

A COMPARISON OF THE SELF ACTUALIZED VALUE SCALE OF THE PERSONAL
ORIENTATION INVENTORY, SELECTED SCALES OF THE MINNESOTA
MULTIPHASIC PERSONALITY INVENTORY, AND SELECTED
CARDS OF THE THEMATIC APPERCEPTION TEST



A Thesis
Presented to
the Department of Psychology
Emporia Kansas State College



In Partial Fulfillment
of the Requirements for the Degree
Master of Science



by
Warner Reed Blackburn
May 1975

Thesis
1975
13

Del. A. Cross

Approved for the Major Department

Harold E. Duest

Approved for the Graduate Council

363695

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ACKNOWLEDGMENTS

I extend my deep appreciation to my advisor, Dr. Elton Amburn, as well as to Dr. W. Maurice McLean and Dr. Howard Schwartz, who served on my committee. Their assistance and cooperation helped considerably in making this study possible.

Acknowledgment and appreciation is also expressed to my wife, Rhnae, whose support and encouragement was invaluable.

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Chapter 1

INTRODUCTION

One of the concerns of this investigation is the manner in which self-actualization is indicated in both projective and objective tests. Maslow has stated that individuals who are less self-actualized exhibit fewer resources that can be utilized in building positive, creative, and healthy conceptions of their environment. Maslow defined self-actualization as, ". . . the full use and exploitation of talents, capacities, potentialities, etc."¹ Thus, people with these characteristics seem to be fulfilling themselves by doing the best that they are capable of doing.² Knapp has written that self-actualization is positively and significantly related to the lack of neurotic symptoms and behavioral tendencies. Persons manifesting neurotic symptoms and behavioral tendencies apparently are not living up to their full potential.³

¹Abraham Maslow, Motivation and Personality (New York: Harper and Brothers, 1954), p. 200.

²Ibid., p. 201.

³Robert R. Knapp, "The Relationship of a Measure of Self-Actualization to Neuroticism and Extraversion," Journal of Consulting Psychology, 29 (1965), 168-172.

People suffering from emotional difficulties show social ineptness and/or have problems in dealing with their environment. Research by Shostrom and Knapp revealed that patients in beginning stages of therapy manifest more social alienation and withdrawal, while patients in advanced stages of therapy tend to display more healthy interpersonal relations. Clients in advanced therapy tend to view man's essential nature in constructive terms and are more capable of developing intimate contacts.⁴

Many instruments have been designed to measure aspects of social behavior, including alienation, uneasiness, and attitudes. Instruments such as the Minnesota Multiphasic Personality Inventory and the Personal Orientation Inventory are designed to obtain a numerical score upon which judgments are based. Projective techniques are also capable of measuring these areas, even though their usefulness depends more upon the judgment and analysis of the examiner.

THE PROBLEM

The primary purpose of this investigation was to explore the relationship between objective techniques versus projective techniques as used in the area of personality assessment. The theoretical base for this investigation was

⁴ Everett L. Shostrom and Robert R. Knapp, "The Relationship of a Measure of Self-Actualization (POI) to a Measure of Pathology (MMPI) and to Therapeutic Growth," American Journal of Psychotherapy, 20 (1966), 193-201.

Allport's contention of the manner in which abnormal and normal subjects respond when administered both objective and projective personality tests. Allport has written that:

. . . the direct responses of the psychoneurotic cannot be taken at their face value. The defenses are high; the true motives are hidden and are betrayed only by a projective technique. The normal subjects, on the other hand, tell you by the direct method precisely what they tell you by the projective method.⁵

Other studies designed to investigate the above statement by Allport concerning projective and objective techniques have been reported in literature. Rodgers investigated the relationship of projective expression to direct expression of achievement, aggression, and nurturance.⁶ In a separate study, the Thematic Apperception Test and the California Study Methods Survey were utilized by Honor to measure attitudes toward educational achievement in high school boys.⁷

This investigation was concerned with self-actualization factors and other personality factors that enable individuals to cope with environmental demands. The tests used in this study were the Personal Orientation Inventory, the

⁵Gordon W. Allport, Personality and Social Encounter (Boston: Beacon Press, 1960), p. 101.

⁶Charles W. Rodgers, "The Relationship of Projective to Direct Expression of Need Aggression, Achievement, and Nurturance in Selected Populations," Dissertation Abstracts, 33B:2355, November, 1972.

⁷Stephen H. Honor, "The TAT and Direct Methods of Obtaining Educational Attitudes of High and Low Achieving High School Boys," Journal of Clinical Psychology, 28 (1972), 81-9.

Minnesota Multiphasic Personality Inventory, and the Thematic Apperception Test.

Statement of the Problem

A comparative study of objective and projective tests reveals the significance of the control group and experimental group responses. One of the primary questions to be answered involves whether projective tests reveal the same personality traits as objective tests. If a cluster of personality traits are revealed by the POI and MMPI, then would these same personality traits become manifest by use of the TAT?

Statement of the Hypotheses

1. There are no significant differences between the male and female subjects of the experimental and control groups as indicated by the mean T scores of the Thematic Apperception Test and the Personal Orientation Inventory.

