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MMPI and DSM III Diagnosis Related to Selected Measures of Religious and Demographic Variables in Adult Outpatients

James L. Frantz

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MMPI and DSM III Diagnosis Related to Selected
Measures of Religious and Demographic Variables in
Adult Outpatients

by
James L. Frantz

Presented to the Faculty of
Western Conservative Baptist Seminary
in partial fulfillment
of the requirements for the degree
Doctor of Philosophy
in Psychology

Portland, Oregon

May 31, 1985

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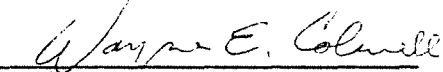
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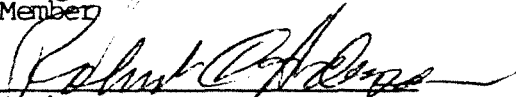
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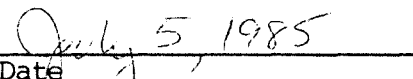
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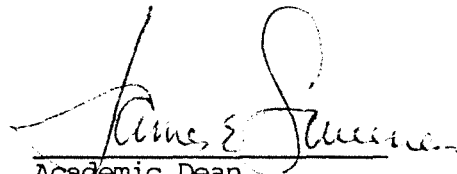
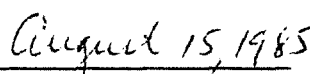
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Abstract

This study investigated the relationship between outpatients' religious beliefs, as measured by the Religious Fundamentalism content scale (REL) of the Minnesota Multiphasic Personality Inventory (MMPI), and their performance on standard MMPI validity and clinical scales, level of psychopathology, psychiatric diagnosis, religious orientation (intrinsic or extrinsic), and performance on a spiritual well-being scale. The sample consisted of 72 male and female client volunteers from two Portland, Oregon outpatient counseling settings. 47 clients were from one center and 25 were from the other center.

The following instruments were given: the MMPI, the Religious Orientation Scale (ROS), the Spiritual Well-Being Scale (SWB); and a demographic questionnaire. Data analysis was primarily correlational, with t-tests and multiple regression also utilized as appropriate.

REL was negatively correlated with the Ma scale and positively correlated with the K scale. No significant correlations were found between REL and the other standard MMPI validity and clinical scales. No significant relationships were found between outpatients' REL scores and their level of psychopathology or psychiatric diagnosis. REL scores were found

to be positively correlated with the Intrinsic scale of the ROS, the Existential Well-Being scale of the SWB, and the Religious-Well Being scale of the SWB. REL scores were negatively correlated with the Extrinsic scale of the ROS. The demographic variables of "importance of religion", "frequency of attendance", and "Christian belief" had strong positive correlations with REL scores.

Additional REL criterion validity studies with a broad sample of populations are recommended. Developing new scales which quantify behavior consistent with a variety of formal religious belief systems, and then comparing them with the REL scale is suggested. Additionally, comparing REL scores with selected psychological constructs is recommended.

The results of this study suggest that religious belief, as measured by the REL scale, is not a relevant factor in the interpretation of standard clinical and validity scales of outpatients' MMPI profiles. Neither the view that religious beliefs are inherently pathological, nor the position that endorsing religious beliefs increases psychological functioning were empirically supported by this study.

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The clinical and secretarial staff at both the Christian Counseling Services and Western Psychological Services also need to be thanked. Mitch Durham of CCS conducted the majority of interviews as well as the computer scoring. Betty Wells, the CCS secretary, cheerfully and conscientiously collected the data. Suzie Lambert and Cheryl Low, of the secretarial staff at WPS, collected and computer scored the data in addition to their multiple clinic duties.

Additionally, Dave Penner was instrumental in my first developing an interest in research with the MMPI by his

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CHAPTER ONE

INTRODUCTION

The relationship between a person's religious beliefs and practice and his psychological well-being has been a potentially rich field to be investigated empirically. However there has been a limited amount of research that would further a serious discussion of the interplay between these two areas. In academic circles serious investigation of these areas over the last century has been characterized by brief periods of sustained interest. Over the last few years a renewed interest has occurred with researchers in a variety of settings systematically studying possible relationships between religious beliefs and personality functioning.

A wide variety of objective and projective instruments have been used in these studies. The focus of this research project is to do validation studies with the Minnesota Multiphasic Personality Inventory which is generally considered the most researched objective instrument. Dahlstrom and Welsh (1960) noted that "the presence in the MMPI pool of a number of statements bearing on religious belief...makes it particularly desirable to know the extent to which religious affiliation may

influence test scores (p.271)." There are twelve studies that have investigated the influence of religious beliefs on standard MMPI validity and clinical scales (See Appendix A for description of MMPI scales). Eight have been with college populations and four studies with psychiatric populations with no known studies involving outpatients.

In addition to the validity and clinical scales Wiggins (1966) has developed 13 content scales for the MMPI. The content scales, in contrast to the empirically based clinical and validity scales, are reflective of actual responses made through self-report. One of these content scales is the Religious Fundamentalism Scale (REL). (See Table 1). The twelve items in this scale are reflective of religious beliefs and practices. This author's review of the items on this scale finds them reflective of a historically and evangelically Christian perspective but not to be representative of any one religious organization or denomination.

Penner (1982) noted that little research has been generated on the MMPI content scales and particularly the REL, as he observes that research on this scale has been consistent with the original description and data developed by Wiggins (1966). But Penner cautioned that empirical support for this scale remains tentative due to the limited number of studies that have been conducted (p. 50).

Table 1

Composition of the Religious Fundamentalism Content Scale

Keyed	Booklet Item	
Response	Number	Item
True	58	Everything is turning out just like the prophets of the Bible said it would.
True	95	I go to church almost every week.
True	98	I believe in the second coming of Christ.
True	115	I believe in a life hereafter.
True	206	I am a very religious (more than most people).
True	249	I believe there is a Devil and a Hell in the afterlife.
True	258	I believe there is a God.
True	373	I feel sure that there is only one true religion.
True	483	Christ performed miracles such as changing water into wine.
True	488	I pray several times every week.

