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An investigation of the Minnesota Multiphasic Personality Inventory as a predictor of adjustment to college life

John Thomas Drury

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AN INVESTIGATION OF THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY AS A PREDICTOR OF ADJUSTMENT TO COLLEGE LIFE

A Dissertation Presented to the Graduate Faculty of The University of Richmond

In Partial Fulfillment of the Requirements for the Degree Master of Arts in Psychology

by John Thomas Drury June 1956
PREFACE

College populations are rapidly growing and many millions of young people will have a chance for college in the future who would not have had an opportunity for such an education some years ago. Factors making for success in college become more important as the population increases and facilities become more limited. The present investigation is directed to the matter of adjustment to college life and the prediction of such adjustment with the use of the Minnesota Multiphasic Personality Inventory.

This study was done under the auspices of the University Center for Psychological Services and the writer wishes to express his gratitude to its Director Dr. John Williams, and to Dr. Robert Corder for their guidance in the preparation of this thesis. He would also like to thank Dean Roberts for permission to do the study at Westhampton College and Dean Roberts, Dean Tucker and Miss Bell for their assistance as raters. There is also a word of thanks due Dr. Merton E. Carver, and Dr. Robert Filer for their encouragement to the writer in doing graduate work.
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CHAPTER I

INTRODUCTION

Human personality has been the object of much re­search and discussion through the centuries. Many psychol­ogists have proposed various theories of personality and many experimenters have tried to devise instruments for measuring personality. Rating scales, personality inven­tories and projective measures have been used to investi­gate personality. Perhaps the most widely used Personality Inventory today is the Minnesota Multiphasic Personality Inventory.

The MMPI, as it is commonly called, is also the most elaborate and ambitious measuring device in this area. The authors state in their Manual that this one test is de­signed to provide scores on all the more important phases of personality (17). The inventory consists of 550 state­ments in a booklet form which are to be answered "True" or "False". These items have been grouped into ten scales. In addition, the authors have included a validity score, a lie score, a question score, and a "K" score. The "K" score is a "correction factor" used to increase the valid­ity of certain scales and all scores considered in this study will include the "K" factor where is is applicable.
Investigators have used the Inventory in almost every possible way and literature on its use is voluminous. In this paper we shall confine ourselves to its use in the college situation.

Review of the Literature

The original normative work with the MMPI was done with clinical groups and normal groups in the general population. When the Inventory began to be used extensively in the college situation the question of college norms arose. Goodstein (14) and Black (1) compared findings from 10,000 subjects at 23 colleges and concluded that special norms for college populations are definitely needed. On the other hand, Tyler (39) found only minor differences between 1,000 University of California students scores and the general population standardization group. Goodstein (14) and Sopchak (37) investigated the need for regional norms, which would more clearly reflect behavior patterns as they were influenced by variance in education, national background and structure of the local population. The general conclusion to date is that there is no need for regional norms.

Early in the development of the MMPI the authors discovered a need for separate norms for men and women and subsequent research indicates that this need extends into the
college populations. Sopchak (37), for example, found that men scored high on the Mf, Ma, and Pt scales and low on Pa, whereas women were high on the Ma, Sc and Hy scales and low on D.

The writer's (10) own research at the University of Richmond agrees with the above findings. Both men and women differed markedly from the general population normative group. The men at Richmond were further from the general norm than the women, but closer to the norms of other college groups; the women here were closer to the normative group than the men, but further from the norms of other colleges. This again suggests a need for regional studies.

The MMPI has been investigated as an indicator of personality factors influencing choice of major area of study in college. Blum (2) found interesting and different profiles for majors in Education, English, Journalism, Medicine and Law, indicating that the MMPI may have utility in counseling as to vocational choice. Norman (35) found the MMPI valuable for distinguishing personality trends among various "majors". Various scales distinguished the "major" group from the remainder of the group. Weisgerber (41) and others have used the test as a screening device for various occupations. Morgan (33) also used it to compare achieving and nonachieving college students and found significant
differences on selected scales.