2. There are no significant differences between the male and female subjects of the experimental and control groups as indicated by the mean T scores of the Thematic Apperception Test and the Minnesota Multiphasic Personality Inventory.

3. There are no significant differences between the male and female subjects of the experimental group and control

DEFINITION OF TERMS

Objective Test

Allport has defined "objective testing" as, ". . . any kind of testing where the final scores represent a sum or pattern of a series of conscious choices on the part of the subject."⁸

Projective Test

With regard to "projective tests," Abt and Bellak stated:

The basic assumption in the use of these tests is that the subject is presented with a number of ambiguous stimuli and is then invited to respond to these stimuli. By such means it is assumed that the subject projects his own needs and press and that these will appear as responses to the ambiguous stimuli.⁹

Self-Actualization

Concerning self-actualized people, Maslow wrote:

Such people seem to be fulfilling themselves and to be doing the best that they are capable of doing. They are people who have developed or are developing to the full stature of which they are capable.¹⁰

LIMITATIONS OF STUDY

The subjects comprising the control group were limited to the freshmen class of 1974 at Emporia Kansas State College.

⁸Allport, loc. cit.

⁹Lawrence Abt and Leopold Bellak, Projective Psychology (New York: Alfred A. Knopf, 1950), p. 9.

¹⁰Maslow, loc. cit.

The control group was selected by the writer and his committee chairman.

The subjects comprising the experimental group were limited to patients institutionalized at Osawatomie State Hospital. Out-patients at Osawatomie State Hospital were not included.

Forty subjects were selected to participate. The control group and experimental group were each made up of ten males and ten females. An additional male and female subject was chosen for each group to help cope with possible losses. The subjects' age range was 17 to 24 years of age inclusive.

The selected personality inventory scales utilized in this study were the Self Actualized Value Scale of the POI and the Psychopathic Deviate and Social Introversion scales of the MMPI. The selected TAT cards utilized in this study were cards 1, 2, and 13 MF.

Chapter 2

REVIEW OF LITERATURE

A search of the literature revealed little material directly relevant to the present study. Several of the studies cited in this chapter utilized the measurement of achievement factors to determine the attainment of primary goals. The present study utilized self-actualization factors.

Rodgers investigated the relationship of projective tests and self reports. The theoretical base used for this investigation was Allport's contention that only normal subjects indicate through objective testing techniques what they reveal by projective methods. In Rodgers' investigation, group TATs were administered to 161 subjects. Each TAT protocol was judged for the strengths of aggression, achievement, and nurturance needs. A self report schedule was utilized to obtain the subjects' self reported need strengths for these three factors. Rodgers concluded that highly reliable interjudge ratings can be obtained for assessing the need strengths of aggression, achievement and nurturance from TAT protocols. Rodgers also stated that:

. . . self reports don't provide the same information for nonpsychotic subjects as provided by the projective expression of these need strengths. Projective test

response expressed need strengths cannot be meaningfully predicted from self reports.¹¹

Two different methods of assessing attitudes towards educational achievement were compared by Honor. The two methods were based on derivations from two contrasting theories of attitudes and their measurement. Honor stated:

According to the views of Allport, an individual's attitudes will be revealed most directly by use of a questionnaire or attitude survey. Supporters of projective methods, particularly Magda Arnold, feel that "true" attitudes are more likely to be disclosed by the use of projective techniques.¹²

The California Study Methods Survey, a direct attitude survey that deals with attitudes towards achievement in school, was used in Honor's investigation. A method of obtaining attitudes regarding achievement from TAT protocols, developed by Arnold, was also utilized. These two measures were administered to a group of high school students who had been identified as varying widely with respect to academic achievement. It was hypothesized that the high achievers would express favorable attitudes towards achievement on both the TAT and attitude survey. Low achievers were expected to express favorable attitudes on the attitude survey and unfavorable attitudes on the TAT. The high achievers performed as expected. The low achievers expressed unfavorable attitudes on both attitude measurement devices for the

¹¹Rodgers, loc. cit.

¹²Stephen H. Honor, "The TAT and Direct Methods of Obtaining Educational Attitudes of High and Low Achieving High School Boys," Journal of Clinical Psychology, 28 (1972), 81-89.

majority of the low achieving sample. In both cases, the TAT was found to be a more accurate discriminative tool than the attitude scale. It was concluded that the TAT was a more potent predictor of high and low achievement than the direct attitude scale.¹³

Cummin utilized the TAT in an investigation of executive performance. It was hypothesized that successful executives would score high in Achievement, Power, Aggression, and Deference needs. A written form of the TAT and a modified version of McClelland's scoring manual for Achievement, Affiliation, and Power needs were administered to the subjects. The descriptive and scoring manual for Autonomy, Aggression, and Deference needs were devised by Cummin. It was concluded that the analysis of motives by means of the TAT has promise for executive selection, although practical use of this technique is limited.¹⁴

Whitely, in a study designed to assess adaptive ego functioning, stated, "The concept of adaptive ego functioning relates to differences among individuals in their capacity to cope with and to master the environment in which they live."¹⁵ Citing a study involving superior achievers and underachievers, Whitely continued:

¹³Ibid.

¹⁴Pearson C. Cummin, "TAT Correlates of Executive Performance," Journal of Applied Psychology, 51 (1967), 78-81.

