

INTERRELATIONSHIPS AMONG RELIGIOUS ORIENTATION,
CHURCH ATTENDANCE, AND CERTAIN PERSONALITY
VARIABLES OF FEMALE NEUROPSYCHIATRIC
PATIENTS

APPROVED:

Sidney Hamilton
Major Professor

Jack R. Hayner
Minor Professor

Swane Kingery
Director of the Department of Psychology

Robert B. Toulson
Dean of the Graduate School

INTERRELATIONSHIPS AMONG RELIGIOUS ORIENTATION,
CHURCH ATTENDANCE, AND CERTAIN PERSONALITY
VARIABLES OF FEMALE NEUROPSYCHIATRIC
PATIENTS

THESIS

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

Marvin Leon Morris, B. A.

Denton, Texas

June, 1967

TABLE OF CONTENTS

	Page
LIST OF TABLES	iv
LIST OF ILLUSTRATIONS	v
Chapter	
I. INTRODUCTION	1
II. METHOD	16
III. RESULTS AND DISCUSSION	22
IV. SUMMARY AND RECOMMENDATIONS FOR FURTHER RESEARCH	28
APPENDIX A	32
APPENDIX B	33
APPENDIX C	34
APPENDIX D	35
APPENDIX E	36
APPENDIX F	39
APPENDIX G	40
APPENDIX H	41
APPENDIX I	42
APPENDIX J	43
BIBLIOGRAPHY	44

LIST OF TABLES

Table	Page
I. Subjects' Religious Denominational Preferences . . .	16
II. Attendance Categories	19
III. Fisher's t Test Comparison of Patients Who Did and Did Not Return Questionnaires	34
IV. Fisher's t Test Comparison of Subjects of Fundamental and Liberal Religious Orientations	35
V. Analysis of Variance	36
VI. Fisher's t Test Comparisons of Fundamental and Liberal Subjects within Attendance Categories	39
VII. Fisher's t Test Comparisons of the Pd Scores of Fundamental Subjects among Attendance Categories	40
VIII. Fisher's t Test Comparisons of the Pd Scores of Liberal Subjects among Attendance Categories	41
IX. Fisher's t Test Comparisons of the Si Scores of Fundamental Subjects among Attendance Categories	42
X. Fisher's t Test Comparisons of the Si Scores of Liberal Subjects among Attendance Categories	43

LIST OF ILLUSTRATIONS

Figure	Page
1. Comparison of Mean MMPI Pd Scores of Fundamental and Liberal Subjects of Four Categories of Church Attendance	25
2. Comparison of Mean MMPI Si Scores of Fundamental and Liberal Subjects of Four Categories of Church Attendance	26

CHAPTER I

INTRODUCTION

Historical Background

In 1950, Allport (1, p. 1) stated that "among modern intellectuals--especially in the universities--the subject of religion seems to have gone into hiding" and that "even psychologists, to whom presumably nothing of human concern is alien, are likely to retire into themselves when the subject is broached." He then concluded that "a sentiment and a belief of such extent cannot be disregarded whether for reasons of professional modesty or disinterest" (1, p. 2).

A theory of personality should include a consideration of the extent to which the individual's culture influences his development. Freud stated that religion "is perhaps the most important item in the psychological inventory of a civilization" (6, p. 14). Allport places similar emphasis upon the importance of religion:

✓ What a man believes to a large extent determines his mental and physical health. What he believes about his business, his associates, his wife, his immediate future, is important; even more so, what he believes about life in general, its purpose and design. Religious belief, simply because it deals with fundamentals, often turns out to be the most important belief of all (1, p. 79).

Most theorists agree that religion is an important consideration in personality development, but there is little

agreement upon religious views. Freud referred to religion as [√]"the universal obsessional neurosis of humanity; like the obsessional neurosis of children, it arose out of the Oedipus complex, out of the relation to the father" (6, p. 43). He further stated that "devout believers are safeguarded in a high degree against the risk of certain neurotic illnesses; their acceptance of the universal neurosis spares them the task of constructing a new one" (6, p. 44). Freud later commented that the technique of religion

[√] consists of depressing the value of life and distorting the picture of the real world in a delusional manner-- which presupposes an intimidation of the intelligence. At this price, by forcibly fixing them in a state of psychical infantilism and by drawing them into a mass-delusion, religion succeeds in sparing many people an individual neurosis. But hardly anything more (5, pp. 84-85).

Jung's views of religion are diametrically opposed to those of Freud. He expressed the following opinion:

[√] During the past thirty years, people from all the civilized countries of the earth have consulted me. Many hundreds of patients have passed through my hands, the greater number being Protestants, a lesser number Jews, and not more than five or six believing Catholics. Among all my patients in the second half of life--that is to say, over thirty-five--there has not been one whose problem in the last resort was not that of finding a religious outlook on life. It is safe to say that every one of them fell ill because he had lost what the living religions of every age have given to their followers, and none of them has been really healed who did not regain his religious outlook (11, p. 334).

Allport views religion as an immature-mature developmental continuum, the extremes of which closely parallel the Freudian and Jungian positions (1).[√] "Immature religion,

whether in adult or child, is largely concerned with magical thinking, self-justification, and creature comfort. . . . By contrast, mature religion is less of a servant and more of a master" (1, p. 63).

✓ Argyle (2, p. 1) asserts that psychologists have devoted too much of their energies to attacking or supporting religion and battling or bantering among themselves. He contends that "psychologists have been diverted from their proper task-- that of discovering empirical generalizations or laws governing religious beliefs, behaviour and experiences, together with finding theories or mechanisms to explain these laws."

Description of the Instrument

Most significant studies of the relationship between religion and personality have used the Minnesota Multiphasic Personality Inventory (MMPI), developed by Hathaway and McKinley (8), to provide personality patterns for comparison. The MMPI is a personality inventory consisting of four validity scales and ten clinical scales and can be administered to individuals or groups. Subjects should be at least sixteen years of age and must have completed a minimum of six years of successful schooling (8, p. 4). The following descriptions of the MMPI scales are summarized from Hathaway and McKinley (8, pp. 18-21).

The Validity Scales

The Question Score (?).--Subjects are instructed to answer as many of the test questions as possible, and the number of questions left unanswered constitutes the ? score. High scores indicate defensiveness, and if large numbers of questions are unanswered, the test validity is questionable.