The MMPI has been widely used in another way. Many investigators have derived scales to measure other personality variables from the original 550 items on the MMPI. The best known of these derived scales is probably the Taylor Scale of Manifest Anxiety. Work with this scale has been widely done, but we cite only one reference that seems to bear on our study. Klugh (23) combined the ACE scores and his own inventory with the Taylor Scale to predict Quality Point Average.

Intelligence seems to be related to scores on some of the scales. Purcell (36) found significant relationships between "altitude-I.Q." discrepancy (arrived at by taking the several highest Wechsler subscores and prorating to get an "altitude-I.Q." from which she then subtracted the original total score to find the discrepancy) and anxiety as indicated by the scores on the Pt, Hs, and D scales on the MMPI. Wexner (42) found positive relation between the Pa scale only and I.Q., but he quotes Brower (5) who found sizeable correlations between I.Q. and the Pd, Hy, and Hs scales.

Another major line of research with the MMPI has been its use as a personality measure for the prediction of adjustment to college life. Some researchers have at-
tacked the problem from the standpoint of trying to identify the deviates (or poorly adjusted) in the college population. Hawkes (19) used a matched group technique and found no significant differences between a group having high scores on Hy, D, and Hs scales and a group whose scores were in the normal range. The groups were compared for Grade Point Ratio, referral to the Dean's office (for discipline, low scholarship, or commendation), ratings by faculty advisors, withdrawals from school, and other factors. Hampton (16) experimented with the test for two years at Western College and found that it did serve as a good screening device to sift out the students who needed counseling and the few cases who need psychiatric aid. He also states that the MMPI helped provide a clinical picture that helped to make treatment relatively easy.

Statement of the Problem

The purpose of this present study was to evaluate the MMPI as a device for predicting adjustment to college life and in this way predicting some of the factors that seem to make for success in college. The problem was to determine the relationship of MMPI scores to two measures of adjustment to college life: (1) the degree of integration into the social group, as measured by a sociometric procedure; and (2) the degree of personal adjustment, as measured through ratings by administrative personnel.
CHAPTER II

PROCEDURE

Subjects

The Experimental Population. The subjects in the study were from the freshman class of Westhampton College, the women's division of the University of Richmond. Westhampton women are a rather select group who rank quite highly in terms of intellectual ability and academic background as measured by the tests and national norms of the Educational Testing Service. Most freshman classes meet on the Westhampton campus and almost all the students live in the college dormitories. These factors make for a very close and continuous contact among the students.

The Sample. The group of subjects used was chosen from the freshman class of approximately 150 women entering in September 1955. Every third name was selected from an alphabetical list. This method gave a random sample of 49 girls, who probably constituted a representative cross-section of the class.
Tests and Rating Scales.

The Minnesota Multiphasic Personality Inventory. The booklet form of the test was administered to the entire freshman class in October 1955 as part of the Freshman Testing Program. This was the first time a personality test had been included in the battery and it was explained to the students that it was being used on a trial basis and that the results would not be sent to their faculty advisors as is the usual procedure. The rooms used were large and seated 100 or more students who were seated closely together. This test was given on the afternoon of the first day after several tests of general ability had been taken. No time limit was imposed and the time taken to complete the inventory varied greatly. The students followed the customary procedure and marked each statement "true" or "false" as it related to themselves. The answer sheet was the usual type in which a pencil is used to place marks between lines designated "true" or "false".

The answer sheets were hand scored with the usual keys. After the raw scores were obtained for the various scales, the "K" factor was added where it was appropriate, and the results were plotted on profile sheets. From these results the data pertinent to the sample group was
extracted.

There seemed every reason to believe that the MMPI scores obtained for the subjects were valid and comparable to those obtained elsewhere. Several studies have demonstrated the validity of group administration methods when compared to the individual form and method for the MMPI. Layton (25) retested the same subjects several times over a period of many weeks and found that the variations observed seemed to be a function of the individual scales and the time sequence of the trials, but that rank among the subjects remained relatively constant. Hence it was felt that nothing would be gained by retesting the subjects with either the individual or group techniques. The distribution of scores for the sample population compared favorably with the distribution of scores for the whole group and followed a normal distribution.