REL Validation 4

True	490	I read the Bible several times a week.
False	491	I have no patience with people who believe there is only one true religion.

Note. From "Substantive Dimensions of Self-Report in the MMPI
Item Pool" by J. S. Wiggins, 1966, Psychological Monographs,
80 (22, Whole No. 630) p. 132. Copyright 1967 by American
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The importance of comparing the REL scores with a variety of demographic variables has also been underscored. Jarnecke and Chambers (1977) concluded that "research exploring the interpretive significance of these demographic variables (age, education, and intelligence) with respect to the content scales is sorely needed" (p. 1131).

Furthermore, comparing REL scores with other religious instruments is warranted also to provide additional criterion validity. Research that taps the dimensions of religious experience and belief common to the REL is needed.

The remaining part of this chapter reviews the literature relevant to this study. Chapter Two describes the method and procedure used. Chapter Three presents the results of this study. Chapter Four discusses these results and suggests conclusions and implications.

Religious Influences on Standard MMPI scales

There is a relative paucity of literature related to the influence of religious belief on standard MMPI validity and clinical scales. Three studies (Bier, 1948; Jalkanen, 1955; and Ranck, 1955) have investigated the MMPI scores of theological students, candidates for religious orders, or members of religious vocations. The majority of other studies investigating these relationships have been with a nonclinical population. Of

the twelve studies investigating the influence of religious beliefs on standard MMPI validity and clinical scales, eight have been with college populations and four with inpatient populations. There are no known studies involving outpatients.

This review will begin with a discussion of the literature of the influence of religious belief on standard MMPI validity and clinical scales. This review will then proceed to examine the development of the MMPI content scales. Next, studies that have been generated related to the REL content scales will be reviewed. The developmental process and the subsequent studies of the Religious Orientation Scale and the Spiritual Well-Being Scale will be discussed.

College Student Samples

Brown and Lowe (1951) investigated the MMPI profiles of 35 Bible college students compared with University of Denver students' scores on either extreme of the Inventory of Religious Belief. 58 subjects, who made up the top 9% of the total sample of 622, were designated believers, while the 50 subjects, who comprised the bottom 9% on the scale, were designated nonbelievers. To enable the samples to be relatively homogeneous, yet widely set apart, the above limits were set, which separated the two groups by 2.84 standard deviations. The group of Bible students scored about an average of four points

higher than believers on the inventory. University believers and nonbeliever university groups were also found to be at the opposite ends of religious activity indicators such as frequency of prayer, Bible reading, church attendance, financial contributions to churches, and declaration of Christ as being Lord and Savior.

Related to the MMPI scores, tests of significance were applied to the mean differences of the three groups. Several significant differences were noted, but the majority of differences could be attributed to chance variation. The observed differences were found to be significant at the .05 level of confidence or beyond. On the Lie scale male Bible students scored significantly higher than male nonbelievers. On the Depression scale male nonbelievers scored higher than believers. The most pronounced differences occurred on the Mf scale. Male nonbelievers scored significantly higher than the two believer groups. Among female subject groups no differences were found at a significance level of .05.

Broen (1955) sampled 140 University of Minnesota freshman male students by dividing them into three groups representing three levels of religiosity. The basis for separation was a religiosity index which was defined as the sum of an individual's standard scores on three Thurstone religious attitude scales: attitude toward the Bible, attitude toward God, and attitude

toward Sunday observance. Personality characteristics of these three groups were evaluated, including use of the MMPI. The only significant difference between the religious and nonreligious groups was on the Pa scale with the former group scoring higher. An analysis of each Thurstone subscale revealed that the attitude toward the Bible scale had a significant negative correlation $r = -.24$ with the Depression scale. The significant positive correlation $r = .20$ was discovered between the Attitude Toward Sunday Observance Scale and the Pt scale.

This researcher noted intercorrelations in the attitude scales. The attitude toward the Bible scale and the attitude toward God scale (both having positive belief content) were observed to correlate with each other to a much greater extent than either scale did with the attitude toward Sunday Observance scale with its "thou shalt not" content. Broen suggested the existence of separate "positive" and "negative" religious factors.

Johnson (cited in Dahlstrom & Welsh, 1960) evaluated the MMPI single scale scores and profile configurations with scores on a religiosity scale of 150 male and 150 female University of Minnesota students. Religiosity correlated negatively with D, $r = .29$ and Mf, $r = -.17$. Students who were involved in church activities were found less likely to have primed codes than students who expressed strong feelings against religious beliefs.

Martin & Nichols' (1962) study of 59 male and 104 female undergraduate students included administering the L, Pa, and Mf MMPI scales, a religious belief scale, a religious information scale, and demographic questionnaire. Significant positive correlations were found between religious beliefs and church attendance, church membership, rated attitude of parents towards religion, Bible information, rural background, and the authoritarian scale. A significant negative correlation was found with socioeconomic status. The total correlations between religious belief and the selected MMPI scales of L, Pa, and Mf were not significant. These researchers then grouped the 50 highest and lowest scoring subjects on the religious information test and compared their MMPI scale scores. The high religious information group correlated negatively with the Mf scale for male subjects, with the low religious information group found to have a significant negative correlation with the Pa scale.

Vaughan's (1965) study focused upon the influence of Catholic versus Protestant beliefs on the MMPI clinical and validation scales. The sample included 162 Catholic and 103 Protestant male university students. The Catholics attended a Catholic university; two-thirds of the Protestants attended the same university; while the remaining third came from a state university. The majority of Protestants were Episcopalian in background. The basis of religious affiliation included a written

affirmation by each student that he belonged to a certain religious group and attended some kind of service at least twice a year during the past year.

Protestants scored significantly higher than Catholics on the D at the .01 level and on the Mf and the F scales at the .05 level. A cross validation study using a similar sample showed a similar range of means and significant differences at the .01 level on all three scales. This researcher noted that on the D scale three items specifically demonstrated a divergence between the two groups. An affirmative response on these three items lowers D scale scores. Two items correspond to theological positions which are related to essential elements of Catholic belief, but related to the belief of many Protestant groups they may be accepted or rejected. The third item involves religious practice. Vaughan suggested that a Catholic experiences a moral obligation to attend weekly services while the Protestants views church attendance as more optional.

