo, Fa	579.966	4	144.99	1.9176	NS
ERROR	25858.2993	342	75.60906		

While there were significant mean differences among the three Validity Scales ($L = 47.68$, $F = 55.3$ and $K = 55.71$), there were no significant differences between students, mothers and fathers.

Hypothesis I: There are no significant differences between high school students' and their parents' MMPI scores using the Validity Scales was not rejected.

A significant interaction was present between the three Validity

Scales and the three subject classifications. The mean T-scores for the subjects on the three Validity Scales are as follows:

	L scale	F scale	K scale
students	46.8	58.33	50.48
mothers	48.7	52.43	55.23
fathers	47.53	55.15	52.43

All the subjects lowest mean score was on the L scale. Students and fathers highest mean score was on the F scale whereas mothers highest mean score was on the K scale.

A 10x2x3 analysis-of-variance factorial design using the Clinical Scales is listed in Table 2.

TABLE 2
ANALYSIS OF VARIANCE BETWEEN PARENTS AND
STUDENTS ON CLINICAL SCALES

Source	SS	df	MS	F	p
TOTAL	153460.806	1199			
Clinical Scales (C)	5025.11621	9	558.346246	4.722	.001
Males (M) vs Females (F)	305.014648	1	305.014648	2.5798	NS
Student (S) vs Mother (Mo) vs Father (Fa)	1621.65039	2	810.825195	6.8580	.005
C x M, F	1439.02539	9	159.89171	1.3523	NS
C x S, Mo, Fa	6536.6709	18	364.148383	3.0715	.001
M, F x S, Mo, Fa	2032.07715	2	1016.03857	8.5938	.001
C x M, F x S, Mo, Fa	1720.2041	18	95.5668945	.8083	NS
ERROR	134781.047	1140	118.228988		

A 10 X 2 X 3 analysis-of-variance factorial design using the Clinical Scales is listed in Table 2. This analysis revealed significant mean differences among the Clinical Scales (H = 54.66, D = 52.48, Hy = 55.88, Pd = 57.6, Mf = 52.08, Pa = 55.47, Pt = 55.16, Sc = 55.81, Ma = 58.49 and Si = 52.5) and significant mean differences among students (55.63), mothers (53.39) and fathers (56.03). The students performance on the MMPI differed from the mothers and fathers. Hypothesis I: There are no significant differences between high school students and their parents MMPI scores using the Clinical Scales was rejected.

There was a significant interaction between the Clinical Scales and the subject classifications. The mean T-scores for the subjects on the ten Clinical Scales are as follows:

	Hy	D	Hs	Pd	Mf
students	52.75	50.05	52.95	59.00	53.05
mothers	53.88	51.98	57.10	54.90	45.23
fathers	57.35	54.40	57.60	58.90	57.98
	Pa	Pt	Sc	Ma	Si
students	58.28	56.43	58.83	63.50	51.43
mothers	54.35	53.78	54.40	54.90	53.35
fathers	53.78	55.28	54.20	57.08	52.73

The students highest mean scores were on the Pd, Pa, Pt, Sc and Ma scales and the lowest mean scores were on the Hy, D, Hs and Si scales. The fathers highest mean scores were on the Hy, D, Hs and the Mf scales and the lowest mean score was on the Pa scale. The fathers and mothers had similar mean T-scores on the Hs and Sc scales. The mothers highest

mean score was on the Si scale and the lowest mean scores were on the Pd, Mf, Pt and Ma scales.

There was a significant interaction between the sex factor and the three subject classifications. The means for male families were students (57.97), mothers (52.86) and fathers (55.73) and for the female families were subjects (53.29), mothers (53.91) and fathers (56.33). Students in the male families had higher means than students in the female families.

Table 3 presents a summary of a 10x2x3 analysis-of-variance performed on the Research Scales.

TABLE 3
ANALYSIS OF VARIANCE BETWEEN PARENTS AND
STUDENTS ON RESEARCH SCALES

Source	SS	df	MS	F	p
TOTAL	118619.299	1199			
Research Scales (R)	7712.02539	9	856.89171	9.5609	.001
Males (M) vs Females (F)	74.5019531	1	74.5019531	.8312	NS
Student (S) vs Mother (Mo) vs Father (Fa)	866.608398	2	433.304199	4.8346	.01
R x M, F	1049.15723	9	116.573025	1.3006	NS
R x S, Mo, Fa	4390.14551	18	243.896973	2.7213	.005
M, F x S, Mo, Fa	501.605469	2	250.802734	2.7983	NS
R x M, F x S, Mo, Fa	1853.70801	18	102.983778	1.1490	NS
ERROR	102171.547	1140	89.62416		

Significant mean differences were found among the Research Scales (A = 48.19, R = 51.88, Es = 52.87, Ca = 52.08, Dy = 49.60, Do = 55.08, Re = 50.74, Pr = 48.90, St = 55.80 and Cn = 48.5) and significant mean differences among the students (51.48), mothers (50.25) and fathers (52.32). The students performance on the MMPI differed from their mothers and their fathers. Hypothesis I: There are no significant differences between high school students' and their parents' MMPI scores using the Research Scales was rejected.

A significant interaction was found between Research Scales and the subject classifications. The mean T-scores for the stubjects on the Research Scales are as follows:

	A	R	Es	Ca	Dy
students	51.28	48.38	52.10	53.58	51.25
mothers	45.68	51.65	52.85	49.58	47.15
fathers	47.65	55.60	53.65	53.08	50.30
	Do	Re	Pr	St	Cn
students	53.20	47.05	51.18	55.10	51.68
mothers	56.48	52.38	45.95	56.45	44.40
fathers	55.55	52.80	49.45	55.73	49.43

The students had the highest mean scores on the A, Ca, Dy, Pr and Cn scales and lowest mean scores on the R, Es, Do, Re and St scales. The mothers had the highest mean scores on the the Do and St scales and lowest mean scores on the A, Ca, Dy, Pr and Cn scales. The fathers highest mean scores were on the R, Es and Do scales but had no lowest mean scores when compared with the mothers and students.

A 2 X 2 analysis-of-variance factorial design was used to analyze

data between parents of male students (Male Parents) and parents of female students (Female Parents) on all MMPI scales. K-corrected raw MMPI scale scores converted to T-scores were used in these analyses. These analyses tested Hypothesis II: There are no significant differences in MMPI scores between parents of male students and parents of female students using the Validity, Clinical and Research Scales.

A summary table of the mean scores for the twenty-three separate analyses are shown in Appendix G. There were no significant differences between parents of male students and parents of female students among the three Validity Scales, therefore Hypothesis II was not rejected for the Validity Scales. There was statistical significance on one Clinical Scale, the Mf scale and three Research Scales, the R, Pr and Cn scales. Hypothesis II was rejected for the Clinical and Research Scales.

The analysis-of-variance between male parents and female parents on the Mf scale is presented in table 4. There was a significant mean difference ($p < .001$) between mothers (45.23) and fathers (57.98). Fathers had a higher mean T-score on the Mf scale than mothers.

TABLE 4

ANALYSIS-OF-VARIANCE BETWEEN MALE PARENTS AND
FEMALE PARENTS ON THE Mf SCALE

Source	SS	df	MS	F	p
TOTAL	8913.19989	79			
Males vs Female	28.80	1	28.80	.40	NS
Mothers vs Fathers	3251.25	1	3251.25	44.90	.001
Interaction	130.05	1	130.05	1.79	NS
Error	5503.09	76	72.40		

The cell means for the parents on the Mf scale were as follows:

SEX		PARENT	
Males	Females	Fathers	Mothers
N = 40	N = 40	N = 40	N = 40
52.2	51	57.98	45.23
Male X Parent		Female X Parent	
Male Mothers	Male Fathers	Female Mothers	Female Fathers
47.1	57.3	43.35	58.65

The analysis-of-variance between male parents and female parents on the R scale is shown in table 5. There was a significant mean difference ($p < .02$) between mothers (51.6) and fathers (55.6). Fathers had a higher mean T-score on the R scale than mothers.

TABLE 5

ANALYSIS OF VARIANCE BETWEEN MALE PARENTS AND
FEMALE PARENTS ON THE R SCALE

Source	SS	df	MS	F	p
TOTAL	4663.20	79			
Males vs Female	54.45	1	54.45	.98	NS
Mothers vs Fathers	319.99	1	319.99	5.75	.02
Interaction	61.25	1	61.25	1.10	NS
Error	4227.50	76	55.62		

The cell means for the parents on the R scale were as follows:

SEX		PARENT	
Males	Females	Fathers	Mothers
N = 40	N = 40	N = 40	N = 40
54.43	52.78	55.6	51.6
Male X Parent		Female X Parent	
Male Mothers	Male Fathers	Female Mothers	Female Fathers
53.3	55.55	49.9	55.65

Table 6 depicts an analysis-of-variance between male parents and female parents on the Pr scale. There was a significant mean difference ($p < .05$) between males (45.48) and females (49.93). Females had a higher mean T-score on the Pr scale than males.

TABLE 6
ANALYSIS OF VARIANCE BETWEEN MALE PARENTS AND
FEMALE PARENTS ON THE Pr SCALE

Source	SS	df	MS	F	P
TOTAL	7062.80	79	7062.80		
Males vs Female	396.05	1	396.05	4.70	.05
Mothers vs Fathers	245.00	1	245.00	2.90	NS
Interaction	14.45	1	14.45	.17	NS
Error	6407.30	76	84.31		

The cell means for the parents on the Pr scale were as follows:

SEX		PARENT	
Males	Females	Fathers	Mothers
N = 40	N = 40	N = 40	N = 40
45.48	49.93	49.45	45.95
Male X Parent		Female X Parent	
Male Mothers	Male Fathers	Female Mothers	Female Fathers
44.15	46.8	47.75	52.1

The analysis-of-variance between male parents and female parents on the Cn scale is shown in table 7. There was a significant difference ($p < .02$) between mothers (44.4) and fathers (49.35). Fathers had a higher mean T-score on the Cn scale than mothers.

TABLE 7

ANALYSIS OF VARIANCE BETWEEN MALE PARENTS AND
FEMALE PARENTS ON THE Cn SCALE

Source	SS	df	MS	F	p
TOTAL	9340.75	79			
Males vs Female	26.45	1	26.45	.23	NS
Mothers vs Fathers	490.05	1	490.05	4.22	.05
Interaction	1.25	1	1.25	.01	NS
Error	8822.99	76	116.09		

The cell means for the parents on the Cn scale were as follows:

SEX		PARENT	
Males	Females	Fathers	Mothers
N = 40	N = 40	N = 40	N = 40
46.3	47.45	49.33	44.4
Male X Parent		Female X Parent	
Male Mothers	Male Fathers	Female Mothers	Female Fathers
43.7	48.9	45.1	49.8

Mean scores on each of the Validity, Clinical and Research Scales were calculated using K-corrected raw scores, converted to T-scores for the same-sex (mother-daughter and father-son) and different-sex (mother-son and father-daughter) analyses. The significance of the difference of the means were analyzed by a paired t-test. Same-sex analyses tested Hypothesis III: There are no significant differences between mother-daughter and father-son MMPI scores using the Validity, Clinical and Research Scales.

The paired t-test comparisons for mothers and daughters are listed in table 8. The comparisons resulted in no significant differences for

same-sex females among the Validity, Clinical and Research Scales.

Hypothesis III was not rejected for mothers and daughters.

TABLE 8

MMPI Scale Means, Standard Deviations and
Tests of Differences For Mothers and Daughters

MMPI SCALES	Mothers N = 20		Daughters N = 20		t	p
	M	SD	M	SD		
Validity						
L	48.0	7.27	48.0	5.42	0	NS
F	51.75	8.10	53.95	6.38	1.14	NS
K	53.15	9.35	50.9	5.78	1.22	NS
Clinical						
Hs	54.75	9.90	51.25	6.73	1.33	NS
D	53.05	10.30	48.05	9.16	1.56	NS
Hy	57.7	10.78	53.55	7.32	1.28	NS
Pd	54.7	10.13	57.6	12.50	.89	NS
Mf	43.35	6.00	45.8	7.78	1.18	NS
Pa	53.25	7.87	54.65	8.99	.54	NS
Pt	55.2	9.88	54.65	8.37	.18	NS
Sc	55.15	11.20	53.5	7.42	.52	NS
Ma	56.75	10.91	64.25	13.95	1.40	NS
Si	53.85	15.02	51.05	8.85	.73	NS
Research						
A	47.5	8.94	49.7	7.56	.98	NS
R	49.9	8.94	45.3	9.07	1.83	NS
Es	50.9	8.28	53.25	9.40	.77	NS
Ca	50.9	8.81	51.75	8.30	.33	NS
Dy	49.55	8.91	49.6	7.25	.02	NS
Do	55.55	11.19	52.15	9.37	1.01	NS
Re	53.45	10.01	47.45	8.08	1.98	NS
Pr	47.75	11.18	50.2	5.73	1.05	NS
St	55.75	9.57	54.45	10.95	.47	NS
Cn	45.1	8.44	49.55	12.20	1.53	NS

Table 9 presents t-test comparisons for fathers and sons. Same-sex male comparisons yielded no significant differences among the Validity Scales. Hypothesis III was not rejected for fathers and sons using the Validity Scales. There were four significant differences among the Clinical Scales: Hs scale, Hy scale, Pa scale and Sc scale. The mean Hs and Hy scores were higher ($p < .02$) for fathers than for sons, where-

as sons had a higher ($p < .02$) mean Pa score than fathers. The mean Sc score was higher ($p < .01$) for sons than for fathers. The t-test comparisons resulted in three significant differences among the Research Scales: A scale, R scale and Re scale. The fathers mean R and Re scores were higher ($p < .01$) than the sons mean score. The mean A score was higher ($p < .01$) for the sons than the fathers. Hypothesis III was rejected for the fathers and sons using the Clinical and Research Scales.