The Sociometric Scale. Working on the assumption that adjustment to college life depended to some extent upon acceptance by fellow classmates, it was decided to find out which women were accepted and which women were relatively isolated from the group. To do this a five-category, five-choice selection form was devised. The five categories were: roommates, party companions,
co-workers, confidants, and ideal persons. Each freshman was then asked to make a choice of five of her classmates in each category. For example, she was asked to choose five freshmen women for roommates. The complete scale is given in Appendix I.

It was felt that by using five different categories all the women who were accepted in any way would be distinguished from those who remained relatively isolated. Little effort was made to structure the situation; rather, a free choice was permitted and each woman chose according to subjective criteria as to what she considered a good roommate, etc.

The scale was administered in a group situation at a "compulsory attendance" freshman class meeting in March 1956. The room used was large, but it was crowded and many women had to sit on the floor to work. No instructions other than those on the form itself were given. The instructions were as follows:

This is not a test; there are no right or wrong answers. It is simply a survey to see how the members of the Freshman class of Westhampton College of September 1955 are now related to one another.

Make all the choices indicated trying to ignore all factors of distance, finances, and the opinions of others. Choose on the basis of your own evaluation and knowledge of the women.

You may use the same name several times, but try to consider each group separately.
In answer to questions, the examiner explained that the survey was simply "A sociometric measurement" and that the results would be confidential.

Apparently, all the women worked seriously at the task. There was no effort to compare choices or to seek advice. There was no resentment or frivolity, but simply a good-natured cooperation. Many of the women worked for half an hour, but most of them finished in about 15 minutes. Most of the papers were returned to the examiner folded like a ballot, although no such instruction had been given.

In general, it appeared that through the cooperation of the Dean and the women themselves, an almost ideal test situation had been obtained,

This inventory was scored by tabulating the votes each woman received in each category, and then adding the scores together to get a total vote for each subject. A normal distribution was obtained; the range was from zero to 121 with a mean of 24. A high score was felt to indicate high acceptability and this in turn probably indicated good adjustment.

The Deans' Rating Scale. In choosing this measure, the assumption was that the Dean of the College, the Dean of Students, and the Registrar, would be sufficiently familiar with this group of women to rate them
as to their adjustment to college life. The Deans are in frequent contact with the women with regard to matters of academic performance, school activities, discipline, etc. The Registrar has frequent contact with them regarding their programs and knows their accomplishments quite well. In addition, the raters live on the campus and have considerable social contact with the students.

After preliminary discussion it was decided that the raters would work together to produce one rating which would be a consensus of opinion. In actual practice, it developed that each rater rated the women that she felt she knew best and there was a minimum of conferring. This procedure had some disadvantages, but there was the definite advantage that each woman was rated by one who knew her well and was competent to rate her.

The scale was built around ten areas of adjustment to school life: Characteristic mood, reaction to stress, group relations, attitude to the future, reaction to guidance, attitude toward others, attitude toward home, attitude toward the school, competitive spirit and her work habits. The rater was to check one response in each category. Four responses were possible: (1) a very negative response, (2) a slightly negative response, (3) a slightly positive response, and (4) a very positive response. The experimenter and his faculty advisors felt
that this would make for discrimination among the women. Like the sociometric scale, this blank was limited to one sheet of paper. (See Appendix II) The person making the rating inserted the name of the woman being rated on the page and worked from an alphabetical list of names of the women comprising the random sample.

When the ratings were completed, the responses were arbitrarily scored negative one, negative two, positive one and positive two, for the appropriate response checked in each of the ten ratings. If any category had not been responded to and there was no check, the ratings given were averaged and multiplied by ten. Each individual score first having been converted into a positive score by the addition of plus 3: 1, 2, 4, 5, for the responses ranging from highly negative to highly positive as listed above. The highest possible score was 50 and the lowest possible score was 10. The actual range was 15 to 41 and the mean was 34.4. The high score was thought to reflect good adjustment, the low score poor adjustment to college life.
CHAPTER III

RESULTS

The outcome of the investigation will be considered under two major sections: (1) the comparison of the MMPI and the sociometric scale, and (2) the comparison of the MMPI and the Deans' Rating Scale. Each of the experimental scales was compared with the MMPI by correlation technique and then by a Chi-square technique*. During the course of the investigation, a comparison was made between the results of the Sociometric Scale and the Deans' Rating Scale, and they were found to have a Chi square relationship of .095. This result indicated that these two scales are relatively independent measures of adjustment to college life.