Bohrnstedt, Borgatta, & Evans (1968) evaluated the MMPI scores of 1,851 male and 1,815 female freshmen entering the University of Wisconsin. Religious preference was ascertained from a questionnaire which asked the student to respond as a Catholic, Protestant, Jewish, or no religious identification (NRI). An "other" category was provided but these students were reclassified into one of the alternative categories. The

religiosity measure was an adaptation of the Conventional Religiosity scale, which has a true-false format. On the MMPI for both the males and the females the most frequent differences among religious groupings occurred with the Mf scale, with Jews and NRI's scoring most feminine. These researchers note that some of the differences may be from two Mf items which related to religious beliefs, belief in life after death, and belief in Hell and the Devil. However, these two items alone do not appear to explain the size of the obtained differences. The same pattern with both sexes was noted on the F scale, with the NRI's scoring highest followed by the Jews. On the D scale, the same results were observed.

These differences might influence the D scale because it contains the three items which could be understood as measures of religious belief. Agreement with these three items would lower one's D scores. The absolute differences between the scores are not large enough to rule out this possibility. Jews and NRI's scored higher on the Hy and Pd scales than Protestants and Catholics, with female NRI's scoring higher on the Sc scale. These researchers observed that all of the MMPI mean scores fell within the "normal" range, so consequently results did not indicate college students of certain religious identification as being "abnormal."

The measure of conventional religiosity was noted to correlate highly with religious affiliation. 92% of the Catholics recorded agreement with a majority of items comprising the measure, 78% of the Protestants, 42% of the Jews, and 10% of the NRI's. For both sexes, significant correlations occurred between conventional religiosity and the MMPI D, Hy, Pd, Mf, Sc, ?, and F scales. All the significant correlations in this study were at the .05 level of significance. These researchers concluded that the highest correlations between religiosity and MMPI scales occurred on the scales with the greatest number of religious items (D, Mf, and F). Thus interpretation of relating religiosity to MMPI scales with religious content must be approached with caution.

Mayo, Puryear, & Richek (1969) studied 166 college students (99 females, 67 males) at a small denominational university in the Southwest. Groups were determined on the basis of sex, church membership, and self classification as religious and nonreligious. The subjects' responses on the MMPI validity and clinical scales and on special scales of R (repression), A (anxiety), and Es (ego strength). Religious males were noted to significantly score lower on the F, D, Pd, and Sc scales. In contrast, the female group comparison displayed only one significant difference. Nonreligious females scored higher on the Es scale than religious females. The results in the study

were at .01 level of significance. Gynther, Gray, & Strauss (1970) investigated the effects of religious affiliation, religious involvement, and sex on the social desirability ratings of 19 MMPI religious items among university student volunteers from the St. Louis, Missouri area. Protestants rated items significantly more favorably overall than Catholics, and Catholics rated the items significantly more favorable than Jews. Religious involvement affected the social desirability ratings of these religious MMPI items, but not to the extent of religious affiliation. The sex of the subject was significant to a lesser degree in the ratings of a few items.

This study also investigated concerns of invasion of privacy from MMPI religious items. Results indicated that the MMPI items themselves were the most significant determinant of how they were perceived, and the favorability or unfavorability of endorsing these items were no different than for the other nonreligious MMPI items. The subjects' reactions to test items were shown to be influenced by individual differences in religious variation and background factors.

Psychiatric Samples

There have been four studies investigating the influence of religious belief on standard MMPI scales in psychiatric populations. Campbell (1958) gave the MMPI K scale to 44

psychotic and 40 nonpsychotic Veterans Administration inpatients along with a Q sort measure of religious conflict. Religious conflict scores were found to be negatively correlated with subject scores on the K scale.

Devries' (1966) study of 600 Caucasian male veteran neuropsychiatric patients focused upon a variety of demographic variables, including religious affiliation. Protestant versus Catholic, Catholic versus Hebrew, and Protestant versus Hebrew groups were compared, with no significant influence on any MMPI responses noted.

Strauss, Gynther & Kneff's (1971) study of Jewish and Protestant inpatients was a followup of Gynther's et al. 1970 study of students. This study focused upon the effects of religious affiliation on the unfavorability ratings of MMPI religious items. Results indicated that Jewish subjects rejected significantly more of these items than Protestants. Degree of psychopathology (as assessed by the number of MMPI clinical scales with a T-score >70), age, or years of education were not related to the differences between the religious groups. Years of education and degree of pathology independent of religious affiliation were positively correlated with item rejection. The correlation between item rejection and the number of scales with T-scores >70 was hypothesized to be a product of the item overlap of religious items on the clinical scale. Age was not

found to be independently correlated with religious item rejection.

Groesch & Davis (1977) examined MMPI scores and the demographic variables of age, education and diagnosis for Veterans Administration male inpatients in Indiana. These inpatients were separated into four groups of 18 each, including Protestant schizophrenics, Protestant drug dependent, Catholic drug dependent, and Catholic schizophrenic patients. Religion was not found to be related to individual MMPI scales. However, it was influential as a variable in a combined interaction with age, diagnosis, and education. These variables were noted to be significantly negatively correlated with the MMPI scales of L, Mf, Pa, and Sc, and were positively correlated with Hs, and D. Depending on different scales, the nature of the interaction between variables varied to different degrees.

Synopsis of Religious Influences on MMPI Scales

Studies examining the influence of religious belief or affiliation on scores on the standard MMPI validity and clinical scales have shown inconclusive results. Often significant results observed for an MMPI scale in one study have not been demonstrated in other studies. However, there have been some tentative directions noted on several scales. In the following section research findings will be summarized for each MMPI scale.