The Lie Score (L).--High L scores indicate that the subject may have attempted to choose responses which would present him in a socially acceptable manner. A high L score usually indicates that obtained test scores are probably below their true values.

The Validity Score (F).--High F scores usually indicate random responses, confusion, or malingering. Extremely low F scores may indicate defensiveness and denial of emotional tension.

The K Scale (K).--The K score is a measure of test-taking attitude. A high score may indicate defensiveness, while a low score may indicate a tendency to exaggerate symptoms. A K-correction factor is usually employed to adjust the clinical scales to the subject's test-taking attitude.

The Clinical Scales

The Hypochondriasis Scale (Hs).--High Hs scores usually indicate abnormal concern about bodily functions and health. Egocentricity, immaturity, and lack of insight are also characteristic of hypochondriasis.

The Depression Scale (D).--High D scores usually indicate the clinical pattern of depression, which consists of pessimism, feelings of hopelessness, introversion, and lack of self-confidence. A high D score may also indicate preoccupations with death and suicide.

The Hysteria Scale (Hy).--High Hy scores usually indicate that the subject is likely to develop conversion-type reactions under stress. Immaturity is also indicated by high Hy scores.

The Psychopathic Deviate Scale (Pd).--A high Pd score may indicate that the subject is amoral, emotionally shallow, unable to profit from punishing experiences, and likely to disregard social customs and mores.

The Interest Scale (Mf).--The Mf scale measures masculine and feminine interest patterns. A high score indicates an interest pattern similar to that of the opposite sex; however, homosexual abnormality cannot be assumed. The Mf interests are most appropriately used in vocational selection.

The Paranoia Scale (Pa).--High Pa scores usually indicate suspiciousness, oversensitivity, and delusions of reference, influence, and grandeur.

The Psychasthenia Scale (Pt).--The Pt scale is a measure of the obsessive-compulsive syndrome, which consists of compulsive behavior, phobias, worry, lack of confidence, and excessive vacillation in making decisions.

The Schizophrenia Scale (Sc).--High Sc scores usually indicate bizarre thought patterns and poor reality testing.

The Hypomania Scale (Ma).--High Ma scores usually indicate overactivity, emotional excitement, and flight of ideas.

The Social Introversion Scale (Si).--High Si scores usually indicate a tendency to withdraw from social contacts and responsibilities.

MMPI Studies of Religion and Personality

In 1948, Brown and Lowe (4) conducted one of the earliest studies of religion and personality in which the MMPI was used to define personality. Their study has been a model for many subsequent investigations.

Brown and Lowe administered their Inventory of Religious Belief to 622 Protestant and 166 Catholic undergraduate students. The Inventory is a measure of acceptance or rejection of traditional Christian dogma, with high scores indicating high acceptance. The Catholic and Protestant students' scores were then compared statistically.

The Catholic group scored significantly higher than did the Protestant group. Catholic church members scored significantly higher than did Protestant church members, but nonmembers of both groups did not differ. Catholic members scored significantly higher than did members of the individual Protestant denominations except Baptists. The Catholic and Baptist scores were almost identical.

As a group, the Protestant students assumed a moderate position regarding acceptance of Christian dogma; they neither

strongly rejected nor strongly accepted it. The Inventory of Religious Belief ranked the mean scores of the individual Protestant denominations along a liberal-fundamental continuum from Episcopal to Baptist. The extreme denominations, Episcopal and Baptist, were significantly different from the moderately-ranked denominations, but few differences existed among the moderate denominations. Nonmembers scored significantly below all denominations.

The second section of the Brown and Lowe study was a comparison of the personality patterns of groups who differed greatly on religiosity scores; these groups were Believers, Nonbelievers, and Bible college students. The fifty-eight Believers and the fifty Nonbelievers represent the upper nine per cent and the lower eight per cent of the initial 622 Protestant undergraduates who were ranked along a liberal-fundamental continuum based on their scores on the Inventory of Religious Belief. A group of thirty-five Bible college students was included for purposes of comparison; the mean Inventory score for this group was slightly above that of the Believers.

The MMPI was administered to the three groups, and the following differences were found to be significant:

1. Male Bible students scored higher on the Lie scale than did the male Nonbelievers.

2. Male Nonbelievers scored higher on the Depression scale than did the Believers, but Bible students had the largest percentage of high scores.

3. The male Nonbelievers scored much higher on the Interest scale than did the males of the other two groups.

The findings obtained by Brown and Lowe are interesting, and may indicate tendencies to be investigated, but the groups studied were from different intellectual levels. A comparison of college entrance examination scores reveals that while the Believers and the Bible college students were from equal strata, the Nonbelievers were intellectually superior to both.

Johnson (10) administered the MMPI and the Stone Measurement of Religious Attitudes to 200 undergraduate students. The liberal-fundamental religiosity scores obtained from the Stone test were correlated with the MMPI scores. Scales L, Hy, Mf (female), Pa, and Pt were found to be correlated positively with religiosity, and the remaining scales were negatively correlated. The negative relationship between depression and religiosity was the only significant correlation, but the negative correlation between the male Mf scores and religiosity approached significance.

Johnson then compared church attendance patterns and abnormal MMPI scores. Hathaway and McKinley stated that "most abnormal subjects score above 70 on one or more of

the present scales. The majority of clearly abnormal persons score above 70 on two or more scales" (7, p. 9).

Johnson found that subjects who do not attend church are much more likely to have MMPI scores above 70 than are subjects who do attend church. However, the relationship between church attendance and MMPI patterns with two or more scores above 70 suggests a U-shaped function in which both extremes are much more pathological than are the moderate categories. Also, the religiosity score was found to be a function of frequency of church attendance.

Broen (3) administered Thurstone's Attitude Toward the Bible, Attitude Toward God, and Attitude Toward Sunday Observance scales to a group of 140 male college students. The total scores provided an index of religiosity which was used to separate the subjects into three groups of religiosity.

All subjects were given the MMPI and comparisons were made among the three groups. The only significant difference was between the extreme groups on the paranoia scale; the most religious group scored higher. The MMPI scores were then correlated with each of the Thurstone scales. MMPI depression was negatively correlated with the Attitude Toward the Bible scale. MMPI psychasthenia was positively correlated with the Attitude Toward Sunday Observance scale.