TABLE 9

MMPI Scale Means, Standard Deviations and
Tests of Differences For Fathers and Sons

MMPI SCALES	Fathers N = 20		Sons N = 20		t	p
	M	SD	M	SD		
Validity						
L	47.6	5.90	45.9	4.99	1.10	NS
F	44.0	10.25	62.7	18.52	1.63	NS
K	52.2	10.84	50.05	6.66	.95	NS
Clinical						
Hs	59.6	12.58	52.35	6.50	2.50	.02
D	55.8	12.11	52.05	14.12	.86	NS
Hy	59.6	12.58	52.35	6.51	2.61	.02
Pd	58.75	11.93	60.4	14.25	.56	NS
Mf	57.3	8.90	60.3	7.09	1.06	NS
Pa	53.75	9.40	61.9	15.04	2.80	.02
Pt	54.0	13.16	58.2	17.87	1.22	NS
Sc	54.2	11.91	64.15	19.90	2.89	.01
Ma	56.75	10.91	64.25	13.95	2.04	NS
Si	51.25	12.49	51.8	8.35	.18	NS
Research						
A	45.45	10.35	52.85	10.86	3.61	.01
R	55.55	5.69	51.45	3.65	3.20	.01
Es	50.9	8.29	53.25	9.40	.77	NS
Ca	51.3	11.77	55.4	11.78	1.32	NS
Dy	49.1	11.64	52.9	13.53	1.37	NS
Do	58.45	8.47	54.25	9.62	1.26	NS
Re	55.55	8.64	46.65	9.99	3.52	.01
Pr	46.8	9.10	52.15	11.56	1.63	NS
St	56.75	7.92	55.75	8.65	.37	NS
Cn	48.9	11.08	53.8	6.75	1.90	NS

TABLE 10

MMPI Scale Means, Standard Deviations and
Tests of Differences For Fathers and Daughters

MMPI SCALES	Fathers N = 20		Daughters N = 20		t	p
	M	SD	M	SD		
Validity						
L	47.45	6.21	48.0	5.41	.32	NS
F	55.2	7.23	53.95	6.39	.53	NS
K	52.65	8.15	50.9	5.78	.94	NS
Clinical						
Hs	58.85	11.42	51.25	6.73	2.40	.05
D	55.0	11.46	48.05	9.16	2.58	.02
Hy	55.6	9.30	53.55	7.32	.81	NS
Pd	59.05	11.75	57.6	12.50	.40	NS
Mf	58.65	10.06	45.8	7.78	4.32	.001
Pa	53.8	8.85	54.65	8.99	.32	NS
Pt	56.55	9.68	54.65	8.37	.76	NS
Sc	54.2	9.97	53.5	7.42	.23	NS
Ma	57.4	13.37	62.75	15.31	1.49	NS
Si	54.2	9.16	51.05	8.85	1.32	NS
Research						
A	49.85	10.77	49.7	7.46	.07	NS
R	55.65	5.99	45.3	9.07	5.27	.001
Es	52.0	9.40	53.25	9.40	.41	NS
Ca	54.85	9.99	51.75	8.30	1.58	NS
Dy	51.5	9.35	49.6	7.24	.79	NS
Do	52.65	8.54	52.15	9.37	.20	NS
Re	50.05	10.73	47.45	8.08	.76	NS
Pr	52.1	8.31	50.2	5.93	1.05	NS
St	54.45	10.17	54.45	10.95	0	NS
Cn	49.8	12.22	49.55	12.20	.14	NS

Different-sex analyses tested Hypothesis IV: There are no significant differences between father-daughter and mother-son MMPI scores using the Validity, Clinical and Research Scales. Table 10 depicts t-test comparisons for fathers and daughters. The different-sex comparisons yielded no significant differences among the Validity Scales. Hypothesis IV was not rejected for fathers and daughters using the Validity Scales. There were three significant differences among the Clinical Scales: the Hs scale, D scale and Mf scale. The mean Hs ($p < .05$), D ($p < .02$) and Mf ($p < .001$) scores were higher for fathers than for

daughters. There was one significant difference in one of the Research Scales, the R scale. The mean R score ($p < .001$) was higher for fathers than for daughters. Hypothesis IV was rejected for fathers and daughters using the Clinical and Research Scales.

TABLE 11

MMPI Scale Means, Standard Deviations and
Tests of Differences For Mothers and Sons

MMPI SCALES	Mothers N = 20		Sons N = 20		t	p
	M	SD	M	SD		
Validity						
L	49.55	6.19	45.6	5.16	2.60	.02
F	53.1	11.42	62.7	18.53	2.74	.02
K	57.3	7.63	50.05	6.66	3.32	.01
Clinical						
Hs	53.0	9.46	54.25	11.47	.41	NS
D	50.9	7.73	52.05	14.12	.32	NS
Hy	56.5	7.13	52.35	6.50	2.16	.05
Pd	55.1	10.30	60.4	14.25	2.11	.05
Mf	47.1	8.55	60.3	7.08	4.92	.001
Pa	55.45	9.04	61.9	15.04	1.74	NS
Pt	52.35	9.84	58.2	17.87	1.54	NS
Sc	53.65	6.95	64.15	19.90	2.37	.05
Ma	51.7	10.19	64.25	13.95	3.05	.01
Si	52.85	10.02	51.8	8.35	.40	NS
Research						
A	43.8	7.28	52.85	10.86	2.85	.02
R	53.4	8.62	51.45	3.65	1.23	NS
Es	54.8	10.24	50.95	10.45	1.44	NS
Ca	48.25	8.40	55.4	11.78	2.83	.02
Dy	44.75	8.02	52.9	13.53	2.30	.05
Do	57.4	8.14	34.25	9.62	1.14	NS
Re	51.3	10.30	46.65	9.99	1.99	NS
Pr	44.15	7.77	52.15	11.56	2.56	.05
St	57.15	8.75	55.75	8.65	.56	NS
Cn	43.7	11.00	53.8	6.75	3.23	.01

The mother-son comparisons are presented in Table 11. There were significant differences among all three of the Validity Scales. The mean L score was higher ($p < .02$) for mothers than for sons, whereas the mean F score was higher ($p < .02$) for sons than mothers. The mothers

mean K score was higher ($p < .01$) than the sons scores. There were significant differences among five Clinical Scales, the Hy scale, Pd scale, Mf scale, Sc scale and Ma scale. The mean Pd ($p < .05$), Mf ($p < .001$), Sc ($p < .05$) and Ma ($p < .01$) scores were higher for sons than for mothers. The mean Hy score was higher ($p < .05$) for mothers than for sons. There were five significant differences among the Research Scales, the A scale, Ca scale, Dy scale, Pr scale and Cn scale. The mean A ($p < .02$), Ca ($p < .02$), Dy ($p < .05$), Pr ($p < .05$) and Cn ($p < .01$) scores were higher for sons than for mothers. Hypothesis IV was rejected for mothers and sons using the Validity, Clinical and Research Scales.

Other Findings

MMPI profiles with at least one Clinical Scale elevated to or above the T-score of 70 were tallied to determine an index of disturbance. The forty families were divided into two groups based on T-score of 70, the usual cutting score indicating abnormal responses on one or more of the Clinical Scales. Group I had T-score(s) below 70 and Group II had T-score(s) of 70 or above. There were twelve families in Group I and twenty-eight families in Group II. Group I contained nine families of male students and three families of female students. Group II contained eleven families of male students and seventeen families of female students.

Of the twenty-eight three member families who had elevated T-scores, a total of nine fathers, five mothers and seven male students were found in the male families, whereas a total of thirteen fathers, ten mothers and twelve female students were found in the female families. One hundred and twenty subjects participated in this study, fifty-six subjects

had elevated T-scores, 39.3 percent were fathers, 26.8 percent were mothers and 33.9 percent were students.

The Ma scale was present in 86.2 percent of the MMPI protocols in group II (94.1 percent of the female families and 86.2 percent of the male families). The Pd scale appeared in 62.1 percent of the MMPI protocols (100 percent of the male families: male students 54.5 percent, mothers 9.1 percent, and fathers 36.4 percent) and 41.2 percent of the female families.

The mean profiles of the Validity and Clinical Scales for the students and the parents are presented in Appendix H. None of the means for any of the subjects exceeded a T-score of 70. Mean T-scores for the students and parents are listed in Appendix J. The highest Clinical Scale was the Hy scale for male mothers and male fathers. Female mothers, male students and female students highest mean T-score was on the Ma scale. Female fathers had three highest mean T-scores on the Hs scale, Pd scale and Mf scale.

The highest Validity Scale mean T-score was the F scale for female mothers, female fathers, female students, male students and male fathers. Male mothers highest mean T-score was the K scale. Male mothers, male fathers, and female fathers showed more general elevations on the neurotic (left) side of the MMPI profile, whereas female students, male students, and female mothers had more elevations on the psychotic (right) side.

The mean profile of the Research Scales for the students and parents are presented in Appendix I. None of the means exceeded a T-score of 60. The highest Research Scale was the St scale for the female students, male students and male fathers. Male mothers and female mothers

had two highest T-scores on the St scale and Do scale. Female fathers highest T-score was on the R scale.

An additional technique was used for evaluating and comparing individual MMPI profiles by the determination of code types. In the procedure, the relative frequencies with which each Clinical Scale appeared as the highest and second highest T-score was computed. The Clinical Scale having the highest T-score would be placed first in the code and the remainder of the Clinical Scales are ranking in descending order according to the obtained T-score. The pattern is indicated without regard to level of score elevation. Each MMPI profile was coded in such a high and second highest two-point code type.

Table 12 illustrates the frequency shown in parentheses and the highest T-score values for each student and parent. The highest T-score obtained by the male students was on the Mf scale (5). The highest T-score for the male mothers was obtained on the Pd scale (4). Male Fathers obtained three highest T-scores: the Hy scale (3), Mf scale (5) and Ma scale (9). The Ma scale (9) was the highest T-score for the female students, female mothers and female fathers.

The second highest T-score in the individual profiles is shown in Table 13. Male student's second highest mean T-score was the Sc scale (8), Male mothers was the Mf scale (5) and the Pd scale (4) for the Male fathers. The female students' second highest T-score was the Pd scale (4), the Hs scale (3) for the female mothers and the Mf scale (5) for the female fathers. The resulting two-point codes of the one hundred and twenty subjects were as follows: female students 9-4; male students 5-8; female mothers 9-3; male mothers 4-5; female fathers 9-5; and male fathers 3-4, 5-4 and 9-4.

MMPI Clinical Scales		Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
<u>Male</u>											
Students											
	(0)	(0)	(0)	(0)	(2)	(8)	(3)	(2)	(2)	(6)	(1)
	0	0	0	0	76	65 61 *63	88	69	88	58 *63	*63
					86	61 67 *63	91	*62	105	75 *63	
						61 69	*62			78 63	
Mothers											
	(2)	(0)	(4)	(5)	(1)	(3)	(3)	(1)	(0)	(4)	(2)
	72	0	63 63	67 57	55	65	65	68	0	68 75	55
	78		64	79 *55		*56	*56			58	65
			*56	69		70				*55	
Fathers											
	(2)	(2)	(4)	(1)	(3)	(3)	(0)	(1)	(1)	(4)	(1)
	70	77	86 71	74	67 65	67 65	0	81	69	75 65	56
	75	65	58 60		69					58 60	
<u>Females</u>											
Students											
	(0)	(1)	(1)	(3)	(1)	(1)	(1)	(2)	(1)	(8)	(3)
	0	57	*54	67	55	55	65	74	57	70 88 60	67
				74				61		83 73 75	*54
				81						68 98	74
Mother											
	(0)	(2)	(3)	(2)	(0)	(1)	(1)	(2)	(2)	(6)	(2)
	0	65	66	57	0	65	65	74	80	73 73	56
		76	61	62				63	84	60 75	81
			79							73 63	
Fathers											
	(3)	(0)	(0)	(5)	(2)	(2)	(1)	(2)	(1)	(6)	(1)
	67	0	0	69 71			70	62	74	81 78	75
	98			*60 68				81		70 60	
	59			81						81 *60	

Note: * Indicates tie scores (same T-score value for two or more scales).
 Parentheses () indicates frequency of T-score Value for each scale.

MMPI Clinical Scales		Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
<u>Male</u>											
Students											
	(1)	(0)	(1)	(4)	(1)	(3)	(2)	(5)	(2)	(2)	(2)
	62	0	53	*69 76	59	56	56	85 *69	68	66	
				60 86		94	58	59 61	86	52	
						59		74			
Mothers											
	(0)	(2)	(2)	(3)	(4)	(3)	(1)	(2)	(2)	(1)	(2)
	0	63	70	60 50	59 55	59	76	63	58	53	
		55	68	62	49 63	62		51		72	
Fathers											
	(1)	(3)	(5)	(5)	(2)	(1)	(1)	(1)	(1)	(2)	(4)
	65	53	58 *60	74 *64	59	67	83	65	*60	*64 48	
		*58	*51 *57	*57 *53	69				*53	*51 *58	
		63	*58	53							
<u>Females</u>											
Students											
	(1)	(2)	(3)	(7)	(0)	(0)	(4)	(2)	(2)	(6)	(2)
	*50	*55	*63	*55 57 79	0	0	*55 63	*55	*55 60	*56	
		67	73	64 65 69			*50 *56	67	45 68	60	
			64	55				*63 53			
Mother											
	(3)	(0)	(7)	(1)	(0)	(1)	(1)	(2)	(2)	(3)	(2)
	52	0	57 56 64	64	0	59	76	67	55	62	
	60		59 68 59					60	75	75	
	70		66						65		
Fathers											
	(1)	(3)	(3)	(3)	(5)	(1)	(1)	(3)	(3)	(3)	(1)
	65	63	*60	55	67 *69	*76	*64	46	*60	*56	
		*56	75	57	69 78		73	*69	73		
		58	55	*76	65			*64	58		

Note: * Indicates tie scores (same T-score value for two or more scales).
 Parentheses () indicates frequency of T-score Value for each scale.