Both college and inpatient samples have found little substantial results related to the validity scales of L, F, and K. Of the twelve studies only one study (Brown & Lowe, 1951) found a difference on the L scale. They noted in their study that male Bible college students scored higher than male nonbeliever university students on the L scale. But male and female believer students compared to male and female students from the same university did not display any significant differences. On the F scale several studies observed significant relationships. Religious male college students scores were significantly lower than nonreligious males (Mayo, et al., 1969). Male and female students' responses on a measure of conventional religiosity were negatively correlated to F scores (Bohrnstedt, et al., 1968). In this study students of both sexes with no religious identification scored significantly higher on the F than Jewish students, with these Jewish students scoring significantly higher than both Catholic and Protestant students (Bohrnstedt, et al., 1968). A significant relationship between religiosity and the K scale was noted in only one study, with a Veterans Administration psychiatric inpatient sample whose K scores were negatively correlated with a Q-sort measure of religious conflict.

The D scale has shown the most extensive evidence for a relationship between religiosity and MMPI scales. Religious male college students have been noted to score significantly lower

than nonreligious males (Brown & Lowe, 1951; Mayo et al., 1969). The D scale has been negatively correlated with religiosity (Bohrnstedt, et al., 1968; Johnson, cited in Dahlstrom & Welsh, 1960) and attitude towards the Bible (Broen, 1955). Students with no religious identification scored higher on the D scale than Jewish students or Protestants and Catholics (Bohrnstedt, et al., 1968). Catholic students scored lower on this scale than did Protestant students (Vaughan, 1965). The Hy scale has been shown to have a significant relationship with religiosity in only one study. In this study conventional religiosity was negatively correlated with Hy; Catholic and Protestant students scored lower than Jewish and no religious identification students (Bohrnstedt et al., 1968).

The Pd scale has been found to have a significant relationship with religiosity in several studies. Religious male college students scored significantly lower than nonreligious male students (Mayo et al., 1969). No religious identification and Jewish students scored higher than Protestant and Catholic students in another study, with conventional religiosity negatively correlated to the Pd scale (Bohrnstedt, et al., 1968). On the Mf scale several studies indicated a negative correlation with scores on the MMPI. Male college students scores on a religious information scale were negatively correlated with Mf (Martin & Nichols, 1962). For both male and female college

students religiosity was noted to be negatively correlated with the Mf scale (Johnson cited in Dahlstrom & Welsh, 1960; Bohrnstedt et al., 1968). Additional results indicate male nonbelieving college students scored higher than either male believing students or Bible college males (Brown & Lowe, 1951). Male Protestant students were noted to score higher than male Catholic students on the Mf scale (Vaughan, 1965). Jewish and no religious identification students of both sexes scored higher on feminine interests than did Protestant and Catholic students (Bohrnstedt et al., 1968).

The two studies finding significant relationships between religiosity and the Pa scales offered inconclusive results. A religious group of students in one study was noted to score higher than a religious group on this scale. The other study found no relationship between a measure of religious belief and Pa. However, it did note that scores of the low religious information group (in contrast to a high religious information group which displayed no relationship) were negatively correlated with Pa (Martin & Nichols, 1962). None of the studies demonstrated any significant relationship between religiosity and the Pt scale. However, one subtest of a religious scale, attitude toward Sunday Observance, was positively correlated with Pt (Broen, 1955).

On the Sc scale several studies have found a negative relationship with religiosity and MMPI scores. Among college students conventional religiosity was negatively correlated with this scale (Bohrnstedt et al., 1968). Self classified male religious students scored lower than nonreligious male students (Mayo et al., 1969). Female students with no religious identification scored higher than Protestant, Catholic, or Jewish students (Bohrnstedt et al., 1968). On the Hs, Ma, or Si scales, none of the studies have observed any significant relationship with religiosity.

In summary, the college and inpatient samples provide difficulty in comparison due to use of different criteria, designs, and procedures. Measures of religiosity utilized in these studies vary widely which also increases problems with comparisons. Results of these studies are often complex and confusing. Some studies have found significant relationships between religiosity and specific clinical scales. Complicating this is that other studies have found no relationship with these specific scales but have obtained significant relationships with other clinical scales. The differential effect of sex must also be kept in perspective in evaluating these results. One clear conclusion is that considerable additional research is required to clarify the complex relationship between religiosity and its influence on MMPI validity and clinical scales.

Development of the MMPI Content Scales

When the MMPI was first developed an empirical keying procedure was utilized for scale item selection, which was based entirely on its ability to separate normal from clinical population patients. In the original classification of the MMPI item pool 26 content categories were established. Hathaway and McKinley (1940) noted that the intent was to develop an item pool necessary to identify "behaviors of significance to the psychiatrist (p. 249)." Wiggins observed that these original content categories have not excited the curiosity of many MMPI researchers (Wiggins, 1966, p. 2). A subsequent principal component analysis of the 26 mutually exclusive and exhaustive content categories resulted in six interpretable factors in both men and women. The first three of these factors seem to represent general syndromes of psychological and physical syndromes of complaints. The remaining three factors focused on sexual attitudes, deviant religious attitudes, and deviant educational attitudes (Wiggins, 1966, p. 8-9). Since there appeared to be promising internal consistencies and factorial structure of original content categories, Wiggins believed that a more substantively consistent grouping of items could occur within categories as a basis for subsequent development of actual content scales. A decision was made to construct the scales primarily with emphasis on rational or substantive

considerations related to classification of item content (Wiggins, 1966, p. 9). Further analysis and revision of the original 26 content categories occurred through Wiggins' collapsing of several categories into single categories, reassignment of items from one category to another, elimination of original categories, creation of new ones, and rekeying of item options within categories. Procedures were almost completely intuitive.

From this procedure emerged 18 categories, which were further reduced to 15 substantive dimensions which appeared to have promising internal consistencies and sufficient number of items to deserve further analysis. Point biserial correlations were then computed between the 566 items of the MMPI and each of the 15 total scale scores of the revised content categories. An item was retained in a particular content scale if its point biserial correlation with total scale of the category of which it was a member exceeded .30; and if the correlation of an item with its scale exceeded its correlation with all the other content scales (Wiggins, 1966, p. 11).