The Comparison of the MMPI and the Sociometric Scale.

Correlations. A product moment correlation was computed between the total score that each subject received on the sociometric scale with the scores the same subject received on the various scales of the MMPI. In all cases, the MMPI scores were raw scores, not T scores. The data is summarized in Table 1.

*All statistical procedures used in the study followed those described by McNemar (44).
TABLE 1

The Product Moment Correlations Between the Sociometric Scale and the MMPI scales

<table>
<thead>
<tr>
<th>MMPI Scale</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hs</td>
<td>-.155</td>
</tr>
<tr>
<td>D</td>
<td>-.122</td>
</tr>
<tr>
<td>Hy</td>
<td>-.001</td>
</tr>
<tr>
<td>Pd</td>
<td>-.114</td>
</tr>
<tr>
<td>Mf</td>
<td>-.070</td>
</tr>
<tr>
<td>Pa</td>
<td>-.061</td>
</tr>
<tr>
<td>Pt</td>
<td>-.066</td>
</tr>
<tr>
<td>Sc</td>
<td>-.044</td>
</tr>
<tr>
<td>Ma</td>
<td>.113</td>
</tr>
<tr>
<td>Si</td>
<td>-.078</td>
</tr>
</tbody>
</table>
An inspection of the table reveals that the Hypochondriasis (Hs) scale and the Sociometric Scale showed a correlation of \( -.155 \), Depression (D) and the Sociometric \( -.122 \), Hysteria (Hy) and the Sociometric \( -.001 \), Psychopathic Deviate (Pd) and Sociometric \( -.114 \), and the Hypomania (Ma) and Sociometric Scale \( .113 \). The remaining scales of the MMPI showed lower correlations: \( Nf \) \( -.070 \), \( Pa \) \( -.061 \), \( Pt \) \( -.066 \), \( Sc \) \( -.044 \) and \( Si \) \( -.078 \). None of these correlations reached statistical significance at the \( .05 \) level.

**Chi Square.** The sample group was split into two groups: (1) those subjects having one or more scale scores on the MMPI above the 70 level, and (2) those subjects who had no scores above 70. This division was made because of significance placed upon scores above 70 by many users of the MMPI. It is reported that this cutoff point, two standard deviations above the mean of 50, distinguishes a very large portion of the testees, who are deviates from the normal population.

The sample group was split on the Sociometric Scale at the whole scores nearest the median: subgroup (1) having scores of 17 or more. Table 2 shows the distribution. The resulting Chi square value was \( .082 \), which is not significant at the \( .05 \) level.
TABLE 2

The Chi Square Distribution of Scores

The Sociometric Scale Scores vs.
the MMPI T scores Above 70

<table>
<thead>
<tr>
<th>The MMPI Scale Scores Above 70</th>
<th>The Sociometric Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>One or more</td>
<td>16 Choices or Fewer</td>
</tr>
<tr>
<td></td>
<td>17 Choices or More</td>
</tr>
<tr>
<td>None</td>
<td>7 Ss</td>
</tr>
<tr>
<td></td>
<td>7 Ss</td>
</tr>
<tr>
<td></td>
<td>18 Ss</td>
</tr>
<tr>
<td></td>
<td>15 Ss</td>
</tr>
</tbody>
</table>

Chi Square = .082

Note: Two subjects in the sample had withdrawn from school and were not included in the selection by the women.
Split High-Low Comparison. One other technique was used to study the relationship of the MMPI scores to the Sociometric scores. In this technique two extreme groups were selected: (1) the 15 women getting the highest scores on the Sociometric Scale, and (2) the 15 women getting the lowest scores. These two groups were then compared for their scores on the MMPI. The means for each group were obtained and then the mean difference between the groups was obtained. A t-test was used to evaluate the difference as to its statistical significance. As Table 3 indicates, the differences were small and none were statistically significant, but the direction is as expected and is consistent. Women who had high scores on the MMPI were not chosen on the Sociometric scale as many times as those whose MMPI scores were in the "normal" range.