Hypotheses Testing

The statement of the null hypotheses with the disposition for each are as follows:

Hypothesis I. There are no significant differences between high school students' and their parents' MMPI scores using the Validity, Clinical and Research Scales.

There were no significant differences between students' and parents' MMPI scores using the Validity Scales. Hypothesis I was not rejected for the Validity Scales. There were significant mean differences ($p < .005$) between students and parents using the Clinical Scales. There were significant mean differences ($p < .01$) between students and parents using the Research Scale. Hypothesis I was rejected using the Clinical and Research Scales.

Hypothesis II. There are no significant differences in MMPI scores between parents of male students and parents of female students using the Validity, Clinical and Research Scales.

There were no significant mean differences between male parents and female parents using the Validity Scales. Hypothesis II was not rejected using the Validity Scales. There were statistical significances on one Clinical Scale (the Mf scale) and three Research Scales (R, Pr and Cn scales). Hypothesis II was rejected for the Clinical and Research Scales.

Hypothesis III. There are no significant differences between mother-daughter and father-son MMPI scores using the Validity, Clinical and Research Scales.

There were no significant mean differences between mothers and daughters using the Validity, Clinical and Research Scales. Hypothesis

III was not rejected for mothers and daughters. There were significant mean differences between fathers and sons among the Clinical Scales (Hs, Hy, Pa and Sc scales) and the Research Scales (A, R and Re scales). Hypothesis III was rejected for fathers and sons using the Clinical and Research Scales.

Hypothesis IV. There are no significant differences between father-daughter and mother-son MMPI scores using the Validity, Clinical and Research Scales.

There were significant mean differences between fathers and daughters among the Clinical Scales (Hs, D and Mf scales) and the Research Scales (R scale). Hypothesis IV was rejected for fathers and daughters using the Clinical and Research Scales. There were significant mean differences between mothers and sons among the Validity Scales (L, F, and K scales), Clinical Scales (Hy, Pd, Mf, Sc and Ma scales) and Research Scales (A, Ca, Dy and Cn scales). Hypothesis IV was rejected for mothers and sons using the Validity, Research and Clinical Scales.

Summary

The results of this study have shown that there are significant differences between parents and students using the Clinical and Research Scales. Parents of male students and parents of female students had significant mean differences among the Clinical and Research Scales. Same-sex comparisons revealed no significant differences between mothers and daughters, whereas fathers and sons had significant differences among the Clinical and Research Scales. Different-sex comparisons yielded significant mean differences between fathers and daughters among the Clinical and Research Scales. Mother-son comparisons had significant mean differences among the Validity, Clinical and Research Scales.

CHAPTER V

Discussion and Conclusions

The purpose of the study was to compare the MMPI scores of graduating high school seniors and their parents to address several pertinent issues in parent-child research. Sopchak (1958) postulated twenty-five years ago that males identify more with their fathers than with their mothers, while females identify more with their mothers than with their fathers. This quarter century has had significant changes in previously held masculine-feminine stereotypes and a blurring of sex roles. It would be anticipated because of these changes a transition from same-sex to different-sex identification would be demonstrated in a study which utilized a normal population. In this study, normal was defined as attainment of average intelligence, average development and freedom from a mental disorder (Tabor, 1970). The subjects had no previous history of referral, diagnosis or treatment for any psychological problems. In addition, the students had average grades or better (minimum of a C average) and normal grade placement (no retention or accelerated advancement). The forty families were intact at the time of testing. This researcher was unable to find any studies with the exception of Sopchak (1958), which examined normal parents and their adolescent-children using the MMPI.

The mother-daughter comparisons yielded no significant differences between the females. The mothers and daughters had very similar MMPI scale means. This finding is consistent with Sopchak's (1958) research which determined the relationship between MMPI scores for college students and their parents. The data suggests that daughters between the ages of 17 to 20 years model their mothers more than their fathers. Therefore, it

can be concluded that mothers of females play a major role in the development of their daughters personalities.

The father-son comparisons showed differences among four Clinical Scales Hs, Hy, Pa, Sc and three Research Scales, A, R, Re. Fathers scored higher on the Hs, Hy, R and Re scales, whereas sons scored higher on the Pa, Sc and A scales. No father-son differences were found on the Validity Scales. The following descriptive statements can be made about the fathers and sons based upon the data found in the male comparisons. The fathers express more physical complaints, avoid dealing with psychological difficulties and may manipulate others as compared to the sons. Generally, the fathers appear formal and conventional. They are comfortable with authority, usually avoid taking risks and use denial and rationalization as coping mechanisms. The sons are more sensitive to what others think of them, lack self-confidence and are dependent in interpersonal relationships. In addition, the sons tend to become easily upset, are pessimistic and can be described as nonconforming. The sons have a wide range of activities and approach problems in a creative manner.

The father-daughter comparisons yielded differences on three Clinical Scales, Hs, D, Mf and one Research Scale, the R scale. No father-daughter differences were found on the Validity Scales. The fathers scored higher on all the scales as compared to the daughters. From this data the following interpretative statements can be made about the fathers and daughters. The fathers tend to be irritable and depressed. They react to stress with physical symptoms i.e. headache, backache, etc., and may be whiny and complaining. The daughters tend to be optimistic, outgoing and cheerful. Generally, the daughters have a willingness to be open and disclosing to others as compared to the fathers, who are more guarded about disclosing information. The fathers have a wide range of interests, es-

pecially aesthetic ones, while the daughters tend to be interested in traditional feminine and domestic activities.

The mother-son comparisons yielded a total of thirteen differences between the mothers and sons. There were differences on all the Validity Scales, five Clinical Scales, Hy, Pd, Mf, Sc, Ma and five Research Scales A, Ca, Dy, Pr, Cn. The mothers scored higher on the L, K, Hy scales as compared to the sons who scored higher on the F, Pd, Mf, Sc, Ma, A, Ca, Dy, Pr, Cn scales. The following interpretative information about the mothers and sons is based upon data found in the different-sex comparisons.

The mothers and sons are willing to admit to general human faults. The sons tend to be worried about some area in their life whereas the mothers expressed no such concerns and function effectively in most situations. The mothers express some bodily concerns, seldom show dissatisfaction with authority figures and are interested in the traditional feminine activities. The sons indicate concern about the social problems of the world, have a wide range of interests, especially aesthetic ones and tend to think somewhat differently than others. In addition, the sons have a high energy level and are involved in many projects which they usually complete. Lastly, mothers were not consciously anxious, are independent of others, have a positive view of the world and are open to alternative points of view. In contrast, the sons had more anxiety, are less tolerant of other's opinions, views or beliefs and appear unemotional and over controlled.

Overall, the results have shown significant mean differences between the parents and students using the traditional MMPI scales supplemented with the Research Scales. There were only two Clinical Scales (Pt, Si) and three Research Scales (Es, Do, St) which did not yield differences in

the same-sex and different-sex comparisons between parents and students. This particular finding is difficult to interpret; researchers may need to investigate this finding in future parent-child studies. The Clinical and Research Scales consistently yielded significant mean differences between parents and students. It is interesting to note in only one analysis, the mother-son comparisons, significant mean differences were found on all three Validity Scales. The Clinical Scales had slightly more significant mean differences than the Research Scales.

The comparison between parents of male students and parents of female students yielded differences on one Clinical Scale, *Mf* and three Research Scales, *R*, *Pr*, *Cn*. The data suggests that as a group, the fathers had more conscious repression of feelings, tends to be rigid in their beliefs, appear overcontrolled and somewhat unemotional as compared to the mothers. Parents of female students were less tolerant of opinions which differ from their own. In addition, these parents may have difficulty expressing feelings and personal warmth. Parents of males were more guarded about discussing personal information, expressed health concerns and used denial frequently.

There were more significant differences between male students and both their fathers and mothers as compared with female students. Generally, parents of male students were more similar in MMPI scale scores to one another as compared to the student's scores. The male students obtained the highest number of elevated mean scale scores, especially on the Clinical Scales.

Of the one hundred and twenty subjects who participated in this study, fifty-six individuals (46.7%) had elevated T-scores: twenty-two were fathers (39.3%), fifteen were mothers (26.8%) and nineteen were students (33.9%). Eighty-five percent of the female families (father,

mother, female student) and fifty-five percent of the male families (father, mother, male student) had a T-score of 70 or above on at least one Clinical Scale. There was a predominance of fathers with elevated T-scores for both male and female students. Parents obtained more T-score elevations than the students. Moreover, there were almost twice as many female families with elevated T-scores as compared with the male families. Overall, male mothers, male fathers and female fathers showed more general elevations on the neurotic (left) side of the MMPI profile, whereas female students, male students and female mothers had more elevations on the psychotic side.

These findings are difficult to interpret but the data suggests that in a normal population there is a tendency for fathers to have elevated T-scores (70 or above) on at least one Clinical Scale. When a student of either sex obtains an elevated T-score it is very likely that one parent will also have an elevated T-score. It should be noted that the Ma scale appeared in 86 percent of the protocols while the Pd scale was present in 62 percent of the elevated profiles. Welsh and Dahlstrom (1956) reported the Ma scale for both normal males and females is most commonly the highest Clinical Scale score.

The frequency of the Ma scale was also reflected in the determination of code-types for the parents and students. The resulting two-point code types for the one hundred and twenty subjects were: female students 9-4, male students 5-8, female mothers 9-3, male mothers 4-5, female fathers 9-5, and male fathers 3-4, 5-4, 9-4. Good and Brantner (1974) described high scoring Ma males as sociable, talkative, verbal, individualistic, adventurous and curious while normal females with high Ma scores are characterized as frank, courageous and idealistic. They reported "The question of normality does not relate directly to the elevation of the score but

rather to the quality of the overactivity" (p. 38). The authors further explain the ability to complete many tasks, projects and activities will determine the differences between normal and abnormal overactivity.

The findings in this study are consistent with the previous MMPI parent-child research (Sopchak 1952, 1958 and Archer, et.al., 1978) which reported that adolescents identify more with the parent of the same sex rather than the parent of the opposite sex. Thus it can be concluded that normal adolescent psychological functioning is related to modeling of parental personality characteristics of the same sex. This finding appears to be more significant for mothers and daughters rather than fathers and sons in a normal population.

RECOMMENDATIONS

There is a need for more studies which utilize normal populations in MMPI parent-child research. Future studies of mentally healthy parents and children should consider the following recommendations. The selection of subjects in parent-child research needs closer scrutiny. Development of code-types for normal parents based on age of their children. Further investigation of sex differences between normal pairs of parents and parents of male and female children is needed. Once base line data is obtained from mentally healthy parents and children, then comparisons can be made with deviant populations of parents. Inclusion of the three member family (father-mother-child) is imperative in future studies, especially with intact families. The Research Scales have been shown to be an essential component in MMPI research and should be utilized in parent-child studies.

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APPENDICES

APPENDIX A

INTRODUCTION TO THE STUDY

March - April 1983

Dear Parents and Students:

I am Nanette Martin, a graduate student at Pittsburg State University. During March and April, a study will be conducted to gain a better understanding of parent-child relationships. It is hoped that the information will be beneficial to others who work with children, parents and families. Students and both parents are being asked to participate in this study. Your participation will involve completion of a personality inventory, the MMPI. The inventory will take approximately 90 minutes to complete.

This study will not involve any cost to you or your family. Your name and your child's name will not be used. All test results will be kept confidential. Participation in this study is on a voluntary basis. If you would like to participate, I need your signature on these forms. Thank you for your cooperation.

Parent(s) Signature

Date

Phone Number

CONSENT FORM

I agree to participate in this study which will examine parent-child relationships. I have been informed of the nature, duration and purpose of the study. I give my permission to Nanette Martin to use the results of the MMPI and data sheets for research purposes. I have been informed that the data sheets and test results will be kept confidential. I understand that individual MMPI interpretations will be available to each participant upon request. I acknowledge that my participation is voluntary and that I have the right to withdraw from this study at any time.

Father's Signature

Date

Mother's Signature

Date

Student's Signature

Date

DATA SHEET

Family Name _____ Occupation _____
Father

Father

Mother

Age _____
Father _____

Father

Mother

Number of children in family _____

Student _____

Religious Preference _____

CIRCLE ONE

Family Position of Student: First born
Second born
Third born
Fourth born

Residence: Rural
Urban

Race: Black
White
Hispanic
American Indian
Asian

Parents: Adoptive
 Natural
 Divorced and remarried
 Widowed and remarried

Education Level:

Mother	Grade School	1	2	3	4	5	6	7	8
	High School	9	10	11	12				
	College	1	2	3	4				
	Graduate School	1	2	3	4				
Father	Grade School	1	2	3	4	5	6	7	8
	High School	9	10	11	12				
	College	1	2	3	4				
	Graduate School	1	2	3	4				

APPENDIX B

TEST INSTRUCTIONS

Part I

The questions you are about to answer are designed to help tell about your attitudes and feelings. They will provide information about parent-child relationships. Some of the questions may seem puzzling or strange to you. They were designed to be used with a wide variety of people. If you are unsure about the meaning of any question try to answer it as best you can. Do not ask for help, since the important thing is how you answer the questions. Your results are confidential. Write your name, address, age, test date, student's school, and designate either family of a son (Son-Family) or family of a daughter (Daughter-Family).