The 15 content scales, which were formed by item analysis with alpha internal consistency estimates for each category, were computed by using a Stanford University student sample. Two scales, sleeping habits and obsessive scales, were abandoned on the basis of unpromising homogeneity, with several other scales

being revised through item analysis to improve their internal consistency. This research process resulted in the adoption of 13 mutually exclusive scales which were considered to be internally consistent, moderately independent, and representative of the major substantive cluster of the MMPI (Wiggins, 1966, p. 12). These MMPI content scales include SOCIAL MALADJUSTMENT (SOC), DEPRESSION (DEP), FEMININE INTERESTS (FEM), POOR MORALE (MOR), RELIGIOUS FUNDAMENTALISM (REL), AUTHORITY CONFLICT (AUT), PSYCHOTICISM (PSY), ORGANIC SYMPTOMS (ORG), FAMILY PROBLEMS (FAM), MANIFEST HOSTILITY (HOS), PHOBIAS (PHO), HYPOMANIA (HYP), and HEALTH (HEA).

Payne and Wiggins (1972) noted that in contrast to the strictly empirical basis for the validity and clinical scales, the content scales are based upon what an individual may be trying to communicate about himself through his responses to self-report items. Payne and Wiggins (1972) observed that

the patient's communication is neither accepted at face value, as in the naive-rational approach, nor rejected out of hand, as in the radical-empirical approach. Instead the fact that patients are trying to communicate something about themselves through self-report is explicitly recognized and made the subject of legitimate inquiry (p. 2).

Wiggins, Goldberg, and Appelbaum (1971) stated that the content scales were originated to serve as a complement to standard MMPI clinical and validity scales and "serve to clarify the manifest content of the S's [subject's] communications to the testor or institution he represents" (Wiggins et al., 1971, p. 403). Additionally these content scales are viewed as mutually exclusive, internally consistent, moderately independent and representative of the major content dimensions of the MMPI (Wiggins et al., 1971).

Cohler, Weiss, and Grunebaum (1974) reported that the content scales can be scored from a shortened (400 item) version of the MMPI. The abbreviated content scales are internally consistent and show high correspondence with the larger scales. Gilberstadt (1970) developed T-score values for the content scales based on a sample of Air Force enlisted men. This was a part of an automated scoring and interpretive service he had developed for the Veterans Administration.

Boerger's (1975) study identified empirical extra-test correlates for some of the Wiggins content scales. These correlates basically coincided with the content of these scales. It was noted that many fewer extra-test correlates were observed for the standard clinical scales. But as many correlates were identified for the content scales as for two different sets of factor analytically derived MMPI scales.

Religious Fundamentalism Content Scale

Development and Description

The religious fundamentalism content scale was originally presented along with the other content scales by Wiggins (1966). In that study, supporting reliability and validity data were provided for this scale. The original formulation of content categories of the MMPI included a religious attitude scale. Nineteen items included the following domains: fundamentalist beliefs, rejection of fundamentalist beliefs, unusual religious experiences, religiosity, magical beliefs, lack of praying, and church attendance (Wiggins, 1966, p. 5). The internal consistencies of these content categories were calculated by odd-even total scores from a sample of 500 Stanford University introductory psychology students, of which 250 were men and 250 were women, with correlations obtained at $r = .258$ and $r = .184$ respectively.

The deletion of four items and rekeying of those remaining resulted in internal consistency increases from the low 20's to the high 80's. An item analysis was next performed, which resulted in three items which had a reliability below .30 being deleted from the scale (Wiggins, 1966, p. 10). Reliability from a variety of samples is provided in Table 2. The resulting twelve items which comprised the present REL scale are noted in Table 1.

Table 2

Coefficient Alpha Internal Consistency Estimates for the
REL Content Scale in Seven Normal Samples

Sample	N	Alpha Coefficient
Air Force enlisted men	261	.674
University of Minnesota men	96	.892
University of Minnesota women	125	.861
University of Oregon men	95	.842
University of Oregon women	108	.756
University of Illinois men	100	.817
University of Illinois women	83	.793

Note. From "Substantive Dimensions of Self-Report in the MMPI Item Pool" by J. S. Wiggins, 1966, Psychological Monographs, 80, 22 (Whole No. 630), p. 14. Copyright 1967 by the American Psychological Association. Reprinted by permission.

Wiggins' (1966) summary of the religious fundamentalism scale was "high scorers on this scale see themselves as religious, church going people who accept as true any number of fundamentalist religious convictions. They also tend to view their faith as the true one" (p. 13).

Compared to the other 12 content scales, the REL scale was among the most reliable scales for college groups but nearly the least reliable for the Air Force sample. To evaluate group differences in content scale scores, combinations of sample groups consisting of Air Force men, outpatient men, outpatient women, inpatient women, college men, and college women were established. The 13 MMPI content scales were scored in each of these seven groups. The REL scale did not differ greatly overall among groups, but significant differences on this scale were obtained between Air Force men and inpatient men, Air Force men and outpatient men, Air Force men and college men, college men and college women, outpatient men and inpatient men, and between college women and inpatient women. Among all MMPI scales, only the Ma scale had significant between group differences.