The Comparison of the MMPI and the Deans' Rating Scale.

Correlations. Again, product moment correlations were computed between the total score that each subject received on the Deans' Rating Scale, with the subjects' scores on each of the MMPI scales. The results are shown in Table 4. Inspection of this table reveals that the Deans' Rating Scale correlates with the Pd scale (-.253) in the expected direction. Subjects who were high on
TABLE 3

The Comparison of the High vs. the Low Groups on the Sociometric Scale for the mean Scores on the MMPI Scales.

<table>
<thead>
<tr>
<th>MMPI Scale</th>
<th>High Group Mean</th>
<th>Low Group Mean</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hs</td>
<td>12.3</td>
<td>13.7</td>
<td>1.4</td>
</tr>
<tr>
<td>D</td>
<td>17.1</td>
<td>18.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Hy</td>
<td>22.3</td>
<td>22.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Pd</td>
<td>21.6</td>
<td>22.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Mf</td>
<td>37.4</td>
<td>37.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Pa</td>
<td>10.3</td>
<td>10.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Pt</td>
<td>28.4</td>
<td>28.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Sc</td>
<td>26.0</td>
<td>25.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Ma</td>
<td>20.6</td>
<td>18.9</td>
<td>1.7</td>
</tr>
<tr>
<td>Si</td>
<td>19.8</td>
<td>22.9</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Note: High Group Ss chosen 28 times or more, Low Group Ss chosen 10 times or less.
### TABLE 4

The Product Moment Correlations Between the Deans' Rating Scale Scores and the MMPI Scale Scores

<table>
<thead>
<tr>
<th>MMPI Scale</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hs</td>
<td>-.110</td>
</tr>
<tr>
<td>D</td>
<td>-.079</td>
</tr>
<tr>
<td>Hy</td>
<td>-.102</td>
</tr>
<tr>
<td>Pd</td>
<td>-.253</td>
</tr>
<tr>
<td>Mf</td>
<td>.123</td>
</tr>
<tr>
<td>Pa</td>
<td>-.083</td>
</tr>
<tr>
<td>Pt</td>
<td>.004</td>
</tr>
<tr>
<td>Sc</td>
<td>-.176</td>
</tr>
<tr>
<td>Ma</td>
<td>-.002</td>
</tr>
<tr>
<td>Si</td>
<td>-.166</td>
</tr>
</tbody>
</table>
this scale were rated as poorly adjusted, or, in other words, they received more negative scores than those whose Pd scores on the MMPI were within the "normal" range. Following the same trend the Sc (-.176), Hs (-.110), Hy (-.102), D (-.079), Pa (-.083) and Si (-.166) all correlate negatively with the Deans' Rating Scale. None of the results were statistically significant (.05 level) individually, but they are in the expected (negative) direction.

Chi square. The group was split, as before at T score 70 on the MMPI and compared with the ratings on the Deans' Scale. The Rating Scale scores were divided into two groups at the whole scores nearest the median: a low rating group (36 and below) and a high rating group (above 37). The distribution is shown in Table 5. This Chi square score was 4.45, which is significant at the 2% level in the expected direction (a one-tailed statistical test).

As a further check on this result, the names of the subjects in our random sample were presented to the raters again. This time they were asked to check the names of the 15 women whom they considered "well-adjusted" and the 15 women they considered "poorly-adjusted." No further instruction was given. The raters complied with
TABLE 5

The Chi Square Distribution of Scores, the Deans' Rating Scale Scores vs. the MMPI T Scores Above 70.

<table>
<thead>
<tr>
<th>The MMPI Scale Scores Above 70</th>
<th>The Deans’ Rating Scale</th>
<th>Score 36 or less</th>
<th>Score 37 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>One or more</td>
<td>10 Ss</td>
<td>3 Ss</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>14 Ss</td>
<td>19 Ss</td>
<td></td>
</tr>
</tbody>
</table>

Chi Square = 4.45

Note: There were 46 subjects who were rated; two had withdrawn and one was not rated.
this request in a conference session that lasted about one-half hour. The results of this choice selection method were substantially the same as those for the rating scale. (Appendix III)