After the answer sheets have been scored, your name will be replaced by a number. All answer sheets will be known by only numbers, therefore your names will remain anonymous. Be sure to answer the questions rapidly but carefully. Do not spend too much time on one question - your first impression is best. You may withdraw from participation or refuse to complete this personality inventory at any time.

Part II

This inventory consists of numbered statements. Read each statement and decide whether it is true as applied to you or false as applied to you. You are to mark your answers on the answer sheet you have. If a statement is true or mostly true as applied to you, blacken between the lines in the column headed T. If a statement is false or not usually true as applied to you, blacken between the lines in the column headed F. If a statement does not apply to you or if it is something that you don't know about, make no mark on the answer sheet. Remember to give your own

opinion of yourself. Do not leave any blank spaces if you can avoid it. In marking your answers on the answer sheet, be sure that the number of the statement agrees with the number of the answer sheet. Make your marks heavy and black. Erase completely any answer you wish to change. Do not make any marks on this booklet. Remember, try to make some answer to every statement.

Part III

If you should have any questions or concerns after you complete the inventory, this investigator will be available to talk with you. A general explanation of your completed inventory is available to everyone in this study. Please place your name and phone number on the sign-up sheet when you have finished the test, if you want an individual interpretation. A follow-up contact will be made by this investigator one month from this date. If you have any questions in the interim, please contact me at 781-9307 after 6 p.m.

Sign-Up Sheet
For Individual Interpretations

Name

Phone Number

This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

APPENDIX C

Family	?	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
1. Mother	3	5	2	10	14	22	27	16	41	11	24	21	17	32
Father	0	3	6	12	21	17	28	27	28	8	29	23	20	25
Son	0	5	9	7	12	20	18	17	20	18	3	32	29	18
2. Mother	0	4	0	17	11	15	20	16	34	8	25	20	16	18
Father	0	3	1	12	11	18	15	15	21	8	20	17	15	31
Son	1	3	3	12	7	12	15	19	26	10	23	27	17	25
3. Mother	1	5	4	21	18	18	29	24	44	15	34	31	12	36
Father	2	2	9	12	12	33	26	27	28	15	38	33	8	48
Son	0	1	12	9	15	26	20	34	25	15	39	35	19	34
4. Mother	11	5	5	17	15	16	22	23	42	13	30	23	19	18
Father	0	4	3	20	13	17	22	21	29	8	23	26	21	15
Son	0	6	4	13	11	19	18	15	27	12	29	25	17	23
5. Mother	0	4	9	16	13	16	28	23	36	11	23	26	26	14
Father	0	2	9	12	9	18	14	21	30	10	25	30	29	20
Daughter	0	2	2	15	20	28	24	19	43	16	40	29	19	34
6. Mother	0	3	0	18	10	19	22	17	39	9	27	23	22	24
Father	0	8	6	16	14	20	18	23	17	6	22	23	21	23
Daughter	1	3	2	15	19	13	21	22	35	8	29	23	27	19
7. Mother	0	8	1	16	15	16	23	17	38	8	24	20	21	19
Father	0	3	6	9	12	14	18	21	17	7	23	22	28	24
Daughter	0	5	10	15	11	26	20	31	36	10	33	30	32	28
8. Mother	0	2	2	9	14	20	17	14	42	8	24	17	16	31
Father	0	1	7	12	11	19	15	23	17	8	29	19	16	31
Daughter	0	3	1	10	7	18	15	21	39	3	24	22	21	24

Family	?	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Sl
9. Mother	0	6	3	18	16	17	25	22	38	11	30	25	20	28
Father	0	4	2	18	13	16	20	27	24	8	25	23	20	30
Daughter	3	4	2	20	16	16	23	17	45	10	32	27	17	33
10. Mother	0	1	3	5	8	20	7	21	40	12	27	23	23	54
Father	0	1	10	8	11	25	24	30	22	17	38	32	21	28
Daughter	0	3	5	10	18	26	32	32	37	14	35	27	20	21
11. Mother	0	5	1	20	19	25	29	20	43	14	40	28	12	27
Father	10	3	1	17	17	21	26	25	24	11	30	23	14	31
Daughter	0	5	3	16	14	18	21	19	42	9	29	21	18	29
12. Mother	0	2	0	21	12	11	22	22	40	8	28	29	27	19
Father	0	3	1	21	13	13	22	22	26	9	23	23	21	21
Daughter	0	3	5	15	15	12	21	25	44	7	23	29	26	15
13. Mother	3	8	5	8	18	19	28	12	39	8	22	14	14	35
Father	1	6	4	11	16	22	17	27	27	8	25	19	17	34
Daughter	5	7	5	12	13	17	17	11	38	6	25	21	13	40
14. Mother	0	2	3	21	16	19	27	20	40	13	32	27	15	20
Father	0	3	11	6	17	13	21	10	28	9	28	35	26	32
Daughter	0	3	2	12	9	14	16	15	34	7	22	19	17	18
15. Mother	2	2	0	9	9	17	24	24	41	10	23	20	19	23
Father	0	4	4	17	14	13	19	22	22	10	22	20	17	25
Daughter	0	2	3	9	15	14	19	27	36	9	24	20	30	24
16. Mother	0	3	3	13	10	24	15	23	44	9	28	23	26	40
Father	0	5	2	15	17	19	8	21	23	15	23	21	11	30
Daughter	0	4	3	15	10	22	20	21	43	8	28	27	19	23

Family	?	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
17. Mother	0	5	7	15	23	27	27	21	44	8	29	29	26	22
Father	3	2	6	8	16	25	22	24	25	12	34	29	13	48
Daughter	2	3	5	13	15	21	19	19	35	11	33	27	15	47
18. Mother	13	0	14	9	15	27	23	29	36	12	41	42	19	35
Father	0	1	6	16	17	22	25	28	30	9	28	32	17	24
Daughter	0	7	10	9	12	21	26	18	41	13	29	26	22	24
19. Mother	0	3	5	13	11	22	23	27	41	11	30	25	18	31
Father	0	3	2	12	8	14	17	18	28	5	21	16	17	26
Son	0	4	3	15	11	17	17	23	26	7	26	20	15	30
20. Mother	0	1	2	17	11	14	19	21	39	8	25	23	19	13
Father	0	1	1	16	12	16	14	20	17	9	21	22	20	19
Son	0	1	3	11	9	18	13	17	27	9	20	22	22	27
21. Mother	0	1	6	20	12	21	19	31	33	11	41	34	17	31
Father	0	3	8	12	14	20	21	30	30	12	24	30	19	30
Son	0	0	3	15	12	12	20	30	17	13	35	31	28	18
22. Mother	0	3	5	13	26	33	29	19	42	9	40	25	19	48
Father	0	1	1	16	9	10	11	16	18	4	18	20	21	13
Daughter	0	2	10	9	10	12	18	24	36	9	22	34	36	21
23. Mother	0	2	3	7	24	23	35	29	36	5	26	32	27	23
Father	0	3	8	9	16	27	22	32	35	12	32	20	16	43
Daughter	0	4	4	13	12	16	21	25	39	8	24	25	25	15
24. Mother	0	3	5	11	18	24	22	21	44	7	23	45	16	4
Father	0	4	7	19	30	25	30	24	24	9	26	31	17	41
Daughter	0	1	3	10	13	16	15	26	40	10	20	16	21	19

Family	?	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
25. Mother	0	4	3	12	9	16	16	22	37	6	17	23	14	33
Father	0	4	5	12	13	20	21	22	29	9	24	22	17	32
Son	0	2	24	14	16	19	19	23	27	10	27	27	22	36
26. Mother	2	3	6	15	10	16	15	18	34	4	21	20	20	24
Father	0	4	6	11	7	13	8	16	20	4	11	19	23	33
Son	0	3	3	11	13	10	16	20	30	8	21	26	24	16
27. Mother	0	4	1	13	27	25	22	23	39	8	23	27	15	45
Father	0	1	3	13	11	23	23	25	25	11	25	21	20	37
Son	0	2	13	8	18	25	23	34	28	21	33	40	26	36
28. Mother	0	2	25	12	11	26	21	22	43	11	30	23	24	34
Father	0	7	1	29	15	17	24	29	25	11	30	33	27	16
Son	0	3	32	16	23	32	21	28	32	22	42	58	28	36
29. Mother	0	6	0	21	14	21	20	22	35	7	22	23	19	23
Father	0	5	1	20	12	18	19	19	31	8	22	20	18	27
Daughter	0	4	4	14	15	16	22	29	30	14	32	33	24	24
30. Mother	0	3	2	16	17	18	25	17	36	12	27	28	27	7
Father	0	1	22	2	13	17	28	26	30	13	28	29	20	11
Son	0	1	10	8	15	13	11	21	24	11	30	32	31	29
31. Mother	0	5	5	15	18	25	23	16	41	10	36	31	19	25
Father	0	4	4	17	17	17	24	21	19	7	22	32	19	5
Son	0	3	4	9	10	13	12	21	29	10	21	24	19	24
32. Mother	0	3	3	23	13	16	24	26	32	9	26	26	19	21
Father	7	3	7	14	23	25	36	32	23	14	39	35	29	28
Son	0	1	22	7	24	25	25	29	26	23	41	51	33	43

Family	?	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
33. Mother	0	4	3	18	13	21	26	19	38	7	25	23	20	31
Father	0	2	5	7	19	23	20	20	27	14	30	29	23	32
Son	0	2	8	14	11	14	20	27	28	11	31	32	27	25
34. Mother	0	7	5	14	11	22	22	14	38	10	21	18	11	33
Father	0	5	5	6	10	28	9	17	25	7	25	15	18	46
Son	0	4	0	13	11	17	18	13	28	8	21	16	15	27
35. Mother	0	3	6	14	12	27	17	25	37	3	26	24	17	57
Father	0	3	6	13	14	16	18	23	29	6	25	19	25	25
Daughter	0	1	5	16	15	23	20	21	38	8	29	22	14	31
36. Mother	0	1	1	16	16	17	24	16	41	10	33	23	19	29
Father	0	2	2	12	15	19	22	17	28	8	26	27	29	23
Daughter	0	3	8	8	14	16	27	20	40	12	28	20	24	24
37. Mother	0	3	1	16	11	15	18	19	37	6	19	18	14	30
Father	0	3	5	18	16	18	26	28	23	9	26	25	21	24
Son	0	5	1	16	8	16	16	21	23	8	26	18	20	21
38. Mother	22	9	4	16	17	25	23	19	30	10	21	30	13	38
Father	2	8	3	10	12	16	21	16	17	8	19	19	21	28
Son	0	2	12	12	10	10	17	20	21	11	18	22	22	21
39. Mother	0	5	2	27	17	17	26	24	34	10	29	30	15	16
Father	2	3	1	21	14	17	21	22	21	10	26	24	16	17
Son	0	2	5	18	10	13	15	23	26	5	27	26	16	21
40. Mother	0	3	0	13	24	25	30	24	45	17	28	25	23	28
Father	0	3	3	15	11	13	22	20	18	4	18	18	18	21
Son	0	4	2	19	14	19	22	30	23	9	25	28	21	16

APPENDIX D

Family	A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
1. Mother	8	21	41	12	25	15	20	8	19	22
Father	12	14	48	13	19	21	24	11	23	23
Son	26	15	44	14	22	11	21	20	16	24
2. Mother	7	17	44	9	20	18	25	7	22	24
Father	5	12	48	9	22	19	25	12	29	20
Son	9	10	47	6	19	16	19	10	20	22
3. Mother	1	24	41	14	25	14	26	7	17	23
Father	26	21	41	24	37	10	22	9	15	27
Son	30	17	40	19	33	16	20	15	22	31
4. Mother	8	12	38	6	20	18	24	7	24	24
Father	1	21	57	3	11	22	26	3	28	28
Son	19	14	44	15	24	13	21	10	22	28
5. Mother	2	15	42	5	15	23	22	3	23	26
Father	14	10	40	12	27	16	15	12	26	32
Daughter	23	15	39	15	34	18	23	4	17	33
6. Mother	10	15	46	8	25	18	24	5	24	23
Father	3	17	57	7	14	15	21	9	23	20
Daughter	12	16	38	14	20	15	21	10	21	20
7. Mother	8	16	39	8	15	14	26	10	21	21
Father	8	12	47	12	11	14	17	23	21	28
Daughter	16	20	44	12	22	9	17	17	22	29
8. Mother	10	18	37	17	27	17	23	11	17	24
Father	14	15	49	18	25	15	14	11	20	28
Daughter	13	12	51	12	26	11	23	13	21	29

Family	A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
9. Mother	5	18	41	10	22	17	20	9	16	25
Father	6	14	49	11	18	19	22	11	21	19
Daughter	5	16	43	8	26	17	24	11	23	19
10. Mother	24	15	39	20	40	15	18	27	14	26
Father	34	11	43	19	38	12	12	17	19	36
Daughter	27	16	38	16	26	14	24	14	24	33
11. Mother	13	21	37	12	24	15	25	7	17	20
Father	15	19	41	12	25	13	20	7	14	22
Daughter	10	20	44	10	21	19	24	12	20	24
12. Mother	2	10	53	4	20	25	25	4	28	27
Father	0	17	54	5	8	16	26	5	21	19
Daughter	7	12	38	6	18	14	16	11	26	27
13. Mother	14	20	33	14	26	11	22	14	19	20
Father	17	20	41	14	21	10	19	13	12	18
Daughter	17	15	47	15	32	12	20	11	10	16
14. Mother	8	22	42	9	20	20	29	1	23	19
Father	24	12	39	19	31	17	20	18	13	26
Daughter	8	18	45	7	14	16	22	11	19	23
15. Mother	14	14	43	9	26	19	25	13	20	25
Father	9	16	46	11	18	20	23	9	21	23
Daughter	22	11	30	17	23	16	18	16	21	24
16. Mother	16	19	43	14	27	16	26	5	17	24
Father	7	22	49	6	16	19	24	5	17	18
Daughter	10	17	45	9	22	18	21	6	22	22