¹⁵John M. Whitely, "A Method for Assessing Adaptive Ego Functioning Using the Thematic Apperception Test," The Journal of Experimental Psychology, 34 (1966), 1-21.

It appears that there is substantial agreement between prediction of how the heroes in TAT stories should behave and empirical findings. The TAT heroes of superior achievers were more adaptive in their handling of needs and press, more often accepted responsibility for their behavior and were better able to control their impulses in the handling of conflict.¹⁶

Harrison investigated leadership in children as related to intellectual ability, academic performance, social interaction patterns, and scores on a number of psychological tests. The tests utilized were the WRAT reading and arithmetic subtests, the Draw-A-Man Test, the WISC vocabulary and block design subtests, and five cards of the TAT. No identifiable patterns of thematic expression discriminating leaders from nonleaders were revealed by analysis of the TAT results. However, a few isolated language and thematic variables within chance limits did significantly differentiate the two groups of children. The results indicated that children chosen as leaders tend to be healthier, higher achievers in school, and more socially adept than those infrequently chosen as leaders.¹⁷

Schwartz administered the MMPI, TAT, Rorschach, and Marlowe-Crowne Social Desirability Scale to nineteen college students and nineteen psychiatric patients. The TAT was scored for social desirability by two judges who assigned

¹⁶Ibid.

¹⁷C. Wade Harrison, James R. Rawls, and Donna J. Rawls, "Differences Between Leaders and Nonleaders in Six to Eleven-year-old Children," The Journal of Social Psychology, 84 (1971), 269-72.

each theme a score from one (not at all socially desirable) to five (extremely socially desirable). Analysis of the tests indicated that the true and false measures of the Marlowe-Crowne SDS and the TAT measures of social desirability and adjustment had some degree of validity. Regarding the TAT measure of social desirability, Schwartz reported that his investigation:

. . . doesn't agree with Reynolds who found that judges did not agree in their ratings of the titles of frequently occurring TAT themes for the degree of social desirability. In this study, the interrater reliability for the two judges was .87.¹⁸

It can be concluded that there has been little research but much discussion into the relationship that exists between projective and objective techniques. Disagreement exists on whether projective techniques provide the same information as objective techniques. These differing viewpoints concerning information manifested on objective and projective tests are expressed by personalities in different fields of psychology.

¹⁸Stephen Schwartz, "Convergent and Discriminant Validity of Three Measures of Adjustment and Three Measures of Social Desirability," The Journal of Consulting and Clinical Psychology, 39 (1972), 239-42.

Chapter 3

METHODS AND PROCEDURES

The relationship between objective test results and projective test results achieved by normal and abnormal subjects was investigated in this study. The procedures utilized in this investigation will be discussed in this chapter, which has been divided into five sections. These sections are: subjects, instrumentation, procedure, data collection, and statistical procedure.

SUBJECTS

Two groups of subjects, consisting of twenty individuals per group, were selected for this study. The age range was 17 to 24 years of age inclusive for both groups. The control group was chosen from four departments at Emporia Kansas State College. The departments were the Biology, Art, Industrial Education, and Chemistry Departments. A list was compiled of all the freshmen level class sections under these four departments. Each class section was assigned a four digit numeral from a book of random digits. The four digits were added together and the sections corresponding to the lowest and highest figures resulting from this summation were chosen for this study. From the class rosters of

these two sections, the names of all males enrolled in the sections were obtained. Each name received a number from a book of random numbers. The names of ten males that had been paired with an odd number were chosen to take part in the control group. This same procedure was used to randomly select the ten female subjects for the control group.

The experimental group was randomly selected from forty patients institutionalized at Osawatomie State Hospital. The forty patients, comprised of twenty males and twenty females, were between the ages of 17 and 24 inclusive. The names of the twenty male patients each received a number from a table of random numbers. Ten patients whose name had been paired with an even number were chosen to take part in the experimental group. The same procedure was used to choose ten female subjects for the experimental group. One extra male and one extra female subject were randomly chosen for both the control group and experimental group to help cope with the possible loss of subjects.

INSTRUMENTATION

The Personal Orientation Inventory, the Minnesota Multiphasic Personality Inventory, and the Thematic Apperception Test were utilized in this study. The following is a description of the above tests.

Personal Orientation Inventory

The Personal Orientation Inventory, or POI, is a 150 item, forced choice questionnaire that requires about thirty minutes to complete. The POI attempts to identify the self-actualized person who is more fully functioning and lives a more enriched life than the average person. The 150 items are scored first for two basic scales of self-actualization. The Support Scale was developed to measure whether reactivity is basically "other-oriented" or "self-oriented". A self-actualized person integrates both orientations and this integration expresses itself in an optimal ratio between other directedness and inner directedness. The Time Competence Scale measures the degree to which an individual uses his time effectively. Ratio scores are expressed for both scales.¹⁹

The "self-actualized value" scale (SAV scale) of the POI was used in this investigation. High scores on the SAV scale implies the presence of self-actualized personality traits.