To provide preliminary normative information Wiggins developed tables which displayed content scale means and standard deviations. These were obtained from using subgroups of these research samples, which were developed to represent a broad range of populations. This data is provided in Table 3 for the REL

Table 3

REL Scale Means and Standard Deviations for SelectedMale Samples

M	SD	Group	N
7.33	2.58	Special symptom reaction (OP)	6
7.16	2.56	Air Force normals	261
7.13	2.36	Brain disorders (OP)	16
6.90	2.53	Affective psychoses	20
6.87	3.09	Brain disorders	23
6.64	2.69	Sociopathic personality disturbance	46
6.57	3.00	Schizophrenic psychoses	85
6.08	2.71	Psychoneurotic disorders	13
5.91	3.50	College normals	96
5.88	2.53	Transient situational disturbance (OP)	8
5.83	3.39	Personality trait disturbance (OP)	36
5.67	2.89	Psychoneurotic disorders (OP)	15
5.40	2.13	Personality pattern disturbance	15
5.35	2.23	Personality trait disturbance	17
5.24	2.17	Personality pattern disturbance (OP)	17
5.11	2.58	Sociopathic personality disturbance (OP)	19

Note. From "Substantive Dimensions of Self-Report in the MMPI Item Pool" by J. S. Wiggins, 1966, Psychological Monographs, 80 22, (Whole No. 630), p. 35. Copyright 1967 by the American Psychological Association. Reprinted by permission.

scale. Wiggins also attempted to use the content scales to aid the differential diagnosis of psychiatric inpatients. Multiple discriminate analyses were utilized related to six diagnostic groups, including brain disorders, affective psychoses, schizophrenic psychoses, psychoneurotic disorders, personality disorders, and sociopathic disorders. REL was one of the several content scales which were noted to contribute little to the present analysis (Wiggins, 1966, p. 21).

Goldberg (cited in Graham, 1977a) in a group of unpublished materials reported correlations between the content scales and standard MMPI validity and clinical scales. The REL scale correlations are provided in Table 4 (See Table 4). There is no identifying demographic information, description of sample size or composition related to Goldberg's data, so care must be taken in using this material. It is clear that additional research examining the correlations between content scales and standard MMPI validity and clinical scales with specific populations is warranted.

REL Content Scale Studies

Wiggins, Goldberg, and Appelbaum (1971) examined the relationship between each of the MMPI content scales and the validity and clinical scales from the MMPI, the Edwards Personal

Table 4

Correlations between Content Scales and Standard
MMPI Validity and Clinical Scales

Standard MMPI Scale	REL (Males)	REL (Females)
L	036	120
F	-264	-265
K	055	142
Hs	-009	-059
D	-165	-212
Hy	-089	023
Pd	-139	-093
Mf	-137	-062
Pa	084	020
Pt	019	-050
Sc	-073	-088
Ma	-152	-067
Si	037	-055

Note. From The MMPI: A practical guide (p. 132) by J. R.

Graham, 1977. New York: Oxford University Press. Copyright 1982 by
 Oxford University Press. Reprinted by permission.

Preference (EPPS), the California Psychological Inventory (CPI), the Adjective Check List (ACL), and the revised Strong Vocational Interest Blank (SVIB) from college samples from the midwest, northwest, and the University of Oregon. Wiggins et al. (1971) noted that the REL content scale "appears to measure a highly specific dimension that is not represented in other standard personality inventories" (p. 407). The REL content scale was positively correlated with the SVIB Religious Activity Scale for males $r = .43$ and females $r = .46$.

Wiggins et al. (1971) in comparing their samples with southern male university students from Fowler and Coyles' (1971) study noted that this group had slightly more fundamentalist religious beliefs ($p < .001$, 3 T -score units) than their midwestern and northwestern samples. Southern university females showed even greater differences as they scored 7 T -score points higher on the REL content scale than Wiggins' et al. (1971) midwestern and northwestern samples.

Taylor, Ptacek, Carithers, Griffin, and Coyne's (1972) study investigated the convergent validity of the REL content scale. 125 psychiatric patients were sampled with their MMPI content scale scores compared with self-report example-anchored rating scales, and with scores on other multi-item personality scales assumed to measure content similar to the MMPI content scales. The REL content scale was compared with the Religious Orientation

Scale of the Omnibus Personality Inventory (Form F) and with two example-anchored scale questions. One example-anchored question was "How religious are you, in a fundamentalist sense" with the polar anchors being "strongly religious vs. not very religious, in a fundamentalist sense" (Taylor et al., 1972, p. 546).

Findings in this study included a convergent coefficient between the REL content scale and the Religious Orientation Scale at $r = .828$. Between the REL content scale and the two example-anchored scales, there were $r = .759$ and $r = .774$. These researchers concluded that the REL content scale, the Religious Orientation Scale, and the example-anchored self-rating scales appeared to be from a very similar content domain.

Hoffman and Jackson's (1976) study examined the factor analytic convergence of the MMPI content scales and the Differential Personality Inventory using a sample of 282 male and 129 female psychiatric patients admitted for acute alcoholism. Of the seven major factors the third was identified as impulse expression vs. religiosity. Rebelliousness, socially deviant attitudes, impulsivity, health concern, and sadism were negatively loaded with religious fundamentalism on this scale.

Taylor's (1977) study examined the reliability of the MMPI content scales. This researcher concluded that these scales including the REL remained "relatively constant across divergent population samples, ie. that each of the 13 scales has its own

intrinsic reliability" (p.351). Taylor contended that this intrinsic reliability was due to the domain of the content measured and not to the specific scales. He commented that "consistency in measurement is determined only partly by the measuring instrument; it is also determined by the phenomenon being measured" (p. 357).

Goldsmith and Gottesman (1977) investigated the construct validity of the content scales using twin-based criteria by administering the MMPI to 178 same sex adolescent twin pairs in the Boston area. These researchers suggested that cotwins would develop many similar personality characteristics because of common genetic and/or common environmental influences. Consequently, indexes of cotwin similarity on personality scale scores should be positive and importantly different from zero if ascertainment and sample size are adequate. For both male and female cotwins interclass correlations in the REL content scale for monozygotic and dizygotic cotwins were compared suggesting environmental rather than genetic factors.

Jarnecke and Chambers' (1977) study evaluated the construct validity of the MMPI content scales using a population of 242 male Veteran Administration psychiatric patients in Ohio. The 13 MMPI content scales were studied along with the variables of age, IQ, and education of each subject. These sixteen variables were subjected to a principle components factor

analysis with a varimax rotation. Education and IQ were observed to be one independent factor, with age also as a separate factor. On another factor which comprised 12.5% of the total variance of all factors Religious Fundamentalism and Feminine Interests were negatively loaded.