Family	A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
17. Mother	12	16	41	11	21	18	25	10	22	27
Father	18	24	33	19	30	14	18	14	11	25
Daughter	24	22	39	21	41	11	21	11	8	22
18. Mother	30	15	31	17	41	7	12	20	10	24
Father	11	19	45	12	18	15	16	18	19	26
Daughter	21	17	29	18	33	19	20	13	12	24
19. Mother	9	22	43	10	22	16	23	12	17	19
Father	8	11	49	7	19	16	21	14	18	26
Son	6	17	53	14	14	16	18	13	21	26
20. Mother	6	16	55	5	18	21	24	6	26	26
Father	2	10	53	5	12	17	18	16	23	29
Son	13	8	49	9	23	20	17	16	26	28
21. Mother	2	23	52	9	11	14	22	14	17	19
Father	13	17	44	12	19	16	17	8	20	21
Son	16	13	51	11	19	17	15	17	22	30
22. Mother	22	24	32	21	39	13	24	15	24	25
Father	2	12	53	2	13	19	20	14	21	26
Daughter	11	8	51	9	17	20	18	10	22	29
23. Mother	22	11	39	16	25	18	17	15	23	30
Father	20	19	38	21	36	10	20	15	16	24
Daughter	10	10	48	6	18	17	17	11	24	32
24. Mother	13	20	41	15	20	19	21	9	20	23
Father	5	28	45	12	15	16	17	15	20	29
Daughter	13	20	45	10	18	21	23	10	23	27

Family	A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
25. Mother	9	20	41	13	21	17	22	11	18	22
Father	9	24	50	11	17	17	26	13	20	20
Son	12	13	46	18	23	14	21	13	20	28
26. Mother	2	16	46	6	4	18	21	8	21	23
Father	3	10	49	8	8	17	23	12	16	19
Son	10	13	41	8	8	15	16	16	20	25
27. Mother	17	20	29	18	35	13	23	11	14	29
Father	21	22	44	17	30	21	21	10	24	30
Son	26	10	35	25	36	13	15	20	15	25
28. Mother	19	23	33	14	28	13	16	14	22	28
Father	0	21	52	5	7	19	27	2	23	19
Son	19	17	29	14	26	17	13	14	14	25
29. Mother	1	21	47	7	9	19	25	7	17	17
Father	1	19	47	5	9	21	23	5	26	23
Daughter	16	21	40	15	27	12	14	16	15	24
30. Mother	3	11	44	10	14	22	18	7	23	30
Father	5	15	48	2	8	22	25	4	25	25
Son	14	10	44	17	24	15	19	22	19	28
31. Mother	18	17	44	17	27	17	18	11	25	33
Father	2	19	53	5	6	21	19	11	23	29
Son	12	13	46	13	15	18	23	16	23	23
32. Mother	2	22	53	4	9	21	21	2	23	25
Father	23	14	33	17	35	16	15	11	19	29
Son	33	14	35	26	44	11	9	24	14	30

Family	A	R	ES	Ca	Dy	Do	Re	Pr	St	Cn
33. Mother	7	18	46	5	18	19	27	7	20	21
Father	23	12	53	21	39	16	17	17	18	30
Son	16	14	51	10	24	22	18	8	21	29
34. Mother	7	24	47	9	25	16	23	8	20	21
Father	18	22	40	17	29	14	21	17	20	26
Son	9	20	47	5	14	21	26	12	28	26
35. Mother	15	23	44	16	28	15	24	13	23	28
Father	14	12	49	12	23	16	22	12	26	27
Daughter	7	16	48	11	19	15	24	12	17	26
36. Mother	14	20	46	11	23	16	22	12	25	24
Father	19	13	45	13	21	17	25	13	24	27
Daughter	20	13	42	16	29	17	20	16	23	30
37. Mother	11	19	47	8	19	22	26	6	22	23
Father	8	16	48	6	13	17	23	5	24	26
Son	4	13	47	7	11	18	25	5	22	22
38. Mother	17	20	38	17	26	15	20	8	13	16
Father	7	18	37	11	20	16	21	11	14	15
Son	5	11	55	5	11	20	22	13	20	26
39. Mother	0	21	46	3	8	20	27	0	25	20
Father	1	21	53	3	9	20	27	0	21	22
Son	5	17	45	6	20	12	22	9	23	24
40. Mother	13	18	36	17	19	19	12	18	28	19
Father	5	12	51	10	10	19	21	12	20	24
Son	5	12	50	8	10	21	16	9	24	27

APPENDIX E

T-Score Conversion Tables

Fractional Scores for Any Given Raw Score of K

Raw K	.5 K	.4 K	.2 K
30	15	12	6
29	15	12	6
28	14	11	6
27	14	11	5
26	13	10	5
25	13	10	5
24	12	10	5
23	12	9	5
22	11	9	4
21	11	8	4
20	10	8	4
19	10	8	4
18	9	7	4
17	9	7	3
16	8	6	3
15	8	6	3
14	7	6	3
13	7	5	3
12	6	5	2
11	6	4	2
10	5	4	2
9	5	4	2
8	4	3	2
7	4	3	1
6	3	2	1
5	3	2	1
4	2	2	1
3	2	1	1
2	1	1	0
1	1	1	0
0	0	0	0

Source: Dahlstrom and Welsh, 1960, p. 436.

Raw Score	Males										Females																
	?	L	F	K	1 (Hs) + .5 K	2 (D)	3 (Hy)	4 (Pd) + .4 K	5 (Mt)	6 (Pa)	7 (Pt) + 1 K	8 (Sc) + 1 K	9 (Ma) + .2 K	0 (Sl)	?	L	F	K	1 (Hs) + .5 K	2 (D)	3 (Hy)	4 (Pd) + .4 K	5 (Mt)	6 (Pa)	7 (Pt) + 1 K	8 (Sc) + 1 K	9 (Ma) + .2 K
60 . . .	58													87	58										107 107	107 107	87
59 . . .														86											106 106	106 106	86
58 . . .												119		85											104 104	104 104	85
57 . . .												120 117		84											102 103	102 103	84
56 . . .												118 115		83											101 101	101 101	83
55 . . .												116 113		82											99 100	99 100	82
54 . . .							118					114 111		81						117 112					98 98	98 98	81
53 . . .							116					112 109		80						115 110					96 97	96 97	80
52 . . .							115					110 107		79						113 109					94 95	94 95	79
51 . . .							113					107 105		78						111 107					93 94	93 94	78
50 . . .	56						111					105 103		77	56					109 105					91 92	91 92	77
49 . . .							109					103 101		76						107 103					89 91	89 91	76
48 . . .							107					101 99		75						105 101					88 89	88 89	75
47 . . .							106					99 97		74						103 100					86 87	86 87	74
46 . . .							120 104 114 100					97 96		73						102 98 114 30					84 86	84 86	73
45 . . .							118 102 111 98					95 94		72						100 96 111 32					83 84	83 84	72
44 . . .							116 100 109 96					93 92		71						98 94 109 34					81 83	81 83	71
43 . . .							113 98 107 94					91 90		70						96 93 107 37					79 81	79 81	70
42 . . .							111 96 104 92					89 88		69						109 94 91 104 39					78 80	78 80	69
41 . . .							108 95 102 90					87 86		68						107 92 89 102 41					76 78	76 78	68
40 . . .	53						106 93 100 88					85 84 108 67 53		67	53					105 90 87 100 43					74 77 108 67	74 77 108 67	67
39 . . .							104 91 97 86					83 82 106 66		66						103 88 86 97 45					73 75 106 66	73 75 106 66	66
38 . . .							118 101 89 95 84					81 80 103 65		65						101 86 84 95 47					71 74 103 65	71 74 103 65	65
37 . . .							116 99 87 93 82					79 78 101 64		64						99 84 82 93 49					69 72 101 64	69 72 101 64	64
36 . . .							113 96 86 90 80					77 76 98 63		63						97 82 80 90 51					68 71 98 63	68 71 98 63	63
35 . . .							111 94 84 88 78					75 74 96 62		62						95 80 79 88 53					66 69 96 62	66 69 96 62	62
34 . . .							108 92 82 86 76					73 73 93 61		61						93 78 77 86 55					65 67 93 61	65 67 93 61	61
33 . . .							106 89 80 83 74					71 71 91 60		60						91 76 75 83 57					63 66 91 60	63 66 91 60	60
32 . . .							103 87 78 81 73 120					69 69 88 58		58						89 75 73 81 59 120					61 64 88 58	61 64 88 58	58
31 . . .		110					100 84 76 79 71 117 66 67 86 56							56						87 73 72 79 61 117					60 63 86 56	60 63 86 56	56

Raw
Score

	?	L	F	K	1	2	3	4	5	6	7	8	9	0	
					(Hs) + .5 K	(D)	(Hy)	(Pd) + .4 K	(Mt)	(Pa)	(Pt) + 1 K	(Sc) + 1 K	(Ma) + .2 K	(Sl)	
30	50	108	83	98	82	75	76	69	114	64	65	83	55	55	0
29		106	81	95	80	73	74	67	111	62	63	81	54	54	1
28		104	79	93	77	71	71	65	108	60	61	78	53	53	2
27		102	77	90	75	69	69	63	105	58	59	75	52	52	3
26		100	75	88	72	67	67	61	102	56	57	73	51	51	4
25		98	74	85	70	65	64	59	100	54	55	70	50	50	5
24		96	72	82	68	64	62	57	97	52	53	68	49	49	6
23		94	70	80	65	62	60	55	94	50	51	65	48	48	7
22		92	68	77	63	60	57	53	91	48	50	63	47	47	8
21		90	66	75	60	58	55	51	88	46	48	60	46	46	9
20	47	88	64	72	58	56	53	49	85	44	46	58	45	45	10
19		86	62	70	56	55	50	47	82	42	44	55	44	44	11
18		84	61	67	53	53	48	45	79	40	42	53	43	43	12
17		82	59	65	51	51	46	43	76	38	40	50	42	42	13
16		80	57	62	48	49	43	41	73	36	38	48	41	41	14
15		86	78	55	59	46	47	41	39	70	34	36	45	40	15
14		83	76	53	57	44	45	39	37	67	32	34	43	39	16
13		80	73	51	54	41	44	36	35	65	30	32	40	38	17
12		76	70	49	52	39	42	34	34	62	28	30	38	37	18
11		73	68	48	49	36	40	32	32	59	26	28	35	36	19
10	44	70	66	46	47	34	38	29	30	56	23	26	33	35	20
9		66	64	44	44	32	36	27	28	53	21	25	30	34	21
8		63	62	42	41	29	35	24	26	50		23	28	33	22
7		60	60	40	39		22	22	47		21	26	32	32	23
6		56	58	38	36		20	20	44		23	30	30	30	24
5		53	55	36	34				41		21			29	25
4		50	53	35	31				38					28	26
3		46	50	33	29				35					27	27
2		44	48	31	26				33					26	28
1		40	46	29	23				30					25	29
0	41	36	44	27	21				27					25	30

APPENDIX F

Raw Score	Males											Females											
	A	R	Es	Lb	Ca	Dy	Do	Re	Pr	St	Cn	A	R	Es	Lb	Ca	Dy	Do	Re	Pr	St	Cn	
68	.	.	.											94									
67	.	.	.											92									
66	.	.	.											91									
65	.	.	.											89									
64	.	.	.											87									
63	.	.	.											86									
62	.	.	.											84									
61	.	.	.											83									
60	.	.	.											81									
59	.	.	.											80									
58	.	.	.											78									
57	.	.	.			91								76			84						
56	.	.	.			90								75			83						
55	.	.	.			89								73			82						
54	.	.	.			88								72			81						
53	.	.	.			87								70			80						
52	.	.	.			86								69			79						
51	.	.	.			85								67			78						
50	.	.	.			84								65			77						113
49	.	.	.			83								64			76						111
48	.	.	.			81					109			62			75						108
47	.	.	.			80					107			61			74						106
46	.	.	.			79					104			59			73						103
45	.	.	.			78					102			58			72						100
44	.	.	.			77					99			56			71						98
43	.	.	.			76					97			54			69						95
42	.	.	.			75					94			53			68						92
41	.	.	.			74					91			51			67						90
40	.	.	.			73					89		102	50			66						87
39	.	.	.			72					86	78	100	48			65						85
38	.	.	.			70					84	77	98	47			64						82
37	.	.	.			69					81	76	95	45			63						79
36	.	.	.			68					79	75	93	43		95	62						77

Source: Dahlstrom, Welsh and Dahlstrom, 1970, p. 374 - 376.