While none of these results taken individually are as positive as one could desire, there seems some significance in the fact that all the results are in the expected direction (negative). In the case of the Sociometric Scale, all ten MMPI scales correlate in the predicted direction: nine of the scales being negative and the Ma scale being positive, as might be expected in a college population. If there were no relation between these measures (null hypothesis), we would expect only five of the ten scales to be in the predicted direction by chance. By chance this would happen only one time in a thousand, so we can reject the null hypothesis at the .001 level. In the same manner the Deans' Scale Ratings correlate with the MMPI scales in the expected direction nine times out of ten, so we can reject the null hypothesis at the .01 level.
CHAPTER IV
DISCUSSION

There are facts that indicate that the two adjustment scales do relate to the MMPI in similar ways, although they themselves are statistically independent.

The Sociometric Scale. The fact that the correlations between the MMPI scales and the Sociometric Scale are all in the expected direction (negative) with the single exception of the Ma scale, suggests that they may be, in some degree, measuring a common factor which we have chosen to call "unacceptability." In general then, high scores on the MMPI scales would seem to indicate the presence of personality variables that would make the woman's integration into the college life more difficult. The variability between the correlations, suggests that elevated scores on some of the MMPI scales may indicate the presence of traits or behavior that would be less acceptable in the college situation, than the behavior indicated by high scores on other scales. Hence, further experimentation and verification might lead to the discovery of a group of scales that, taken together, would indicate a syndrome of "acceptability" or "nonacceptability."
In the neurotic triad (the Hs, D, and Hy scales of the MMPI), the Hs and D scales correlate to about the same degree (-.155 and -.122) and both are in the expected direction. A high score on these scales indicates a tendency to neurosis which would make the woman less acceptable. This fact, together with the observed result that the Hy scale does not show an opposite trend, would indicate that these scales may be working together to indicate the unacceptable neurotic. The writer's earlier research (10) revealed that the means for the freshman class on these three scales were Hs 51, D 48.5, and Hy 56, and the standard deviation on the Hy scale was 1.31. This may indicate a higher level of hysteria symptoms in the experimental group than in the general population, which might account for the acceptability of other persons who manifest similar symptoms.

The psychotic triad, Pa, Pt, and Sc, shows the three scales correlating at the same level and in the same expected direction: Pa -.061, Pt -.066, and Sc -.044. These correlations, though not statistically significant in themselves, are not disheartening either. They add to the picture of personality disorder that influences "acceptability." Judging from the obtained differences in correlation coefficients, there is an interesting problem as to why
psychotic behavior seems to be more acceptable than neurotic behavior; i.e., lower negative correlations indicates higher acceptability. A guess might be that the woman who has some tendency toward behavior of a psychotic nature, might inhibit these tendencies better and keep them from any outward manifestation; whereas neurotic tendencies might not be inhibited as well, tend to become more annoying and lower the woman's "acceptability."

The Pd scale seems to indicate the same general trend and direction as the neurotic triad. The Mf scale shows a slight negative correlation as might be expected in a highly select group in a small southern college. One might argue that femininity would be more acceptable in this situation. The Ma scale is the only one that does not show a negative correlation, but rather shows a positive correlation: high on the Ma (hypomania) scale being high on the Sociometric Scale. This may be explained when the authors in the manual (18) admit that it is extremely difficult to devise a scale that will differentiate the clinically hypomanic from the person who is normal, but full of plans, vigorous, and ambitious. All these qualities that might make the normal person appear manic would also make her most acceptable in a college situation. Even the true hypomanic might be acceptable socially, to a point, because of her activity and enthusiasm.
The Chi square check on this comparison, splitting the group at the 70 T score on the MMPI, and considering whether those above 70 would be ranked low on the Sociometric Scale, showed a resulting Chi square of .082. This result is not statistically significant, but is again in the expected direction.

The split high-low technique gives very much the same picture with only the Sc scale showing a different (positive) direction, but a very slight difference. Here again the simple fact becomes evident that women whose MMPI scores were high, are not accepted into the group at the same level, or with the same readiness, as the one whose MMPI scores are entirely "normal." Our split on the Sociometric Scale was arbitrary: 15 high, 15 low. Another split at a different level might show the MMPI more discriminating than this one.