Among the significant correlations occurring between specific scale scores and certain demographic variables, the REL scale was correlated to age $r = .019$, to education $r = -.036$, and to IQ $r = -.079$. The content scale scores still constituted a separate component and so were not predominately intelligence-related or age correlated data.

Cohler, Weiss, and Grunebaum (1974) investigated the short and long forms of the MMPI content scales by using a sample of 175 Peace Corps female volunteers between the ages of 22 and 45 who had take the MMPI prior to overseas duty. The correlation between the long and short forms of the REL was $r(175) = .98$, $p < .01$. The long (regular) form in the REL content scale is comprised of 12 items with 11 items scored for a true response and one item scored for a false response. In contrast the short form comprised 9 items with all scored for a true response.

A second sample in the Cohler et al. (1974) study were 40 women who were hospitalized for mental illness following childbirth who had displayed chronic psychotic histories, and a control group of 41 nonhospitalized women recruited by means of

a newspaper advertisement. These two groups were matched on the basis of age, age and sex of the youngest child, religion (Catholic vs. non-Catholic), education, parity, and husband's occupation.

On the REL at the initial evaluation and at a 20 month followup, test-retest correlations were $\underline{r} = .81$ for the hospitalized mothers and $\underline{r} = .91$ for the non-hospitalized mothers. Otherwise the REL scale did not discriminate between the two groups who were over 50% Catholic. With this sample REL was noted to be negatively correlated with patient's level of education and Shipley abstraction scores, $\underline{r} = -.36$, $\underline{p} < .05$. But for the control group nonsignificant correlations were obtained with these variables. Neither the patient nor the control group revealed a significant relationship between REL scores and Shipley vocabulary scores. Age was positively correlated with REL ($\underline{r} = .30$) for the patient group, but for the control group this correlation was not significant.

Lachar and Alexander (1978) evaluated the extent of agreement between self-report and clinical impressions of clients by investigation of the external correlates of the MMPI content scales. The subjects were 384 male U.S. Air Force personnel and their dependents evaluated in a variety of inpatient and outpatient military facilities at Lackland Air Force Base in

Texas. Clinical impressions were based on responding to 81 possible descriptive adjectives.

The study sample was reduced to 363 as a total of 21 subjects had MMPI protocols of dubious validity ($F > 25$ raw score) or substantial missing data ($Q > 30$ raw score). All subjects were designated as either high scorers, low scorers, or "other" for each of the 13 content scales. For the REL scale patients with T-scores > 59 ($n = 40$) were considered high scores and patients with T-scores < 41 ($n = 84$) were considered low scorers.

Replicated and single-sample correlates descriptive of high scores on the REL content scale were characterized by less alcohol excess, delusions, religiosity, less impulsivity, less drug usage, less marital conflict, and autism. In contrast low REL content scale score correlates corresponded to homicidal, impulsivity, drug usage, less moody, destructive gestures, and confused. These researchers concluded that the elevated REL scores generally represented inhibition of acting out behaviors while low REL scores demonstrated more of an acting out stance.

Lachar and Alexander (1978) proposed interpretations of high content scale scores, based on a combination of scale content, psychometric properties, and correlate characteristics. For the REL content scale scores Lachar and Alexander (1978) suggested

Endorsed item content reflects strong religious beliefs and religiously motivated behavior. In client populations,

this orientation suggests a reduced probability of substance abuse, impulsive behaviors, and conflict with family members. Expression of strong religious beliefs may, at times, reflect a delusional system and associated thought disorder (p. 1356).

Loper, Kammeier, and Hoffman (1973) evaluated the scores of 32 University of Minnesota college freshman males who were later hospitalized as alcoholics with the scores of 148 male classmates. The MMPI had been completed by both groups as part of a standard college admission procedure. Related to the REL scale there were no significant differences between the two groups as calculated by a t test.

Hoffman, Loper, and Kammeier (1974) in a study similar to the preceding one examined the clinical records from an alcohol treatment center and state hospital to identify alcoholics who might have attended the University of Minnesota between 1947-1961. Scorable answer sheets were obtained for 25 students who later became alcoholics and also had scorable answer sheets available at one of the treatment facilities.

On the average there was a 13 year lapse of time between college admission and time of hospitalization during which there had been normative shifts in MMPI scores. To correct for this a control group was developed by selecting at random a total of 148 answer sheets from the classmates of alcoholics. Differences

between the MMPI scale scores of the pre-alcoholics and the control group were evaluated by t tests (two tailed) for independent samples. Alcoholics at the time of treatment scored significantly higher on the SOC, DEP, FEM, MOR, and FAM scores, but were significantly lower on the REL than at their college admission. They also indicated losing interest in religious activities.

O'Neil, Teague, Lushene, and Davenport (1975) studied the MMPI content scale scores of 19 female college students from Florida State University involved with a women's liberation group, with 33 female students from the same university who were not actively involved in the liberation movement. Results indicated that the women's liberation activists scored significantly lower on the REL scale than the non-activist student control group.

Carlson (1978) examined the relationship between the MMPI Repression-Sensitization Scale with 50 male and 50 female subjects. Sensitizers were expected to score lower than repressors on the REL because of a possible relationship between social desirability and religiosity. Contrary to this premise no relationship was found. Carlson suggested that this could be explained by noting that the REL scale may have a tendency to reflect a subject's interests and value systems, i.e.,

characterological type traits in contrast to the behavioral and symptomatic nature of the other content scales.

Penner (1982) examined the relationship between psychiatric patients' scores on the REL content scale with their performance on standard MMPI validity and clinical scales, level of psychopathology, psychiatric diagnosis, intelligence, and religious affiliation. The subjects were 324 male and female patients from Dammasch State Hospital in Oregon. Among other findings, there was no evidence that religious belief is a significant factor in interpretation of psychiatric inpatients' standard MMPI profiles. On the D scale REL was negatively correlated for males $r = -.17$, $p < .01$, and approached significance for females $r = -.14$. But the effects of item overlap may have resulted in the significance of these relationships. REL was unrelated to the other standard MMPI validity and clinical scales.