Raw Score	A	R	Es	Lb	Ca	Dy	Do	Re	Pr	St	Cn
35	79	91	35		98	67				86	76
34	77	89	33		96	66				84	73
33	76	86	32		94	65				82	71
32	75	84	30		92	64		78	88	80	68
31	74	82	29		90	63		76	86	80	66
30	72	80	27		88	62		74	84	78	63
29	71	78	25		86	61		71	82	75	61
28	70	76	24		84	59	87	69	80	73	58
27	69	74	22		83	58	85	66	78	71	55
26	67	72	20	120	81	57	82	64	76	69	53
25	66	70	19	116	79	56	79	62	75	66	50
24	65	68	17	112	77	55	76	59	73	64	48
23	64	66	16	108	75	54	73	57	71	62	45
22	62	63	14	104	73	53	70	54	69	60	43
21	61	61	12	99	71	52	68	52	67	58	40
20	60	59		95	69	51	65	50	65	55	38
19	59	57		91	68	50	62	47	63	53	35
18	57	55		87	66	48	59	45	62	51	32
17	56	53		83	64	47	56	42	60	49	30
16	55	51		78	62	46	53	40	58	46	27
15	54	49		74	60	45	51	37	56	44	25
14	52	47		70	58	44	48	35	54	42	22
13	51	45		66	56	43	45	33	52	40	19
12	50	43		62	55	42	42	30	51	38	17
11	49	40		57	53	41	39	28	49	35	14
10	47	38		53	51	40	37	25	47	33	11
9	46	36		49	49	39	34	23	45	31	9
8	45	34		45	47	37	31	21	43	29	6
7	44	32		41	45	36	28	18	41	27	4
6	42	30		36	43	35	25		39	24	1
5	41	28		32	41	34	22		38	22	
4	40	26		28	40	33	20		36	20	
3	38	24		24	38	32			34	18	
2	37	22		20	36	31			32	15	
1	36	20			34	30			30	13	
0	35	17		32	32	29			28	11	

APPENDIX G

ANALYSIS OF VARIANCE OF MMPI
 SCALES FOR PARENTS OF MALES AND
 PARENTS OF FEMALES

MMPI Scales		Sex (S)	Parent (P)	S X P	Within
Validity					
L	MS	14.45	31.24	9.80	41.17
	F	.35	.76	.24	
F	MS	7.81	148.51	10.51	88.35
	F	.09	1.68	.12	
K	MS	68.45	156.80	105.80	82.43
	F	.83	1.90	1.28	
Clinical					
Hs	MS	5362.81	6107.51	5277.81	4073.06
	F	1.32	1.50	1.05	
D	MS	9.11	234.61	43.51	110.95
	F	.08	2.11	.39	
Hy	MS	39.20	5.00	135.20	102.98
	F	.38	.05	1.31	
Pd	MS	.05	320.00	2.45	122.24
	F	.04	2.62	.02	
Mf	MS	28.80	3251.35	130.05	72.40
	F	.40	44.90***	1.79	

MMPI Scales		Sex (S)	Parent (P)	S X P	Within
Pa	MS	23.11	6.61	25.31	77.57
	F	.30	.09	.33	
Pt	MS	145.80	45.00	.44	115.32
	F	1.26	.39	3.90	
Sc	MS	10.51	.61	10.51	233.98
	F	.05	2.62	.05	
Ma	MS	248.51	94.61	165.31	132.43
	F	1.87	.71	1.25	
Si	MS	78.01	7.81	19.01	141.47
	F	.55	.06	.13	
Research					
A	MS	238.05	80.80	2.45	89.07
	F	3.68	.90	.03	
R	MS	54.45	319.99	61.25	55.62
	F	.98	5.75**	1.10	
ES	MS	259.20	12.80	1.80	90.07
	F	2.90	.14	.02	
Ca	MS	192.20	245.00	4.05	96.66
	F	1.99	2.53	.04	

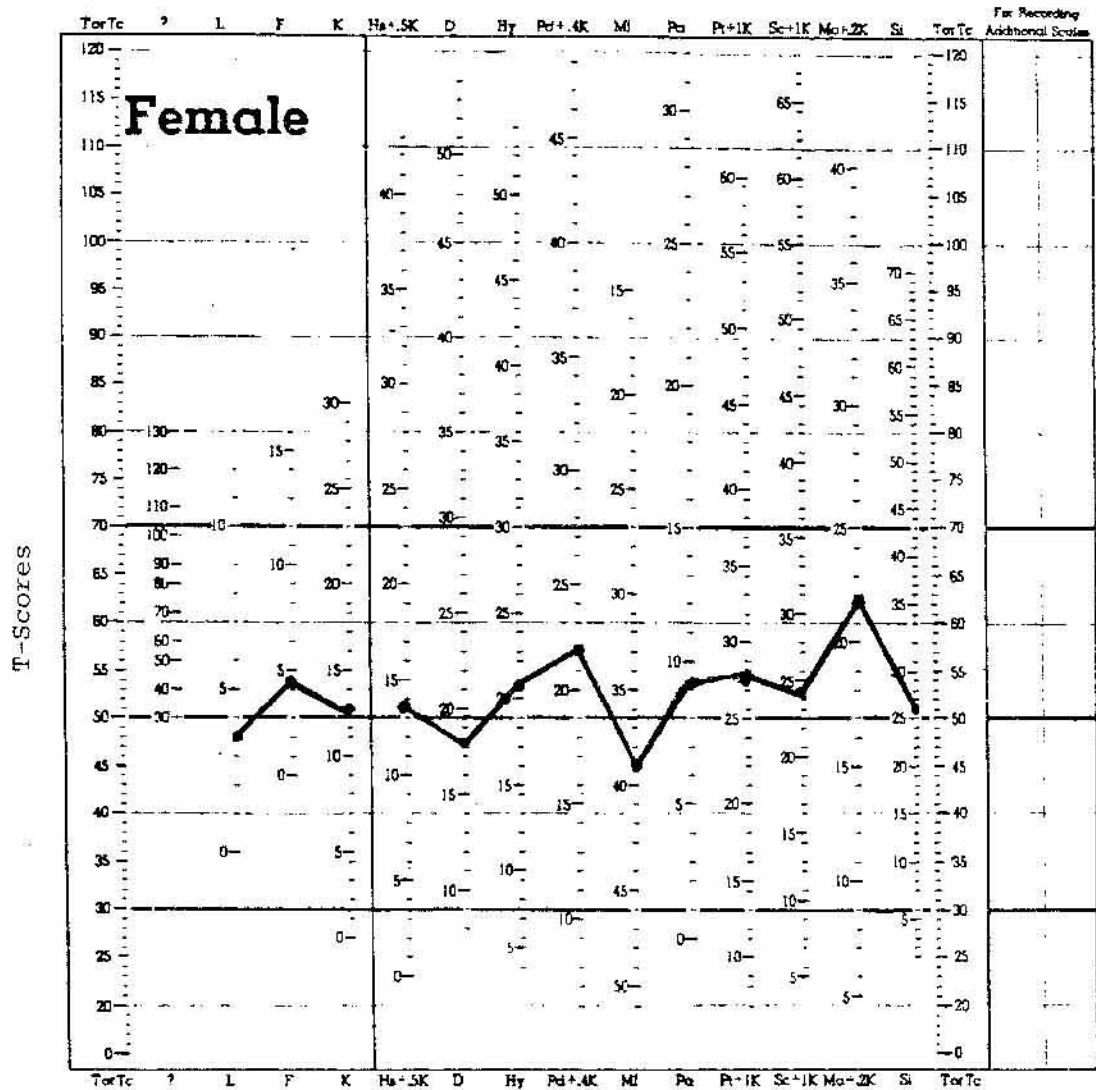
MMPI Scales		Sex (S)	Parent (P)	S X P	Within
Dy	MS	259.20	198.45	28.80	91.65
	F	2.83	2.17	31	
Do	MS	292.61	17.11	17.01	84.07
	F	3.48	.20	.93	
Re	MS	56.11	3.61	292.61	99.01
	F	.57	.04	2.95	
Pr	MS	396.05	245.00	14.45	84.31
	F	4.70*	2.91	.17	
St	MS	68.45	14.45	4.05	83.59
	F	.82	.16	.05	
Cn	MS	26.45	490.05	1.25	116.09
	F	.23	4.22*	.01	

Note: df = 1 for sex, parent and S X P; df = 76 for within.

* p < .05
 ** p < .02
 *** p < .001

APPENDIX H

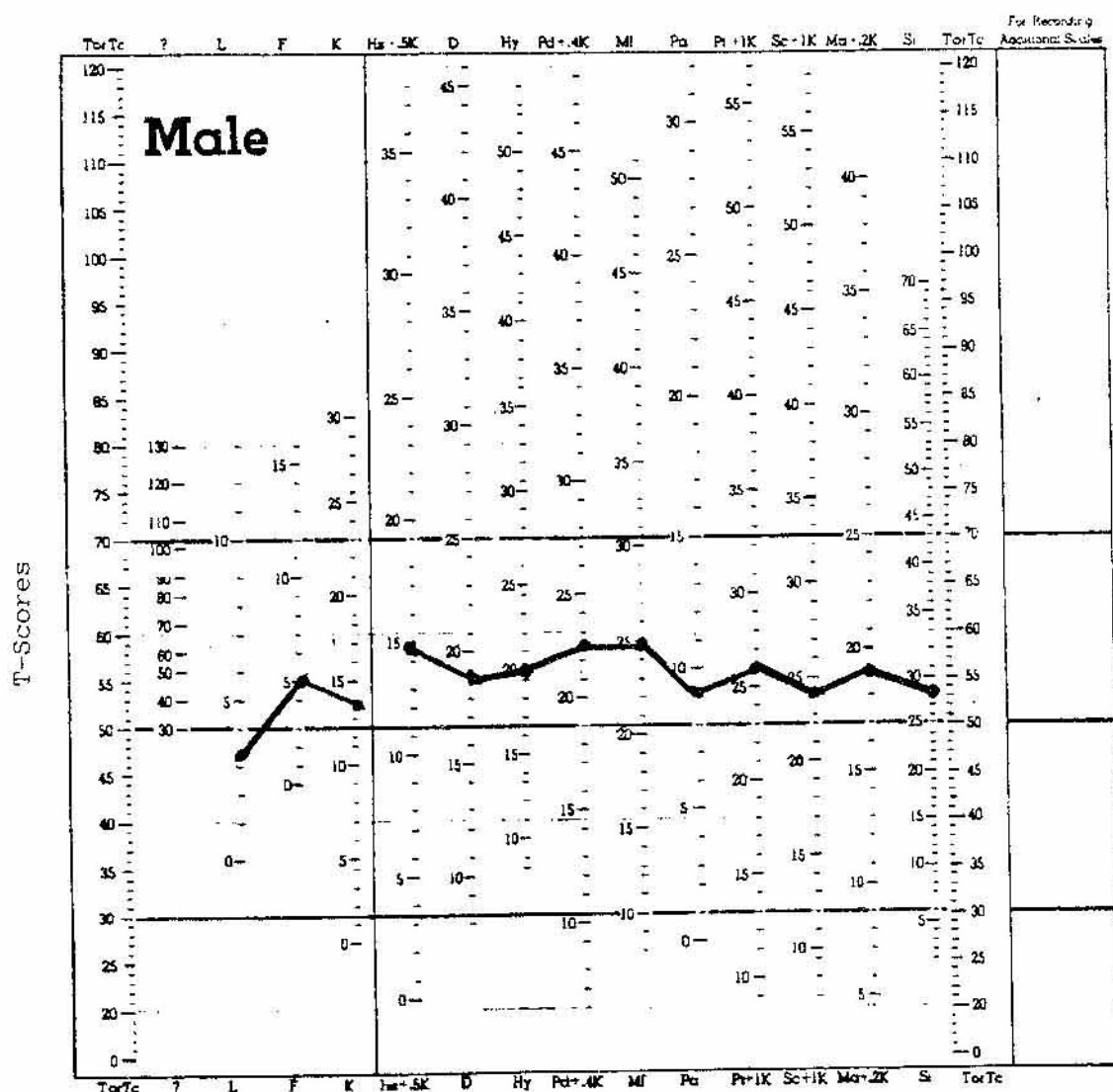
FEMALE STUDENT'S MEAN PROFILE



Mean Scores

L	F	K							
48	54	52							
Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
+ .5K			+ .4K			+ 1K	+ 1K	+ .2K	
51	48	54	58	40	54	55	54	63	51

FEMALE FATHER'S MEAN PROFILE

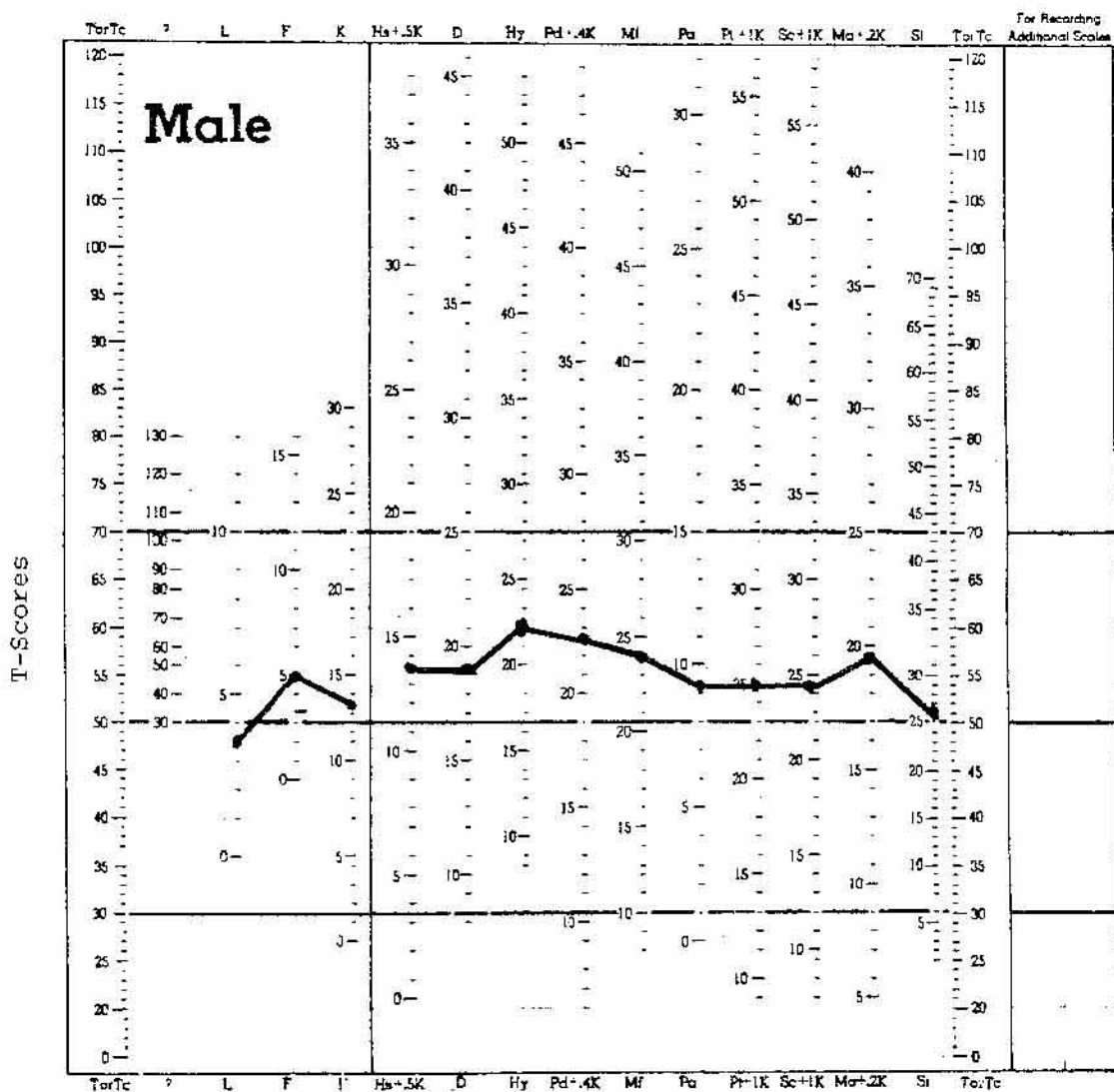


Mean Scores

L	F	K
47	55	53

Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
+.5K			+.4K			+.1K	+.1K	+.2K	
59	55	56	59	59	54	57	54	57	54