Jalkanen (9) compared the MMPI scores of 100 Lutheran seminarians with the MMPI scores of college students, graduate

students, Roman Catholic seminarians, and the MMPI male standardization group. The following significant differences were found:

1. The Lutheran seminarians scored higher on scales Hs, Hy, Pd, Mf, and Pa than did the college students.
2. The Lutheran seminarians scored higher on scales D and Mf than did graduate students.
3. The Lutheran seminarians scored lower on scale D than did the Roman Catholic seminarians. The Lutherans and Catholics were not compared on scales Hs, Pd, Pt, Sc, and Ma.
4. The Lutheran seminarians scored lower on scales L and Si, and higher on scales K, Hs, Hy, Pd, Mf, Pa, Pt, Sc, and Ma than did the MMPI male standardization group.

Ranck (13) drew a representative sample of 800 male students from twenty-eight Protestant theological schools. The subjects were administered the Scale of Religious Attitude and Belief and were ranked along a liberal-conservative continuum. The lower twenty-seven per cent of the subjects were compared with the upper twenty-seven per cent of the subjects on the basis of their MMPI scores. Religious liberals were found to score significantly higher on scales Ma and Mf.

Ranck hypothesized that liberals score slightly higher on the Ma scale because they have left the secure confines of orthodoxy and are experiencing some anxiety in their quest to resolve religious problems. He further speculated that

the liberals' higher Mf score should not be interpreted as being a homosexual tendency. Ranck concluded that liberals score higher on the Mf scale because they possess more aesthetic sensitivity and have a less dichotomous definition of sex roles.

Vaughan (14) administered the MMPI to 162 Catholic and 103 Protestant male freshman college students. Each subject was a church member and attended a minimum of two services yearly. The Protestants scored significantly higher on scales F, D, and Mf.

Vaughan conducted a chi-square analysis of MMPI questions in the F, D, and Mf scales and found that nine MMPI questions dealt with religious differences between the two groups. He concluded that "items dealing with religious belief rather than moral conduct contributed to the divergence" (14, p. 417).

The differences Vaughan obtained might have been greater if he had obtained a more representative sample of Protestants. Two-thirds of the Protestants studied were students at the Catholic university where the Catholic students were selected, and the largest proportion of the Protestants were Episcopalian.

Kania (12) conducted a study to determine whether the MMPI K score is an indication of defensiveness and psychological weakness or a sign of personality integration among seminarians. Subjects were selected from three seminaries, representing conservative, moderate, and liberal theological

views. All subjects were administered a battery of tests consisting of the MMPI K scale, the Religious Belief Inventory, Heilbrun's Defensiveness Scale, The Rokeach Dogmatism Scale, Journard's Self-Disclosure Scale, Bills' Index of Adjustment and Values, and the IPAT Anxiety Scale. High K scores were found to be positively correlated with openness or low dogmatism, self-concept and self-acceptance, adjustment, and ego strength.

The Religious Belief Inventory correctly identified the conservative, moderate, and liberal groups, as did the progressive increase in the K scores.

The MMPI has been shown to be an adequate instrument for investigating the relationship between religion and personality. It has revealed personality differences among many types of subjects who vary in their religious orientation. However, research in this area is still in a very primitive stage. Most previous studies have been based on students and seminarians, and the findings of these studies cannot be generalized to other populations.

Statement of the Problem

This study was conducted to investigate the interrelationships among religious orientation, church attendance, and certain personality variables of female neuropsychiatric patients.

Hypotheses

The following hypotheses were investigated:

1. There will be no significant differences between the personality patterns of female neuropsychiatric patients of fundamental and liberal religious orientations.

2. There will be no significant differences between the personality patterns of female neuropsychiatric patients of fundamental and liberal religious orientations who have similar patterns of church attendance.

3. There will be significant differences on the MMPI Pd scale among female neuropsychiatric patients of fundamental religious orientation who have different patterns of church attendance.

4. There will be significant differences on the MMPI Pd scale among female neuropsychiatric patients of liberal religious orientation who have different patterns of church attendance.

5. There will be significant differences on the MMPI Si scale among female neuropsychiatric patients of fundamental religious orientation who have different patterns of church attendance.

6. There will be significant differences on the MMPI Si scale among female neuropsychiatric patients of liberal religious orientation who have different patterns of church attendance.

CHAPTER BIBLIOGRAPHY

1. Allport, Gordon W., The Individual and His Religion, New York, The Macmillan Company, 1950.
2. Argyle, Michael, Religious Behaviour, London, Routledge & Kegan Paul, 1958.
3. Broen, William E., "Personality Correlates of Certain Religious Attitudes," Journal of Consulting Psychology, XIX (January, 1955), 64.
4. Brown, D. G. and W. L. Lowe, "A Study of Religious Beliefs and Personality Differences in College Students," unpublished master's thesis, Department of Psychology, University of Denver, Denver, Colorado, 1948.
5. Freud, Sigmund, Civilization and Its Discontents, London, The Hogarth Press, 1930.
6. _____, The Future of an Illusion, London, The Hogarth Press, 1927.
7. Hathaway, Starke R. and J. Charnley McKinley, Minnesota Multiphasic Personality Inventory Manual, New York, The Psychological Corporation, 1943.
8. _____, Minnesota Multiphasic Personality Inventory Manual, Rev. ed., New York, The Psychological Corporation, 1951.
9. Jalkanen, Ralph J., "The Personality Structure of Seminars: The Use of Available MMPI Norms for Diagnosis," unpublished master's thesis, Department of Psychology, Roosevelt University, Chicago, Illinois, 1955.
10. Johnson, Ruth L. E., "The Relation of Religious Attitudes and Selected Personality Characteristics," unpublished master's thesis, Department of Psychology, University of Minnesota, Minneapolis, Minnesota, 1948.
11. Jung, C. G., Modern Man in Search of a Soul, New York, Harcourt, Brace and Co., 1933.