Minnesota Multiphasic Personality Inventory

The Minnesota Multiphasic Personality Inventory, or MMPI, is a 566 item test designed to provide an objective assessment of some of the major personality characteristics

¹⁹J. Fox and R. R. Knapp, "Assessment of Self-actualization of Psychiatric Patients: Validity of the Personal Orientation Inventory," Educational and Psychological Measurement, 28 (1968), 565-66.

that affect personal and social adjustment. Two scales were selected for use in this study out of the original ten profile scales that have been developed for clinical use of the MMPI. These scales were the psychopathic deviate scale (scale Pd) and the social introversion scale (scale Si).

The psychopathic deviate scale was developed to measure the personality characteristics of the amoral and asocial subgroup of persons with psychopathic personality disorders. The main features of the personality pattern include a repeated and flagrant disregard for social customs and an emotional shallowness in relation to others. Some of the items of the scale involve poor morale, sexual problems, and frank admission of personal limitations.²⁰

The social introversion scale contains items that describe the person's uneasiness in social situations in addition to having items that cover a variety of special sensitivities, insecurities, and worries.²¹ Individuals who score high on the Si scale often prefer to avoid social activity and tend to be introverted, shy and socially inept. Low scorers are gregarious, outgoing, sociable, assertive, and adept at interpersonal manipulation.²²

²⁰W. Grant Dahlstrom and George Schlager Welsh, An MMPI Handbook (Minneapolis: University of Minnesota Press, 1960), pp. 60-63.

²¹Ibid., p. 77.

²²Richard I. Lanyon, A Handbook of MMPI Group Profiles (Minneapolis: University of Minnesota Press, 1968), p. 8.

Thematic Apperception Test

The Thematic Apperception Test, or TAT, consists of thirty pictures printed on individual cards. For administration of the test, ten cards are usually chosen from the available thirty. The subject is instructed to tell a story about each picture presented to him. He is asked to include what the events were that led up to the situation depicted in the picture, what the actual situation is, and what the final outcome might be. The stories are later analyzed for information concerning the individual's fantasies, attitudes, aspirations, and preoccupations. In this investigation, TAT cards 1, 2, and 13 MF were utilized.

The TAT was designed for investigative purposes and may be viewed as representative of reality situations. The pictures permit systematic exploration of specific areas of potential conflict. Experimental use has revealed that the TAT is a multidimensional instrument that elicits from a subject a rich source of data about himself.²³ The TAT is capable of a wide variety of interpretations. Clues to personality can be identified through the subject's tendency to interpret ambiguous situations in directions conforming to his own present wants and to past behaviors.²⁴

²³Harold H. Anderson and Gladys L. Anderson, An Introduction to Projective Techniques (Englewood Cliffs: Prentice-Hall, Inc., 1951), pp. 181-82.

²⁴Leonard W. Ferguson, Personality Measurement (New York: McGraw-Hill Book Co., 1952), pp. 359-60.

One conclusion that can be formulated is that the POI, MMPI, and TAT provide information pertaining to how an individual responds to his environment. This information includes his interpersonal contacts, as well as how he uses his resources to form positive and healthy concepts of life and human nature.

PROCEDURES

The POI and MMPI were administered to the control group using the standard procedures outlined by the authors of the tests. The instructions printed on the front of the test booklets were carefully explained to the subjects. After administration of the POI and MMPI, the TAT was administered in group form.²⁵ The subjects were required to write out their stories in response to each of the three TAT cards. The cards were presented one at a time and placed where they could be seen clearly. The subjects comprising the experimental group were administered the same three tests as the control group and received identical instructions. All of the subjects in the study were able to cooperate and it was not necessary to use the two extra subjects.

²⁵Leopold Bellak, The TAT and CAT in Clinical Use (New York: Grune and Stratton, 1971), p. 115.

DATA COLLECTION

Data collection consisted of administering and collecting the answer sheets in order for them to be scored and recorded. Each subject's set of test data received a code number which simplified organizing and recording the data.

STATISTICAL PROCEDURE

The subjects' MMPI answer sheets were hand scored. The raw scores were placed on MMPI profile sheets which contained precalculated T scores. The T scores of the Pd and Si scales were entered on tables for use in the study.

The subjects' POI answer sheets were machine scored. The raw scores were placed on POI profile sheets which contained precalculated T scores. The T scores on the SAV scale were entered on tables.

Each subject's set of three TAT stories were rated by the experimenter on a three point continuum. Point one implied "difficulty in coping effectively with environmental demands." This level of response corresponded to a T score of less than 43 and was designated as being below average for the normal population. Point three implied the "ability to cope effectively with environmental demands." This level of response corresponded to a T score greater than 57 and was designated as being above average for the normal population. Point two was designated as a neutral continuum position. This level of response corresponded to T scores from 43 to 57

and was designated as being average for the normal population. For a more detailed examination of the continuum, see Appendix A.