MALE FATHER'S MEAN PROFILE

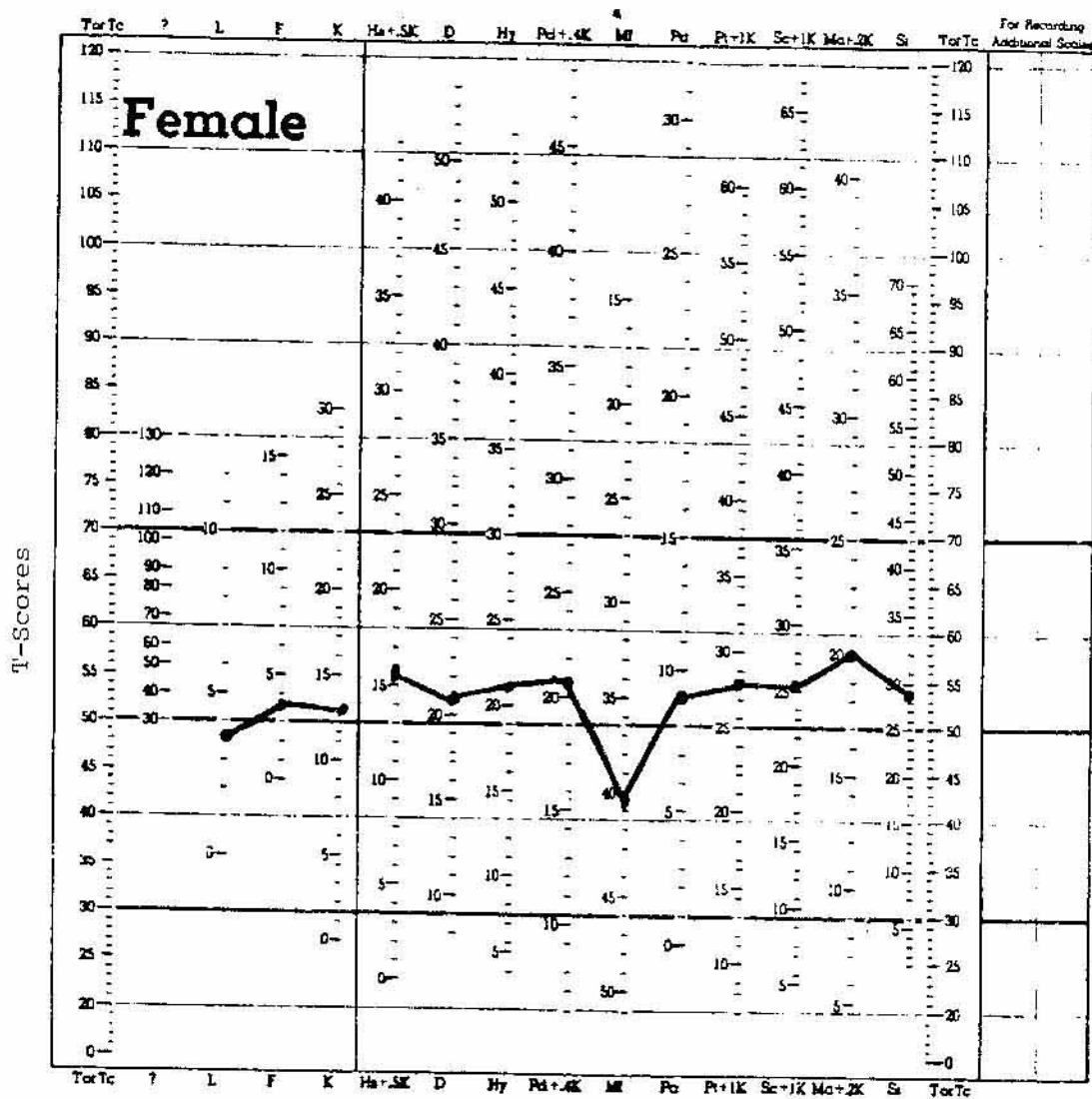


Mean Scores

L	F	K
48	55	52

Hs +.5K	D	Hy	Pd +.4K	Mf	Pa	Pt +.1K	Sc +.1K	Ma +.2K	Si
56	56	60	59	57	54	54	54	57	51

FEMALE MOTHER'S MEAN PROFILE

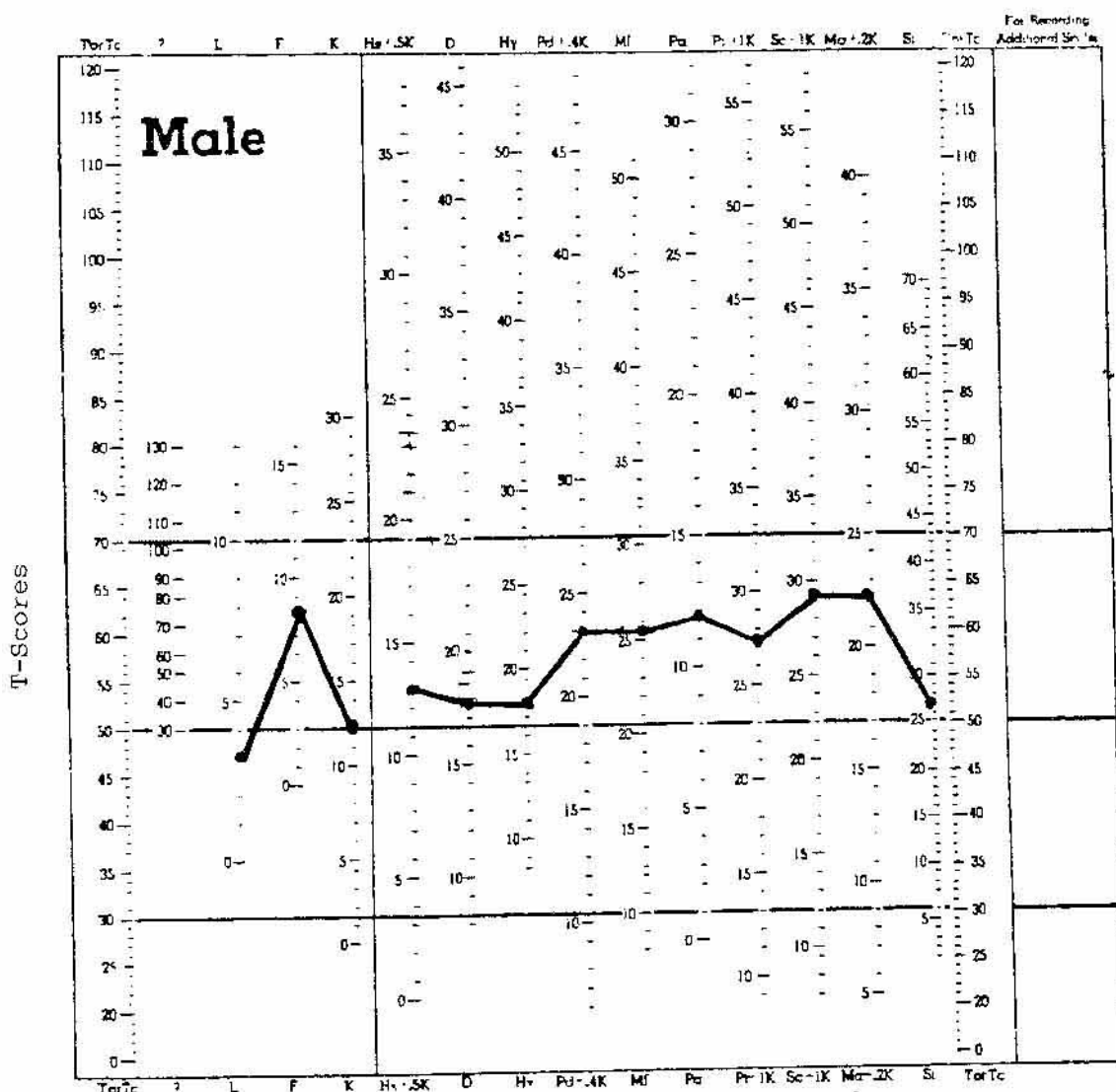


Mean Scores

L	F	K
48	52	51

Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
+.5K			+.4K			+1K	+1K	+.2K	
55	53	54	53	43	53	55	55	58	54

MALE STUDENT'S MEAN PROFILE



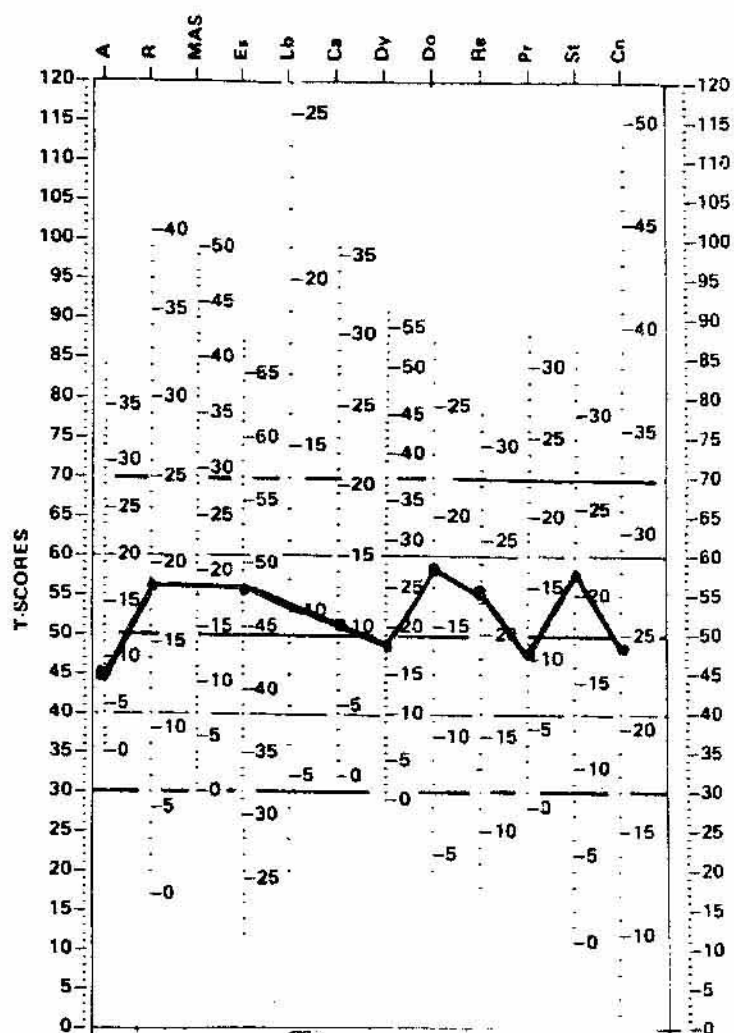
Mean Scores

L	F	K
46	63	50

Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
<u>+ .5K</u>			<u>+ .4K</u>			<u>+ 1K</u>	<u>+ 1K</u>	<u>+ .2K</u>	
54	52	52	60	60	62	58	64	64	52