12. Kania, Kaiter, "An Investigation of the K Scale of the MMPI as a Measure of Defensiveness in Protestant Theological Seminary Students," unpublished doctoral dissertation, Department of Psychology, Michigan State University, East Lansing, Michigan, 1965.
13. Ranck, James Gilmour, "Some Personality Correlates of Religious Attitude and Belief," unpublished doctoral dissertation, Department of Psychology, Columbia University, New York City, New York, 1955.
14. Vaughan, Richard P., "The Influence of Religious Affiliation on the MMPI Scales," Journal of Clinical Psychology, XXI (April, 1965), 416-417.

CHAPTER II

METHOD

Subjects

The subjects for this study consisted of ninety-one female outpatients of a private neuropsychiatric hospital. Their ages ranged from 16 years to 67 years of age, with a mean age of 35.42 years of age. Their socioeconomic levels were not specifically determined for this study, but would be estimated to range from the upper lower class to the upper middle class. The subjects' religious denominational preferences are shown in Table I.

TABLE I
SUBJECTS' RELIGIOUS DENOMINATIONAL PREFERENCES

Fundamental Denominations	Number	Liberal Denominations	Number
Assembly of God	1	Lutheran	1
Church of Christ	6	Presbyterian	8
Baptist	23	Methodist	22
Catholic	14	Disciples of Christ	10
		Episcopal	6
Total	44	Total	47

Procedure

Questionnaires (See Appendix A) and letters of explanation (See Appendix B) were mailed to a population of 346 female outpatients of a private neuropsychiatric hospital. The questionnaires were coded, and subjects were not asked to sign their names. Ninety-three patients returned questionnaires. Two patients expressed no religious denominational preferences and were eliminated from the sample. The remaining ninety-one patients constituted the sample upon which this study was based.

All 346 members of the female outpatient population had previously been administered the booklet form of the MMPI as a part of their psychological examinations. The inventories were scored and profiled according to the method outlined by Dahlstrom and Welch (3). The K-correction factor was employed.

The subjects were classified as religiously fundamental or liberal, depending upon their stated denominational preferences. The fundamental-liberal dichotomy was based upon the extent to which each denomination accepts the "fundamental" doctrines of the Christian faith. These doctrines are stated to be "the Virgin Birth of Christ; the physical resurrection of the dead; the absolute inerrancy of the Bible in every detail, as being the inspired Word of God; the theory of the vicarious Atonement by Christ; and the physical Second Coming or Advent of Christ" (7, p. 159). Denominations were classified

as fundamental or liberal on the basis of their theological positions as evaluated by Cassels (2), Mead (6), Rosten (8), and Schneider (9). Studies by Brown and Lowe (1), Johnson (4), and McLean (5) indicate that groups of subjects may be categorized by denominational preferences along a fundamental-liberal continuum because individual beliefs cluster around denominational means. The subjects' denominational preferences were shown in Table I.

In addition to the fundamental and liberal classifications, the subjects were also categorized by their patterns of church activity attendance. The term church activity includes all church-related activities such as church services, Sunday School, choir, fellowship, and business meetings. The subjects were asked to report the number of church activities they attend in a typical month (See Appendix A). The subjects were divided among four categories of church activity attendance within the fundamental and liberal classifications. The distribution of subjects among attendance categories is shown in Table II.

TABLE II
ATTENDANCE CATEGORIES

Category	Frequency of Attendance (x)	Fundamental Subjects	Liberal Subjects	Total Subjects
A	$x = 0$	8	11	18
B	$0 < x < 5$	13	19	32
C	$5 \leq x < 9$	17	8	25
D	$9 \leq x$	6	9	15
Total		44	47	91

Statistical Treatment of the Data

With the exception of the ? scale, all MMPI scores were expressed in T-scores, with appropriate K corrections. The ? scores were expressed as raw scores because MMPI norms do not provide T-scores for raw scores below thirty.

Before the hypotheses were tested, the representativeness of the sample was determined by t test comparisons of the ages and MMPI scores of patients who did and did not return their questionnaires.

Hypothesis I was tested by comparing the MMPI scores of both groups with t tests. The ages of both groups were also compared with t tests.

Hypotheses II, III, IV, V, and VI were tested by an analysis of variance comparison of the ages and MMPI scores

of fundamental and liberal categories A, B, C, and D. Appropriate t tests were performed on variables with significant F's.

The .05 level of significance was used in this study.

CHAPTER BIBLIOGRAPHY

1. Brown, D. G. and W. L. Lowe, "A Study of Religious Beliefs and Personality Differences in College Students," unpublished master's thesis, Department of Psychology, University of Denver, Denver, Colorado, 1948.
2. Cassels, Louis, What's the Difference?: A Comparison of the Faiths Men Live By, New York, Doubleday & Company, Inc., 1965.
3. Dahlstrom, W. Grant and George Schlager Welsh, An MMPI Handbook: A Guide to Use in Clinical Practice and Research, Minneapolis, The University of Minnesota Press, 1962.
4. Johnson, Ruth L. E., "The Relation of Religious Attitudes and Selected Personality Characteristics," unpublished master's thesis, Department of Psychology, University of Minnesota, Minneapolis, Minnesota.
5. McLean, Milton D., "Religious World Views," Orientation 1960, (1960), pp. 22-26.
6. Mead, Frank S., Handbook of Denominations in the United States, 4th ed., New York, Abington Press, 1965.
7. Pike, E. Royston, Encyclopaedia of Religion and Religions, New York, Meridian Books, Inc., 1958.
8. Rosten, Leo, Religions in America, New York, Simon and Schuster, 1963.
9. Schneider, Herbert W., Religion in 20th Century America, Cambridge, Massachusetts, Harvard University Press, 1952.

CHAPTER III

RESULTS AND DISCUSSION

Six hypotheses were tested in an effort to investigate the interrelationships among religious orientation, church attendance, and personality variables of female neuropsychiatric patients.

Before the hypotheses were tested, the representativeness of the sample was determined by t test comparisons of the ages and MMPI scores of patients who did and did not return their questionnaires (See Appendix C). With the exception of the Pt variable, there were no significant differences between the two groups. Patients who did return their questionnaires averaged 3.4746 T-score points higher on the Pt scale. This difference, although slight, was significant at the .05 level, but it was not believed to affect the validity of the study significantly.

Hypothesis I stated that no significant differences would exist between the personality patterns of female neuropsychiatric patients of fundamental and liberal religious orientations. The hypothesis was tested by comparing the MMPI scores of both groups with t tests (See Appendix D). No significant differences were found between the two groups. The ages of the subjects in both groups were compared with a

t test and were found to be almost identical (See Appendix D). Hypothesis I is accepted at the .05 level of significance.