The Deans' Rating Scale. With this measure, too, we find the MMPI correlating slightly in the expected direction, the triads close together and the Pd scale distinguishing rather well. This latter scale at -.253 is close to the level of statistical significance, the 5% level would be at .288.

The Chi square method gives a significant result: 4.45, a significant at the 2% level on a one-tailed test.
It appears that the MMPI when used in this way, does differentiate between "normal" and the "deviant" or, in our case, in the college situation between the "well-adjusted" and the "poorly-adjusted." This is in keeping with the findings of the authors, since the authors have emphasized the significance of scores above 70 and this comparison uses that score to divide the group. Probably regular correlation methods do not show this result so well because of the wide variance within the limits of "normal" behavior. A difference of 20 points in an MMPI score would not seriously affect "normality" as measured by the MMPI, if the two scores were within the normal range. However, when the woman obtains a score that is two standard deviations from the mean, she then merits some special consideration at least. The efficiency of this measure may be heightened when used in the college situation as a screening device, by establishing local norms (or college norms) and then selecting the scales that distinguish at a higher level. No scales can be ignored, since a high MMPI score on any of the scales may indicate abnormality, but probably a special emphasis can be placed on a few scales for their own scores and for the relation one to another.

**THE TWO SCALES.** Since both the Sociometric Scale
and the Deans' Rating Scale indicate positive results are being obtained with the MMPI, and these two measures when compared to each other give a Chi square of .095, we have evidence that they are two fairly independent measures of what constitutes adjustment to college life. It may well be practical to use these two scales to derive a scale from the MMPI responses (as has been done for "dependency", "anxiety", sex deviation", etc.) that will measure "adjustment to college" at a significant level. It would also be interesting to compare the findings from these scales to find out which women are rated high on both, low on both, or high on one and low on the other, and then try to find out the reasons for the differences. Doubtless there are some factors that would be more important to the Dean than to the classmate in considering subjects as to "adjustment."

In general, the results of this investigation are what might have been expected. The MMPI is working to discriminate the groups we are interested in, but further work and particular adaptation would probably serve to increase its value as a screening tool. However, because the correlations are low, a special note of caution is in order. This instrument should not be used alone, except as a screening tool that might sift out the deviates in
the college population for further testing and counseling. All of the studies to date, with which the writer is familiar, come to this same conclusion.
CHAPTER V

SUMMARY AND CONCLUSIONS

The MMPI was administered to the Freshman Class at Westhampton College in October 1955, and from this group of testees a random sample was selected for this study.

A Sociometric Scale was administered to the entire freshman class in a group situation approximately six months later, to determine the degree to which each woman had been accepted into the group. The scores that the women in the random sample group obtained on this scale were then compared with their respective scores on the MMPI to find out if the MMPI served in any way to predict this matter of "acceptability." Product moment correlations were run for the sample group and then Chi square comparisons were made between the women who had one score or more above 70 on the MMPI and those women whose scores were entirely within the normal range. In addition, a further check was made by dividing the group and selecting two extreme subgroups: the 15 women who scored highest on the Sociometric Scale and the 15 women who scored lowest. With these groups t tests of significance were run.
Secondly, the Dean of the College, the Dean of Students, and the Registrar, rated the women in the sample group as to adjustment to college life. The scores for adjustment were compared to the MMPI results in the same manner as the Sociometric scores had been.

The results of this study indicate that the MMPI does distinguish the group that is "acceptable" or "well-adjusted" from the group which is not. Correlations show low statistical reliability, but when the sample was divided into two groups (those who had one score or more above 70 on the MMPI, and those who did not), it was found that there was a significant relationship (at the 2% level) between this classification and the Deans' Ratings.

The MMPI is a valuable tool for screening purposes in the college situation, but the variable results would restrict its use to sifting out students who appear as deviates for the purposes of further testing and counseling. None of the results of this study would warrant the use of this instrument alone as a positive and decisive measure to restrict the entry of anyone into college, or to terminate her attendance at college.