The accuracy of the experimenter's TAT ratings were checked by a psychologist with experience in projective techniques. Using the continuum, the psychologist rated eight sets of TAT stories. Four sets of stories were randomly selected from the experimental group and four sets were randomly selected from the control group. The results of the psychologist's ratings were withheld until the experimenter had completed a TAT continuum rating on each subject involved in the study. The completed ratings performed by the psychologist and experimenter were then compared. When a discrepancy was found as to what level a particular set of TAT stories should receive, the two ratings were averaged together. The raw continuum scores that resulted from this procedure were converted into T scores by using the formula:²⁶

$$T = 50 + 10Z$$

where, $Z = \frac{X - \bar{X}}{S}$ = A standard score

X = An original measurement

\bar{X} = The mean of the distribution

S = The standard deviation of the distribution

²⁶Woodrow W. Wyatt and Charles M. Bridges, Statistics for the Behavioral Sciences (Boston: D. C. Heath and Company, 1967), p. 36.

All of the statistical information concerning the raw TAT scores was programmed into a computer which then calculated the T scores.

The T scores for the POI, MMPI, and TAT were recorded on IBM cards and the mean T scores for the male control group, female control group, male experimental group, and female experimental group were calculated. A computer was then used to calculate t-tests between the mean T scores achieved by the four groups of subjects.²⁷ A table of the t-distribution contained t-tests indices of various levels of significance.²⁸ After examining this table, the t-test indices calculated in this study were reorganized into five tables to simplify examination and analysis of the data. The procedure of using t-tests was for the purpose of detecting a level of significance, above which the hypothesis was rejected.

After consultation with authorities, it was decided that in order to reject a group-hypotheses, three or more factors should be significantly different on at least the .05 level. Two or less factors, significantly different at the .05 level, were the criteria to accept the hypotheses.²⁹

The statistical procedures employed in this study involved the computation of t-tests between the mean T scores

²⁷B. J. Winer, Statistical Principles in Experimental Design (New York: McGraw-Hill, 1962), p. 218.

²⁸Wyatt, op. cit., p. 271.

²⁹Based on consultation with Dr. Cooper Holmes and Dr. Chris Joseph.

of the POI, MMPI, and TAT. The computing of t-tests was for the purpose of revealing significant differences, thereby accepting or rejecting the hypotheses.

Chapter 4

ANALYSIS OF DATA

The purpose of this study involved identifying information applicable to the diagnosis and prognosis of mental disorders as a function of therapy. Significant differences between the mean T scores of selected scales of the POI and MMPI and cards of the TAT were analyzed. These analyses were to determine the practicality of reducing the duplication of testing in the use of the above diagnostic instruments.

The following five tables present t-test indices between the POI-TAT, MMPI-TAT, and POI-MMPI. Listed in the tables are the various combinations of personality inventory scales, cards, and groups of subjects between which the t-tests were calculated. Footnotes were used to indicate t-test indices at the .05, .01, and .001 levels of confidence.

POI and TAT

The mean T scores of the POI and the mean T scores of the TAT were compared in Table 1. The first factor listed in Table 1 compared the male control group's mean T score on the POI with the female control group's mean T score on the TAT. The t-test index produced from this collation, 3.9139, was significant at the .01 level of confidence. All other factors in Table 1 are read in a like manner.

Table 1

t-test Indices for Experimental and Control
Groups on Mean T Scores of TAT and POI

Group	Personality Test	<u>t</u> -test
Male Control Female Control	POI TAT	3.9139 ^b
Male Control Male Experimental	POI TAT	1.1248
Male Control Female Experimental	POI TAT	.6627
Female Control Male Experimental	POI TAT	.4436
Female Control Female Experimental	POI TAT	1.0428
Male Experimental Female Experimental	POI TAT	.0662

^a.05 level of significance

^b.01 level of significance

^c.001 level of significance

Analysis of Data in Table 1

No significant differences were computed between the subjects' responses on the TAT and POI with the exception of the male control-female control factor. The occurrence of a significant difference in this factor may have been due to an inefficient use of time and effort spent by the male control group in answering the POI questions carefully. Low scores on the POI may reflect a hurried or careless approach to the test since it measures the effective use of time and

the optimal use of an individual's resources. Since only one factor demonstrated a significant difference, the hypothesis was accepted that there were no significant differences between the mean T scores of the TAT and POI. This implies that there is little difference between the information provided by the TAT and POI about the subjects in this study.

TAT and MMPI (Pd)

Table 2 compares the mean T scores of the TAT and the mean T scores of the MMPI (Pd). The purpose of the table was to make known any significant differences that might exist between the MMPI (Pd) and TAT. Table 2, as well as the other tables that follow, should be read in the same manner as in the reading of Table 1 on page 24.

Analysis of Data in Table 2

Analysis of the data in Table 2 revealed the factors that were significantly different between the TAT and MMPI (Pd) at the .05 level of significance or greater. Significant differences were revealed on all factors with the exception of the male control-female control factor. The probable cause of this anomaly was that the TAT themes expressed by the female control group implied an above average ability in coping with environmental demands. The female control group's mean TAT score was high enough to warrant this assumption. The hypothesis that there were no significant differences between the mean T scores of the

Table 2

t-test Indices for Experimental and Control Groups
on Mean T Scores of TAT and MMPI (Pd)

Group	Personality Test	<u>t</u> -test
Male Control Female Control	MMPI (Pd) POI	.6320
Male Control Male Experimental	MMPI (Pd) POI	3.2064 ^b
Male Control Female Experimental	MMPI (Pd) POI	4.1557 ^c
Female Control Male Experimental	MMPI (Pd) POI	2.1325 ^a
Female Control Female Experimental	MMPI (Pd) POI	2.8841 ^b
Male Experimental Female Experimental	MMPI (Pd) POI	10.2837 ^c

^a.05 level of significance

^b.01 level of significance

^c.001 level of significance

TAT and MMPI (Pd) was rejected since five factors showed significance. It can be inferred that a subject revealing factors of good adjustment on the TAT would correspondingly score in the normal range or between a T score of 46 and 54 on the MMPI (Pd),³⁰ thereby verifying a lack of pathological symptoms.