An analysis of variance comparison of the ages and MMPI scores of subjects in fundamental and liberal categories A, B, C, and D was performed (See Appendix E). Two variables had significant F's. The Pd scores differed significantly at the .01 level, and the Si scores differed significantly at the .05 level. These variables were evaluated by t tests between groups where necessary.

Hypothesis II stated that no significant differences would exist between the personality patterns of subjects of fundamental and liberal religious orientations who have similar patterns of church attendance. Fisher's t tests were conducted between the MMPI scores of fundamental and liberal subjects within each frequency category on variables Pd and Si (See Appendix F). One difference was found to be significant. Liberal subjects in category C had an average score which was 11.6839 T-score points higher than the fundamental subjects' average score on variable Si. Although, of a possible eighty-four relationships in Hypothesis II, only one differed significantly, Hypothesis II must be rejected.

Hypothesis III stated that significant differences would exist among the MMPI Pd scores of subjects of fundamental religious orientation who have different patterns of church attendance. Fisher's t tests were conducted between the Pd

scores of fundamental subjects of different attendance categories (See Appendix G). Subjects in categories A and B scored significantly higher on variable Pd than did subjects in category C. Hypothesis III is accepted at the .05 level of significance.

Hypothesis IV stated that significant differences would exist among the MMPI Pd scores of subjects of liberal religious orientation who have different patterns of church attendance. Fisher's t tests were conducted between the Pd scores of liberal subjects of different attendance categories (See Appendix H). Subjects in category D scored significantly higher on variable Pd than did subjects in categories B and C. Hypothesis IV is therefore accepted.

Hypothesis V stated that significant differences would exist among the MMPI Si scores of subjects of fundamental religious orientation who have different patterns of church attendance. Fisher's t tests were conducted between the Si scores of fundamental subjects of different attendance categories (See Appendix I). Subjects in category A scored significantly higher on variable Si than did subjects in categories C and D. Hypothesis V is accepted at the .05 level of significance.

Hypothesis VI stated that significant differences would exist among the MMPI Si scores of subjects of liberal religious orientation who have different patterns of church attendance. Fisher's t tests were conducted between the Si

scores of liberal subjects of different attendance categories (See Appendix J). Liberal subjects did not differ significantly on variable Si. Hypothesis VI is therefore rejected.

Conclusions

It was concluded that, on the basis of the results of this study, the subjects' religious orientations are not significantly related to their MMPI scores. However, significant interrelationships were found to exist among religious orientation, frequency of church attendance, and the MMPI variables Pd and Si.

The interrelationships among religious orientation, church attendance, and the Pd variable are shown in Figure 1.

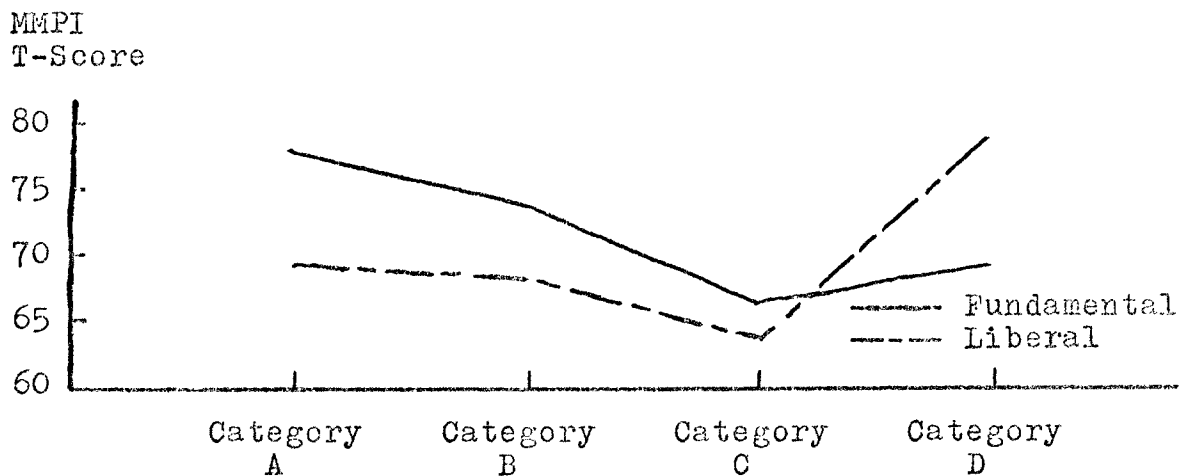


Fig. 1--Comparison of mean MMPI Pd scores of fundamental and liberal subjects of four categories of church attendance.

Among subjects of fundamental religious orientation, those who attended from five to nine church activities per month scored considerably lower on the Psychopathic Deviate scale

of the MMPI than did those who attended fewer than five church activities per month. Among subjects of liberal religious orientation, those who attended nine or more church activities per month scored significantly higher on the Psychopathic Deviate scale of the MMPI than did those who attended fewer than nine activities, excluding non-attenders. Although fundamental and liberal subjects do not differ significantly on the Pd variable, significant interrelationships were shown to exist within these classifications among attendance categories.

The interrelationships among religious orientation, church attendance, and the Si variable are shown in Figure 2.