The writer concludes this study with the conviction that there is a very fertile field here for almost limitless further study.
BIBLIOGRAPHY


21. Hovey, H. B. MMPI profiles and personality characteristics. *Journal of Consulting Psychology,* 1953, 17, 142-146.


APPENDIX
APPENDIX I

CHOOSE A PERSON INVENTORY
CHOOSE A PERSON INVENTORY

This is not a test, there are no right or wrong answers. It is simply a survey to see how the members of the Freshman class of Westhampton College of September 1955 are now related to one another.

Make the choices indicated trying to ignore all factors of distance, finances, and the opinions of others. Choose on the basis of your own evaluation and knowledge of the girls.

You may use the same name several times, but try to consider each group separately.

1. Which five (5) FRESHMAN girls would you choose for roommates?


2. Which five (5) FRESHMAN girls would you choose for companions on a weekend party?


3. Which five (5) FRESHMAN girls would you choose to work with you on a very difficult job with which none of you have previous experience?


4. Which five (5) FRESHMAN girls would you choose to go to for advice or assistance in a very serious personal difficulty?


5. Which five (5) FRESHMAN girls do you think are the ideal Freshman coeds?


APPENDIX II

PERSONALITY RATING SCALE
PERSONALITY RATING SCALE

Student's name ________________________________

Please check the one response in each group you think best fits this subject.

SCORING

HER CHARACTERISTIC MOOD:
5  ____ She is gay, carefree, optimistic
2  ____ She is sober, serious
4  ____ She is cheerful, happy
1  ____ She is rather sad, gloomy, pessimistic

HER REACTION UNDER STRESS ("under fire"):  
2  ____ She becomes nervous
4  ____ She is steady, calm, resourceful
1  ____ She breaks down, "goes to pieces"
5  ____ She works best under pressure

HER GROUP RELATIONS:  
1  ____ She never leads, content to be led
5  ____ She must lead, is "bossy"
4  ____ She tends to be leader, but doesn't insist on it
2  ____ She tends to follow, but can and does lead sometimes

HER ATTITUDE TOWARD THE FUTURE:
1  ____ She is anxious, worried
4  ____ She plans, is optimistic
2  ____ She doesn't plan too well, rather pessimistic
5  ____ She is unconcerned, indifferent, carefree

HER REACTION TO GUIDANCE, CORRECTION, DISCIPLINE:
2  ____ She is compliant, obedient
5  ____ She is servile, subject
1  ____ She is rebellious, resentful, disobedient
4  ____ She is receptive, respectful

HER ATTITUDE TOWARD OTHERS:
5  ____ She is trusting, gullible, effusive
2  ____ She is reserved, suspicious
1  ____ She is unfriendly, distrustful, deceptive
4  ____ She is cordial, friendly, receptive

HER ATTITUDE TOWARD HOME:
4  ____ She is seldom homesick, but writes regularly
1  ____ She is often homesick, writes almost daily, very dependent
5  ____ She is never homesick, independent, seldom writes
2  ____ She is sometimes homesick, writes frequently

HER ATTITUDE TO THE SCHOOL:
1  ____ She is critical, suspicious, "grumps" a great deal
4  ____ She is enthusiastic, interested
5  ____ She is wildly enthusiastic, "sold on everything"
2  ____ She is rather indifferent, disinterested

HER COMPETITIVE REACTION:
2  ____ She is a poor competitor, doesn't try too hard
5  ____ She wins at any cost, "do or die"
1  ____ She gives up easily, doesn't care
4  ____ She competes well, does her best

HER WORK HABITS:
2  ____ She would rather play, a bit careless
5  ____ She works all the time, "an eager beaver"
4  ____ She is a good worker, conscientious
1  ____ She is a bit lazy, puts things off, doesn't apply herself
APPENDIX III

DATA
APPENDIX III

DATA FOR EXPERIMENTAL GROUP

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VITA
VITA

The writer was born in New York City in 1917. He was educated in the public and parochial schools of that city. In 1942 he felt called into the Christian Ministry and prepared for this service at Moody Bible Institute, and Northern Baptist Seminary Chicago, Manchester College and Grace Seminary, Indiana, and Waynesburg College in Pennsylvania. After service in the pastorate for four years he came to Ettrick, Virginia, and the pastorate of Fellowship Baptist Church. His long interest in Mental Health and Psychology led him to his present study at the University of Richmond.