APPENDIX I

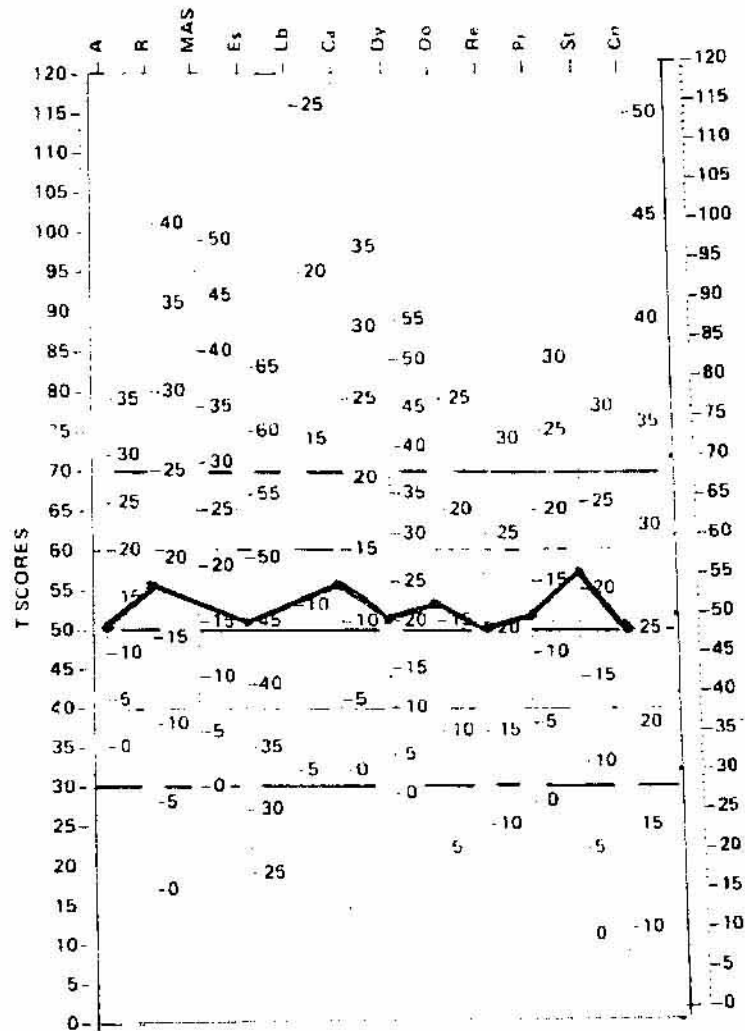
MALE FATHER'S MEAN PROFILE



Mean Scores

A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
45	56	55	51	49	58	56	47	57	49

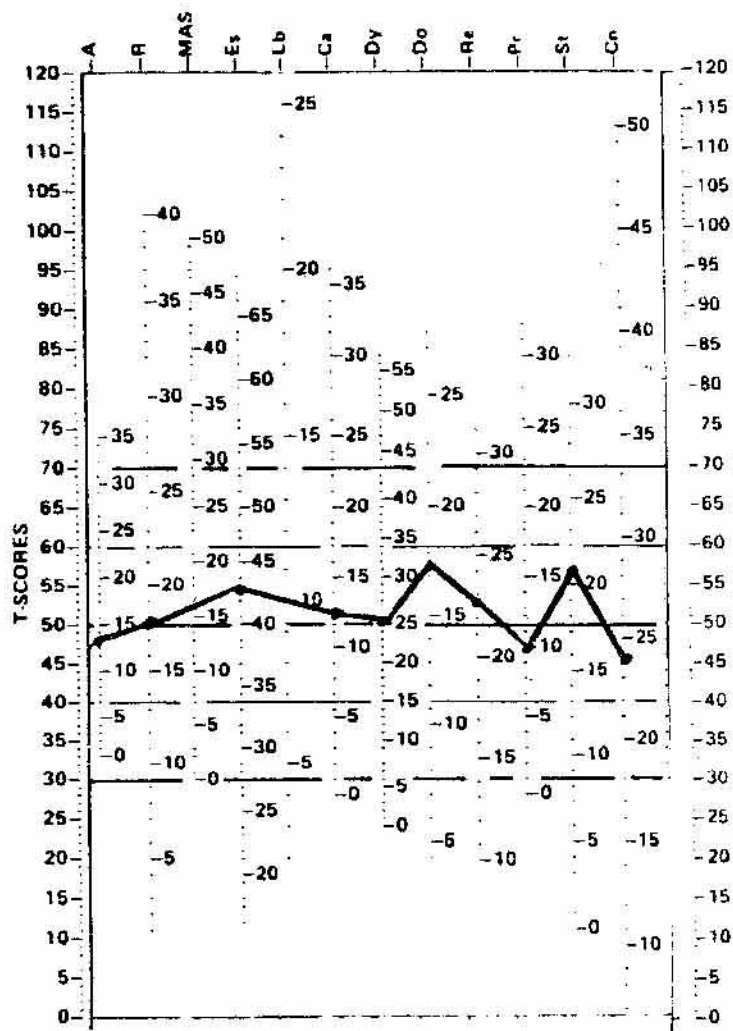
FEMALE FATHER'S MEAN PROFILE



Mean Scores

A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
50	56	51	55	51	53	50	52	54	50

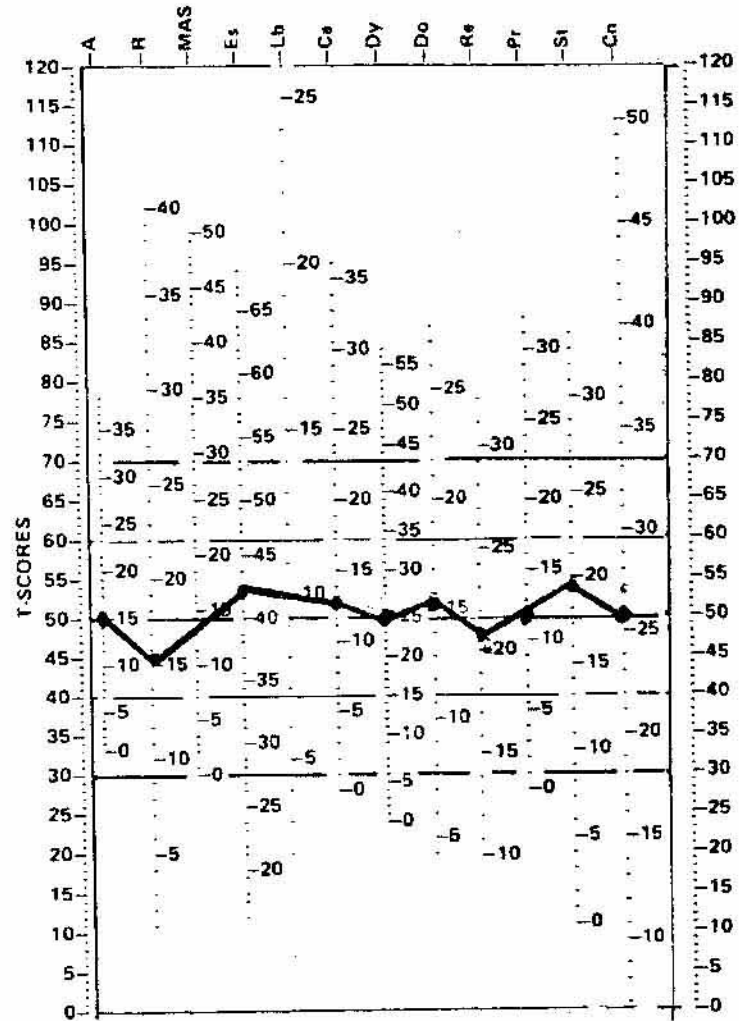
FEMALE MOTHER'S MEAN PROFILE



Mean Scores

A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
48	50	51	51	50	56	53	48	56	45

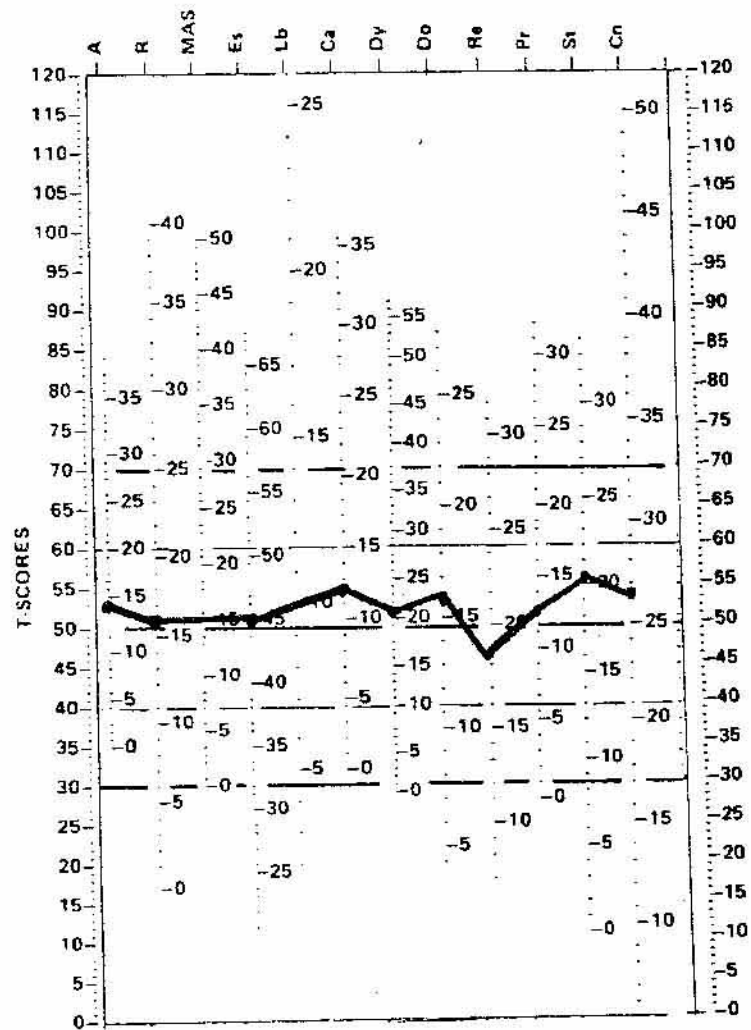
FEMALE STUDENT'S MEAN PROFILE



Mean Scores

A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
50	45	53	52	50	52	47	50	54	50

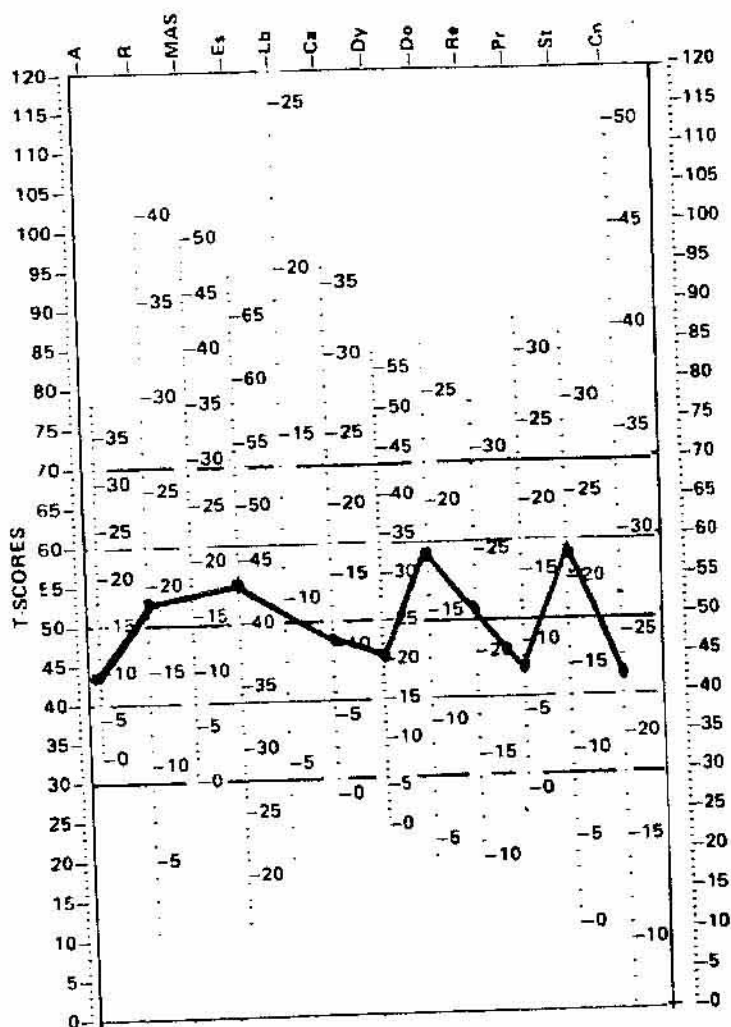
MALE STUDENT'S MEAN PROFILE



Mean Scores

A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
53	51	51	55	53	54	47	52	56	54

MALE MOTHER'S MEAN PROFILE



Mean Scores

A	R	Es	Ca	Dy	Do	Re	Pr	St	Cn
44	53	55	48	45	57	51	44	57	44

APPENDIX J

MEAN T-SCORES FOR STUDENTS
AND PARENTS

MMPI SCALES	Male N = 60			Female N = 60		
	Sons	Mothers	Fathers	Daughters	Mothers	Fathers
Validity						
L	45.60	49.40	47.60	48.00	48.00	47.45
F	64.70	53.10	55.10	53.95	51.75	55.20
K	50.05	57.30	52.20	50.90	53.15	52.65
Clinical						
Hs	54.25	53.00	55.85	51.25	54.75	58.85
D	52.05	50.90	55.80	58.05	53.05	55.00
Hy	52.35	56.50	59.60	53.55	57.70	55.60
Pd	60.40	55.10	58.75	57.60	54.70	59.05
Mf	60.30	47.10	57.30	45.80	43.35	58.65
Pa	61.90	55.45	53.75	54.65	53.25	53.80
Pt	58.20	52.35	54.00	54.65	55.20	56.55
Sc	64.15	53.65	54.20	53.50	55.15	54.20
Ma	64.25	51.70	56.75	62.75	58.10	57.40
Si	51.80	52.85	51.25	51.05	53.85	54.20
Research						
A	52.85	43.80	45.45	49.70	47.50	49.85
R	51.45	53.40	55.55	45.30	49.90	55.65
Es	50.95	54.80	55.30	53.25	50.90	52.00
Ca	55.40	48.25	51.30	51.75	50.90	54.85
Dy	52.90	44.75	49.10	49.60	49.55	51.50
Do	54.25	57.40	58.45	52.15	55.55	52.65
Re	46.65	51.30	55.55	27.45	53.45	50.05
Pr	52.15	44.15	56.80	50.20	47.75	52.10
St	55.75	57.15	56.75	54.45	55.75	54.70
Cn	53.80	43.70	48.90	49.55	45.10	49.95