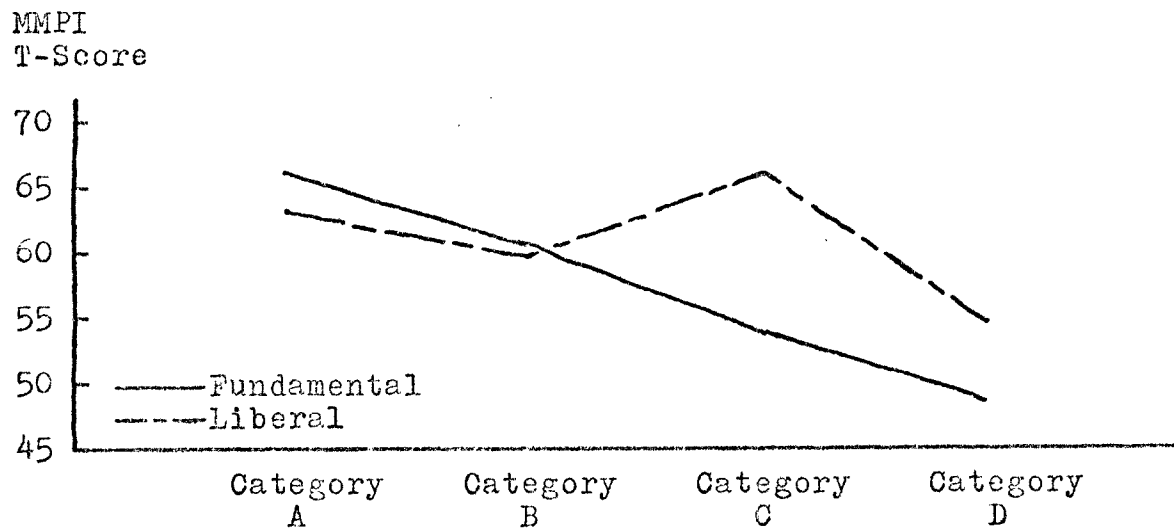


Fig. 2--Comparison of mean MMPI Si scores of fundamental and liberal subjects of four categories of church attendance.

Among subjects of fundamental religious orientation, frequency of church attendance is a negative function of the Si score.

Among subjects of liberal religious orientation, frequency of church attendance and social introversion do not seem to be related.

CHAPTER IV

SUMMARY AND RECOMMENDATIONS FOR FURTHER RESEARCH

This study was conducted to investigate two questions concerning the interrelationships among religious orientation, church attendance, and certain personality variables of female neuropsychiatric patients. The first question asked whether or not there were significant differences between the personality patterns of patients of fundamental and liberal religious orientations. The second question asked whether or not significant differences existed among the personality patterns of subjects within each orientation category who have different patterns of church attendance. The following hypotheses were presented for investigation:

1. There will be no significant differences between the personality patterns of female neuropsychiatric patients of fundamental and liberal religious orientations.

2. There will be no significant differences between the personality patterns of female neuropsychiatric patients of fundamental and liberal religious orientations who have similar patterns of church attendance.

3. There will be significant differences on the MMPI Pd scale among female neuropsychiatric patients of fundamental religious orientation who have different patterns of church attendance.

4. There will be significant differences on the MMPI Pd scale among female neuropsychiatric patients of liberal religious orientation who have different patterns of church attendance.

5. There will be significant differences on the MMPI Si scale among female neuropsychiatric patients of fundamental religious orientation who have different patterns of church attendance.

6. There will be significant differences on the MMPI Si scale among female neuropsychiatric patients of liberal religious orientation who have different patterns of church attendance.

The subjects were ninety-one female outpatients of a private neuropsychiatric hospital. The subjects were administered the MMPI as a part of their psychological examinations. They reported their religious denominational preferences and frequencies of church attendance by questionnaire.

The subjects were classified as religiously fundamental or liberal, depending upon the orientations of their preferred denominations. Within these classifications, subjects were divided into four categories of church attendance.

Statistical analysis of the hypotheses was accomplished by use of the analysis of variance technique. Appropriate t tests were performed on variables with significant F's.

No significant differences were found between the MMPI scores of subjects of fundamental and liberal religious

orientation. Hypothesis I was therefore accepted. Hypothesis II was rejected because tests of eighty-four relationships revealed one significant difference. However, despite the one exception, it was concluded that the subjects' religious orientations are not significantly related to their MMPI scores.

Subjects of fundamental religious orientation who have different patterns of church attendance were found to have significantly different Pd scores. Those who attended from five to nine church activities per month scored significantly lower than did those who attended fewer activities per month. Hypothesis III was therefore accepted.

Subjects of liberal religious orientation who have different patterns of church attendance were found to have significantly different Pd scores. Among subjects who attended church activities, those who attended nine or more scored significantly higher on the Pd scale. Hypothesis IV was therefore accepted.

Among subjects of fundamental religious orientation, those who attended no church activities scored significantly higher on the Si scale than did those who attended five or more church activities. Hypothesis V was therefore accepted.

Subjects of liberal religious orientation who have different patterns of church attendance do not differ significantly on the Si scale. Hypothesis VI was therefore rejected.

It was concluded that, on the basis of the results of this study, among female neuropsychiatric patients, significant interrelationships exist among religious orientation, frequency of church attendance, and the MMPI variables Pd and Si.

Recommendations for Further Research

It is suggested that further research into the interrelationships among religious orientation, frequency of church attendance, and personality variables be undertaken utilizing subjects of both sexes from neuropsychiatric populations and normal populations.

APPENDIX A

RESEARCH QUESTIONNAIRE

How would you rate the treatment you received here?
Poor___ Fair___ Satisfactory___ Good___ Excellent___

Do you feel that you received enough personal attention?
Yes___ No___

Church Preference (specific denomination)_____

How many newspapers do you read in a typical day?_____

How many church activities (services, Sunday school, choir, fellowship, business, etc.) do you attend in a typical month?

Do you watch one or more television programs in a typical day?
Yes___ No___

If you have any additional comments please write them in this space.

APPENDIX B

LETTER OF EXPLANATION

Dear _____,

In fulfilling the three basic purposes of a hospital, treatment, teaching, and research, the _____ Center and Hospital is requesting your cooperation in a voluntary, confidential study. Your doctor and the research staff of our center hope that you will assist us in our attempt to advance medical knowledge and thereby provide better care for future patients.

Please fill out the enclosed questionnaire and return it at your earliest convenience. It is not necessary to sign your name to the questionnaire.

Your cooperation is important to the success of this project and will be greatly appreciated. Please feel free to call me if you have any questions. Thank you sincerely for your assistance.