³⁰Starke R. Hathaway and Elio D. Monachesi, Adolescent Personality and Behavior (Minneapolis: University of Minnesota Press, 1963), p. 30.

TAT and MMPI (Si)

The mean T scores of the TAT were compared with the mean T scores of the MMPI (Si) in Table 3. The purpose of the table was to show significant differences, if any, between the TAT and MMPI (Si) by using a control and experimental group of females and males.

Table 3

t-test Indices for Experimental and Control Groups
on Mean T Scores of TAT and MMPI (Si)

Group	Personality Test	t-test
Male Control	MMPI (Si)	
Female Control	TAT	.6112
Male Control	MMPI (Si)	
Male Experimental	TAT	2.1586 ^a
Male Control	MMPI (Si)	
Female Experimental	TAT	2.9859 ^b
Female Control	MMPI (Si)	
Male Experimental	TAT	1.3514
Female Control	MMPI (Si)	
Female Experimental	TAT	2.1117 ^a
Male Experimental	MMPI (Si)	
Female Experimental	TAT	1.1959

^a.05 level of significance

^b.01 level of significance

^c.001 level of significance

Analysis of Data in Table 3

Three of the six factors of the TAT and MMPI (Si) had significant differences at the .05 level or greater. The

factors that did not embody significant differences were the male control-female control, female control-male experimental and male experimental-female experimental factors.

The male control group's high scoring on the MMPI (Si) was the most likely cause for an absence of a significant difference in the male control-female control factor. This group's responses on the Si scale were on the average slightly above the normal range.

The lack of a significant difference in the female control-male experimental factor may have been due to an overall difficulty by the male experimental group in coping adequately to environmental challenges. This difficulty was indicated in the male experimental group's low mean T score on the TAT continuum.

An absence of a significant difference between the male experimental-female experimental factor may have been caused by the female experimental group experiencing difficulty in contending with environmental demands. This difficulty was signified in the low scores achieved by the female experimental group on the TAT continuum. The mean TAT score produced by this group was the lowest of the four groups of subjects involved in the study and was designated as being below average for the normal population.

As a result of the findings described above, the hypothesis that there were no significant differences between the mean T scores of the TAT and MMPI (Si) was rejected.

Therefore, it can be stated that a subject producing TAT responses reflecting at least an average amount of personality integration would be apt to score in the normal range on the MMPI (Si).

POI and MMPI (Pd)

The mean T scores of the POI and the mean T scores of the Pd scale of the MMPI were compared in Table 4. Placing the test scores in tabular form facilitated examination and analysis of the data.

Analysis of Data in Table 4

The comparisons of all six factors of the POI and MMPI (pd) revealed significant differences at the .01 level of confidence. The most likely explanation for the occurrence of these significant differences is the diversity between the POI and MMPI. Higher scores on the POI imply a person who is more fully functioning, who makes good use of his talents and capabilities, and who enjoys a more enriched life. Higher scores on the MMPI (Pd), however, suggest the characteristics of emotional shallowness in relation to others and poor morale. The hypothesis stating there were no significant differences between the mean T scores of the POI and MMPI (Pd) was rejected since all factors showed significant differences. This implies that a person scoring high on the POI would score in the normal range or below on the MMPI (Pd).

Table 4

t-test Indices for Experimental and Control Groups
on Mean T Scores of POI and MMPI (Pd)

Group	Personality Test	<u>t</u> -test
Male Control Female Control	POI MMPI (Pd)	3.0973 ^b
Male Control Male Experimental	POI MMPI (Pd)	8.7940 ^c
Male Control Female Experimental	POI MMPI (Pd)	6.8646 ^c
Female Control Male Experimental	POI MMPI (Pd)	7.6172 ^c
Female Control Female Experimental	POI MMPI (Pd)	5.7908 ^c
Male Experimental Female Experimental	POI MMPI (Pd)	6.2656 ^c

a. .05 level of significance

b. .01 level of significance

c. .001 level of significance

POI and MMPI (Si)

Compared in Table 5 were the mean T scores of the POI and the mean T scores of the MMPI (Si). The table facilitated analysis of the data in order to examine any significant differences between the POI and MMPI (Si).

Analysis of Data in Table 5

Significant differences were computed between the POI and MMPI (Si). Four of the factors were found to be significant at the .05 level of confidence or greater. The

Table 5

t-test Indices for Experimental and Control Groups
on Mean T Scores of POI and MMPI (Si)

Group	Personality Test	<u>t</u> -test
Male Control Female Control	POI MMPI (Si)	2.4318 ^a
Male Control Male Experimental	POI MMPI (Si)	1.6709
Male Control Female Experimental	POI MMPI (Si)	5.7511 ^c
Female Control Male Experimental	POI MMPI (Si)	.0000
Female Control Female Experimental	POI MMPI (Si)	4.3657 ^c
Male Experimental Female Experimental	POI MMPI (Si)	4.9816 ^c

^a.05 level of significance

^b.01 level of significance

^c.001 level of significance

statistical treatment of the male control-male experimental and female control-male experimental factors did not reveal significant differences.

The absence of a significant difference in the male control-male experimental factor was probably caused by the low scoring on the Si scale by the male experimental group. The mean Si scale attributed to this group was within the normal range for the MMPI, but was the lowest of the four groups of subjects involved in this study.

The probable cause for a t -test index of .0000 within the female control-male experimental factor also involved the low scores produced by the male experimental group on the Si scale. In addition, the female control group's mean POI score was the highest of the four groups of subjects. The scores on the POI and MMPI (Si) both imply normal functioning and no significant difference was noted.

Since four factors contained significant differences, the hypothesis that there were no significant differences between the POI and MMPI (Si) was rejected. A person scoring well on the POI would therefore be expected to score within the normal limits of the MMPI (Si).

Summary of Findings

Analysis of the data implied that little difference existed between the information provided by the TAT and POI about the subjects in this study. An individual scoring high on the POI or TAT would most likely score in the normal range on the Pd and Si scales of the MMPI. Any duplication of information between the POI, TAT, and MMPI would result in significant differences between the factors of the POI-MMPI and TAT-MMPI. These significant differences would occur because high scores on the POI and TAT imply normal functioning, while high scores on the MMPI indicate possible pathological disorders.

A collation of the TAT and MMPI (Pd) indicated that about 83 percent of the factors showed significance on at

least the .05 level of confidence. Comparing the POI and MMPI (Pd) revealed that 100 percent of the factors were significant on at least the .01 level of confidence. This was the normal expectancy range of scores.

Comparing the TAT and MMPI (Si) revealed that significant differences on the .05 level of confidence or greater existed between 50 percent of the factors. About 66 percent of the factors between the POI and MMPI (Si) showed significance on the .05 level.

A congruency by the POI, TAT, and MMPI of information about the subjects in this study was implied by the significant differences described above. Ten factors of the POI-MMPI were significantly different on at least the .05 level of confidence. Eight factors of the TAT-MMPI were significantly different on the same level of confidence. The number of significantly different POI-MMPI factors was about sixteen percentage points greater than the number of TAT-MMPI factors showing significant differences. The mean T scores of the TAT and POI duplicated the mean T scores of the MMPI. The POI, however, evidently produced more scores of the type replicating the information obtained from the MMPI.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was designed to provide information on reducing the duplication in the use of projective and objective testing. The information provided by such tests plays an important part in the diagnosis and treatment of mental disorders. Gathering and analyzing the data in this investigation resulted in a number of conclusions. These conclusions could make possible a more effective use of the POI, MMPI, and TAT.

SUMMARY

An experimental and control group, each consisting of twenty subjects between the ages of 17 and 24 inclusive, were randomly selected to participate in the study. The experimental group was selected from patients institutionalized at Osawatomie State Hospital. The control group was chosen from the freshman class of 1974 at Emporia Kansas State College. All subjects were administered the POI and MMPI in their entirety and cards 1, 2, and 13 MF of the TAT. After administration and scoring of the subjects' responses to the instruments, t-tests were used to detect significant differences between the mean T scores of the SAV scale of the POI, scales Pd and Si of the MMPI, and the three cards of

the TAT. It was hypothesized that there would be no significant differences between these mean T scores.

A lack of significant differences between the POI and TAT was revealed by analysis of the data. This implied that the information provided by the POI and TAT about the subjects in this study was quite similar. The analyses of the POI-MMPI (Pd, Si) and TAT-MMPI (Pd, Si), which were conducted in the same manner as in the comparison of the POI and TAT, revealed significant differences at the .05 level of confidence or greater. The most likely cause of these significant differences was that high scores on the POI and TAT imply normal functioning while high scores on the MMPI imply pathological disorders. A congruency of the mean T scores of the POI, MMPI, and TAT was implied by the significant differences that were calculated.

CONCLUSIONS

One of the findings of this study is that the POI and TAT evoke quite similar information. Therefore, in a battery of tests, only one of the two instruments would probably be needed for diagnostic purposes. It has been revealed that the POI indicated only normal responses. Both the MMPI and TAT indicate normal and abnormal responses. The use of the MMPI and TAT in the diagnosis and prognosis of mental disorders would provide information concerning aspects of good personality functioning in addition to any indications

of pathological disorders. The use of the POI could add supportive information to the findings of the MMPI and TAT in cases of normal personality diagnosis, and therefore might be useful in verifying the information obtained from the administration of these two tests.

RECOMMENDATIONS

The following four recommendations might prove beneficial to researchers in this area of study.

1. The use of a larger number of subjects for both the control and experimental groups would improve the effectiveness of the sampling procedures. This improvement would result because larger groups of randomly selected subjects are apt to be more representative of the normal population than smaller groups.