Very truly yours,

Staff Psychologist

Research Committee

_____, M.D.
_____, M.D.
_____, M.D.
_____, M.S.

Enclosure

APPENDIX C

TABLE III

FISHER'S t TEST COMPARISON OF PATIENTS WHO DID NOT RETURN QUESTIONNAIRES AND PATIENTS WHO DID RETURN QUESTIONNAIRES

Variable	Did Not Return Questionnaires		Did Return Questionnaire		Fisher <u>t</u>
	Mean	Standard Deviation	Mean	Standard Deviation	
?	2.8260	10.1856	3.6236	7.5118	- .6873
L	50.7430	6.6022	49.1075	9.6033	1.7865
F	58.1264	8.2092	59.6344	8.7765	-1.4821
K	52.0118	7.9987	51.4516	8.2468	.5711
Hs	64.1185	13.5757	64.4838	12.9354	- .2240
D	70.6719	13.5975	71.3870	13.5939	- .4324
Hy	70.3438	11.6390	70.1505	10.7182	.1394
Pd	69.2964	13.2841	69.8172	11.1721	- .3358
Mf	47.9565	10.0976	47.8494	11.2927	.0843
Pa	63.8063	10.9788	65.3010	11.1159	-1.1157
Pt	66.4071	12.8473	69.8817	12.8948	-2.2215*
Sc	67.0276	13.7660	68.8602	12.7773	-1.1155
Ma	57.7984	11.5328	58.6774	10.6913	- .6388
Si	59.1818	10.9540	59.0645	11.4505	.0860
Age	34.9762	11.8214	35.4193	11.6732	- .3092

*P < .05.

APPENDIX D

TABLE IV

FISHER'S t TEST COMPARISON OF SUBJECTS OF FUNDAMENTAL AND LIBERAL RELIGIOUS ORIENTATION

Variable	Fundamental		Liberal		Fisher <u>t</u>
	Mean	Standard Deviation	Mean	Standard Deviation	
?	3.0000	7.6455	4.0638	7.3727	- .6943
L	49.4318	10.7563	49.1914	8.3986	.1334
F	58.6818	8.4363	59.8723	8.5889	- .6742
K	53.0909	9.0649	50.1063	7.2412	1.6009
Hs	66.1818	14.2290	62.7872	11.6471	1.1124
D	70.8636	14.5064	71.7021	12.9449	- .2794
Hy	71.5227	11.0216	68.7021	10.1957	1.2378
Pd	70.6363	10.1982	68.8297	12.0554	.7208
Mf	47.9772	13.4392	47.4255	8.9555	.2381
Pa	66.4545	10.3164	63.7021	11.5037	1.1889
Pt	69.8409	13.1147	69.6382	12.7936	.0728
Sc	68.0681	11.8808	68.5106	12.5136	- .1611
Ma	58.8636	10.0308	57.7872	10.6049	.4897
Si	57.4090	10.9239	60.6382	11.9331	-1.2891
Age	35.6136	12.7140	35.6808	10.6073	- .0277

APPENDIX E

TABLE V
ANALYSIS OF VARIANCE

Variable	Source of Variance	Sum of Squares	Degrees of Freedom	Variance Estimate	F Level
?	Between	440.0446	7.	62.8635	1.1072
	Within	4712.4829	83.	56.7769	. . .
	Total	5152.5275	90.	. . . .	. . .
L	Between	871.8900	7.	124.5557	1.3719
	Within	7535.5000	83.	90.7891	. . .
	Total	8407.3900	90.	. . . .	. . .
F	Between	380.9500	7.	54.4214	.7227
	Within	6250.0400	83.	75.3016	. . .
	Total	6630.9900	90.	. . . .	. . .
K	Between	821.7100	7.	117.3871	1.7841
	Within	5460.8200	83.	65.7930	. . .
	Total	6282.5300	90.	. . . .	. . .
Hs	Between	536.3700	7.	76.6242	.4237
	Within	15009.9200	83.	180.8424	. . .
	Total	15546.2900	90.	. . . .	. . .
D	Between	1241.9800	7.	177.4257	. . .
	Within	15909.0100	83.	191.6748	. . .
	Total	17150.9900	90.	. . . .	. . .

TABLE V--Continued

Variable	Source of Variance	Sum of Squares	Degrees of Freedom	Variance Estimate	F Level
Hy	Between	503.990	7.	71.9985	.6031
	Within	9907.6200	83.	119.3689	. . .
	Total	10411.6100	90.	. . . .	. . .
Pd	Between	2251.9400	7.	321.7057	2.8932**
	Within	9229.0500	83.	111.1933	. . .
	Total	11480.9900	90.	. . . .	. . .
Mf	Between	1183.3300	7.	169.0471	1.3311
	Within	10540.0600	83.	126.9886	. . .
	Total	11723.3900	90.	. . . .	. . .
Pa	Between	945.3600	7.	135.0514	1.1065
	Within	10129.5500	83.	122.0427	. . .
	Total	11074.9100	90.	. . . .	. . .
Pt	Between	870.0700	7.	124.2957	.7168
	Within	14391.6100	83.	173.3928	. . .
	Total	15261.6800	90.	. . . .	. . .
Sc	Between	604.1000	7.	86.3000	.5522
	Within	12970.8900	83.	156.2757	. . .
	Total	13574.9900	90.	. . . .	. . .

TABLE V--Continued

Variable	Source of Variance	Sum of Squares	Degrees of Freedom	Variance Estimate	F Level
Ma	Between	500.4600	7.	71.4942	.6422
	Within	9238.9300	83.	111.3124	. . .
	Total	9739.3900	90.	. . . .	. . .
Si	Between	2081.2400	7.	297.3200	2.4435*
	Within	10099.2300	83.	121.6774	. . .
	Total	12180.4700	90.	. . . .	. . .
Age	Between	1379.7300	7.	197.1042	1.4844
	Within	11021.0200	83.	132.7833	. . .
	Total	12400.7500	90.	. . . .	. . .

*P < .05.

**P < .01.

APPENDIX F

TABLE VI

FISHER'S t TEST COMPARISONS OF FUNDAMENTAL AND LIBERAL SUBJECTS WITHIN ATTENDANCE CATEGORIES

Variable	Frequency Category	Fundamental		Liberal		Fisher's t
		Mean	S. D.	Mean	S. D.	
Pd	A	77.8750	5.9253	69.0909	11.9958	1.7927
Pd	B	73.7692	12.1917	67.0526	11.2271	1.7696
Pd	C	65.4117	6.9541	62.3750	5.2186	.6716
Pd	D	69.0000	9.2556	78.0000	12.8409	-1.6194
Si	A	66.2500	7.1195	63.1818	12.2683	-.9953
Si	B	60.0769	7.7802	59.6842	11.8989	.0989
Si	C	53.9411	11.7796	65.6250	10.3915	-2.4704*
Si	D	49.6666	8.3400	55.1111	10.1153	-.9364

* $P < .05$.