2. A five-point continuum could be substituted for the three-point continuum utilized in this study. The addition of two points to the scale with which to perform the TAT ratings would contribute to the ratings' accuracy by enabling the scoring to be more precise.

3. Specific groups of mental illness such as schizophrenia could be isolated and compared to normal groups of subjects by using the three instruments described in this study.

4. Using a greater number of scales of the POI and MMPI and cards of the TAT would increase the reliability of the instruments.

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APPENDICES

APPENDIX A

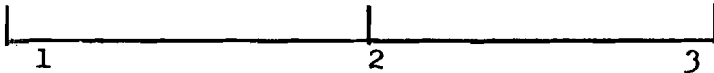
THEMATIC APPERCEPTION TEST CONTINUUM

THEMATIC APPERCEPTION TEST CONTINUUM

Cards 1, 2, and 13 MF

Subject Number _____

After reading the enclosed set of TAT stories, please summarize their overall tone and mood by placing a mark on the appropriate continuum point. The three continuum points correspond to the three levels of response listed below.



- 1 . . . Difficulty in coping with environmental demands
- 2 . . . Neither distinct ability nor distinct difficulty in coping with environmental demands
- 3 . . . Ability to cope effectively with environmental demands

APPENDIX B

RAW SCORES OF THE POI, MMPI, AND TAT

Table 6

Male Control Group Raw Scores of the
 POI (SA), MMPI (Pd, Si), and
 TAT (Cards 1, 2, 13 MF)

Subject	Raw Scores			
	POI	MMPI		TAT
		Pd	Si	
1	20	22	28	3
2	24	21	32	3
3	16	17	24	2
4	17	20	28	3
5	20	25	20	2
6	16	25	36	1
7	14	23	30	2
8	20	20	24	3
9	12	28	47	1
10	17	27	28	1

Table 7

Female Control Group Raw Scores
of the POI, MMPI, and TAT

Subject	Raw Scores			
	POI	MMPI		TAT
		Pd	Si	
11	23	21	21	3
12	20	22	31	2
13	20	26	13	3
14	20	19	21	2
15	19	17	28	3
16	19	24	36	2
17	14	29	23	2
18	23	20	22	3
19	24	16	35	3
20	16	19	33	3

Table 8

Male Experimental Group Raw Scores
of the POI, MMPI, and TAT

Subject	Raw Scores			
	POI	MMPI		TAT
		Pd	Si	
21	19	26	16	3
22	21	28	27	2
23	22	28	17	3
24	16	29	35	1
25	17	32	27	1
26	20	31	23	1
27	20	31	12	1
28	13	31	16	1
29	14	32	31	2
30	24	30	28	2

Table 9

Female Experimental Group Raw Scores
of the POI, MMPI, and TAT

Subject	Raw Scores			
	POI	MMPI		TAT
		Pd	Si	
31	17	37	47	1
32	16	36	46	1
33	20	34	42	1
34	17	35	39	1
35	19	33	31	2
36	14	18	34	1
37	23	34	27	1
38	10	32	41	2
39	17	28	44	2
40	17	27	41	3

APPENDIX C

T SCORES OF THE POI, MMPI, AND TAT

Table 10

Male Control Group T Scores of the POI (SA),
MMPI (Pd, Si) and TAT (Cards 1, 2, 13 MF)

Subject	T Scores			
	POI	MMPI		TAT
		Pd	Si	
1	49	57	53	62
2	62	55	58	62
3	36	46	49	50
4	39	53	53	62
5	49	64	45	50
6	36	64	63	38
7	29	60	55	50
8	49	53	49	62
9	22	71	74	38
10	39	69	53	38
Mean T Scores	41.0	59.2	55.0	51.8

Table 11

Female Control Group T Scores of the POI (SA),
MMPI (Pd, Si) and TAT (Cards 1, 2, 13 MF)

Subject	T Scores			
	POI	MMPI		TAT
		Pd	Si	
11	59	55	46	62
12	49	57	56	50
13	49	67	38	62
14	49	50	46	50
15	46	46	53	62
16	46	62	63	50
17	29	74	48	50
18	59	53	47	62
19	62	43	62	62
20	36	50	60	62
Mean T Scores	48.4	55.7	51.9	57.2

Table 12

Male Experimental Group T Scores of the POI (SA),
MMPI (Pd, Si) and TAT (Cards 1, 2, and 13 MF)

Subject	T Scores			
	POI	MMPI		TAT
		Pd	Si	
21	46	67	41	62
22	52	71	52	50
23	55	71	42	62
24	36	74	62	38
25	39	81	52	38
26	49	79	48	38
27	49	79	37	38
28	26	79	41	38
29	29	81	56	50
30	62	76	53	50
Mean T Scores	44.3	75.8	48.4	46.4

Table 13

Female Experimental Group T Scores of the POI (SA),
MMPI (Pd, Si) and TAT (Cards 1, 2, 13 MF)

Subject	T Scores			
	POI	MMPI		TAT
		Pd	Si	
31	39	93	74	38
32	36	90	73	38
33	49	86	69	38
34	39	88	66	38
35	46	83	56	50
36	29	48	61	38
37	59	86	52	38
38	16	81	68	50
39	39	71	71	50
40	39	69	68	62
Mean T Scores	39.1	79.5	65.8	44.0