APPENDIX G

TABLE VII

FISHER'S t TEST COMPARISONS OF THE Pd SCORES OF FUNDAMENTAL SUBJECTS AMONG ATTENDANCE CATEGORIES

Categories Compared	Mean	Standard Deviation	Mean	Standard Deviation	Fisher <u>t</u>
A & B	77.8750	5.9253	73.7692	12.1917	.8664
A & C	77.8750	5.9253	65.4117	6.9541	2.7567 *
A & D	77.8750	5.9253	69.0000	9.2556	1.5584
B & C	73.7692	12.1917	65.4117	6.9541	2.1511*
B & D	73.7692	12.1917	69.0000	9.2556	.9163
C & D	65.4117	6.9541	69.0000	9.2556	- .7166

*P < .05.

APPENDIX H

TABLE VIII

FISHER'S t TEST COMPARISONS OF THE Pd SCORES OF LIBERAL SUBJECTS AMONG ATTENDANCE CATEGORIES

Categories Compared	Mean	Standard Deviation	Mean	Standard Deviation	Fisher t
A & B	69.0909	11.9958	67.0526	11.2271	.5101
A & C	69.0909	11.9958	62.3750	5.2186	1.3706
A & D	69.0909	11.9958	78.0000	12.8409	-1.8797
B & C	67.0526	11.2271	62.3750	5.2186	1.0525
B & D	67.0526	11.2271	78.0000	12.8409	-2.5656*
C & D	62.3750	5.2186	78.0000	12.8409	-3.0494**

*P < .05.

**P < .01.

APPENDIX I

TABLE IX

FISHER'S t TEST COMPARISONS OF THE SI SCORES OF FUNDAMENTAL SUBJECTS AMONG ATTENDANCE CATEGORIES

Categories Compared	Mean	Standard Deviation	Mean	Standard Deviation	Fisher <u>t</u>
A & B	66.2500	7.1195	60.0769	7.7802	1.2453
A & C	66.2500	7.1195	53.9411	11.7796	2.6026*
A & D	66.2500	7.1195	49.6666	8.3400	2.7837*
B & C	60.0769	7.7802	53.9411	11.7796	1.5097
B & D	60.0769	7.7802	49.6666	8.3400	1.9121
C & D	53.9411	11.7796	49.6666	8.3400	.8160

*P < .05.

APPENDIX J

TABLE X

FISHER'S t TEST COMPARISONS OF THE SI SCORES OF LIBERAL SUBJECTS AMONG ATTENDANCE CATEGORIES

Categories Compared	Mean	Standard Deviation	Mean	Standard Deviation	Fisher t
A & B	63.1818	12.2683	59.6842	11.8989	.8369
A & C	63.1818	12.2683	65.6250	10.3915	- .4766
A & D	63.1818	12.2683	55.1111	10.1153	1.6278
B & C	59.6842	11.8989	65.6250	10.3915	-1.2778
B & D	59.6842	11.8989	55.1111	10.1153	1.0245
C & D	65.6250	10.3915	55.1111	10.1153	1.9615

BIBLIOGRAPHY

Books

- Allport, Gordon W., The Individual and His Religion, New York, The Macmillan Company, 1950.
- Argyle, Michael, Religious Behaviour, London, Routledge & Kegan Paul, 1958.
- Cassels, Louis, What's the Difference?: A Comparison of the Faiths Men Live By, New York, Doubleday & Company, Inc., 1965.
- Dahlstrom, W. Grant and George Schlager Welsh, An MMPI Handbook: A Guide to Use in Clinical Practice and Research, Minneapolis, The University of Minnesota Press, 1962.
- Freud, Sigmund, Civilization and Its Discontents, London, The Hogarth Press, 1930.
- _____, The Future of an Illusion, London, The Hogarth Press, 1927.
- Hathaway, Starke R. and J. Charnley McKinley, Minnesota Multiphasic Personality Inventory Manual, New York, The Psychological Corporation, 1943.
- _____, Minnesota Multiphasic Personality Inventory Manual, Rev. ed., New York, The Psychological Corporation, 1951.
- Jung, C. G., Modern Man in Search of a Soul, New York, Harcourt, Brace and Co., 1933.
- Mead, Frank S., Handbook of Denominations in the United States, 4th ed., New York, Abington Press, 1965.
- Pike, E. Royston, Encyclopaedia of Religion and Religions, New York, Meridian Books, Inc., 1958.
- Rosten, Leo, Religions in America, New York, Simon and Schuster, 1963.
- Schneider, Herbert W., Religion in 20th Century America, Cambridge, Massachusetts, Harvard University Press, 1952.

Articles

- Broen, William E., "Personality Correlates of Certain Religious Attitudes," Journal of Consulting Psychology, XIX (January, 1955), 64.
- McLean, Milton D., "Religious World Views," Orientation 1960, (1960), 22-26.
- Vaughan, Richard P., "The Influence of Religious Affiliation on the MMPI Scales," Journal of Clinical Psychology, XXI (April, 1965), 416-417.

Unpublished Materials

- Brown, D. G. and W. L. Lowe, "A Study of Religious Beliefs and Personality Differences in College Students," unpublished master's thesis, Department of Psychology, University of Denver, Denver, Colorado, 1948.
- Jalkanen, Ralph J., "The Personality Structure of Seminarians: The Use of Available MMPI Norms for Diagnosis," unpublished master's thesis, Department of Psychology, Roosevelt University, Chicago, Illinois, 1955.
- Johnson, Ruth L. E., "The Relation of Religious Attitudes and Selected Personality Characteristics," unpublished master's thesis, Department of Psychology, University of Minnesota, Minneapolis, Minnesota, 1948.
- Kania, Kaiter, "An Investigation of the K Scale of the MMPI as a Measure of Defensiveness in Protestant Theological Seminary Students," unpublished doctoral dissertation, Department of Psychology, Michigan State University, East Lansing, Michigan, 1965.
- Ranck, James Gilmour, "Some Personality Correlates of Religious Attitude and Belief," unpublished doctoral dissertation, Department of Psychology, Columbia University, New York City, New York, 1955.