Level of psychopathology was not related to the psychiatric patients' religious beliefs. The measure of psychopathology was the mean of eight non-K corrected MMPI clinical scales. Penner further commented that the large proportion of patients who reported no religious affiliation (30.3%) compared with the much smaller proportion noted in the general population is counter to a frequent assumption that increased religious concern characterizes psychiatric patients. Related to psychiatric

diagnoses patients with bipolar disorder scored significantly higher on REL than patients with depressive disorder. No significant differences were noted on REL between patients with schizophrenia and patients with bipolar disorder, or between patients with schizophrenia and patients with depressive disorder. REL was unrelated to Shipley-Hartford verbal, abstraction, and total intelligence scores.

Summary

These 13 studies discussed have added a significant amount of information related to the validity and reliability of the REL content scale and its relationships to a variety of demographic variables, assessment instruments, and behavioral indicators. The REL scale has been shown to correlated positively with other religious instruments such as the SVIB Religious Activity Scale (Wiggins et al., 1971), the Religious Orientation Scale of the Omnibus Personality Inventory (Taylor et al. 1972); and a example-anchored scale of how religious patients perceive themselves (Taylor et al., 1972).

The REL content scale has demonstrated a high degree of internal consistency (Cohler et al., 1974; Goldsmith & Gottesman, 1977) and reliability across a variety of samples (Taylor, 1977). Negative relationships have been shown between scores on the REL content scale with impulsivity and acting out (Hoffman & Jackson,

1976; Lachar & Alexander, 1978). REL content scores were noted to be significantly independent of education (Jarnecke and Chambers, 1977), with inconsistent relationships displayed with age and different measures of intelligence with varying populations (Cohler et al., 1974; Jarnecke & Chambers, 1977; Penner, 1982).

REL scores did not distinguish between college students who later became alcoholics and their classmates at the time of college entrance (Loper et al., 1973). However, scores on the REL were noted to decline for college students who later became alcoholics (Hoffman et al., 1974). Women's liberation student activists were noted to score lower on the REL scale than did non-activist female students (O'Neil et al., 1975). Level of psychopathology was not related to psychiatric patients' religious beliefs, while on psychiatric diagnoses patients with bipolar disorder scored significantly higher on REL than patients with depressive disorder (Penner, 1982). Protestant and Catholic patients scored significantly higher on REL than patients with no religious affiliation, with Protestants and Catholics not differing on this scale.

In summary, existing research on the REL content scale has corresponded with the original description and data formulated by Wiggins (1966). It is also clear that additional research is

needed to strengthen the empirical support and validation of this content scale.

Religious Orientation Scale Studies

Allport (1967) developed the Religious Orientation Scale which conceptualized religious orientation on an intrinsic-extrinsic continuum. He was originally interested in how a difference in orientation influenced level of prejudice. Extrinsically oriented individuals were characterized as placing primary emphasis upon a variety of temporal and eternal benefits that would result from a religious identification. In contrast, intrinsically oriented individuals would be primarily motivated by inner desires to faithfully live a life consistent with a high level of commitment and sacrifice.

Hunt and King (1971) critically reviewed selected articles and original data to evaluate the ROS. They suggested there was no single intrinsic-extrinsic dimension, and these two factors can be seen as separate dimensions and not as opposites. They concluded that the extrinsic is well operationalized as a selfish instrumental approach to religion. But Hunt and King reported numerous problems with operationalizing the intrinsic dimension, and suggested that it needs considerable refinement or abandonment as a label. The indiscriminately pro and anti-religious

dimensions also require further theoretical and empirical attention (Hunt & King, 1971, p. 157).

Strickland and Shaffer (1971) investigated the ROS by studying three groups of volunteer male and female members of two large churches, one liberal and one conservative of the same Protestant denomination. These subjects were evaluated as to their intrinsic-extrinsic religious orientation and belief in internal vs. external control of reinforcement, and authoritarianism. This later variable was found not to be related to either religious orientation or locus of control.

Maddock, Kenny, and Middleton (1973) studied active members of Episcopalian congregations who were asked to indicate preferences for a set of questionnaire items composed of personality characteristics and typical role activities of clergymen. Subjects also completed the ROS. The preference for personality characteristics was significantly greater than for the role activity items. The intrinsic-extrinsic orientation of the respondents was not significantly related to these choices.

Crandall and Rasmussen's (1975) study of psychology students explored the relationship between scores on the Purpose in Life Test and religious values. With regard to the ROS, perceived purpose in life was found to be correlated with an intrinsic religious orientation but not with an extrinsic orientation. Bolt (1975) found that individuals displaying an intrinsic

religious orientation compared to subjects with an extrinsic orientation reported a significantly higher sense of purpose or meaning.

These findings were closely paralleled in Soderstrom and Wright's (1977) study which noted that intrinsically motivated individuals scored significantly higher on the degree of purpose in life than extrinsically motivated subjects.

Paloutzian, Jackson, and Crandall (1978) in two studies assessed the relationships between the type of religious belief system "ethical vs. born again Christian", type of conversion experience (sudden vs. gradual vs. unconscious), and four attitudinal dependent variables including the Religious Orientation Scale.

The same pattern of results was obtained in both studies. "Born-again Christians" were significantly more intrinsically motivated in their religious beliefs and higher in social interest than "ethical Christians." "Sudden converts" were significantly more intrinsic in religious orientation than "unconscious converts."

Cerny (1978) investigated death perspectives and religious orientation as a function of Christian faith. The construct validity of the Death Perspective Scales (DPS) was evaluated by administering it, Allport's ROS, Spilka's Committed-Consensual Religious Orientation Scale, and a personal data questionnaire to

undergraduate subjects described as born-again Christians, Christians, and non-Christians. Significant positive and negative dimensions of the DPS and a association between a positive death perspective and a committed intrinsic religious orientation were found. "Born-again Christians" had a more positive death perspective characterized by belief in an afterlife of reward and a more committed intrinsic religious orientation.

Tjart and Boersma (1978) studied the religious values of 91 Christian and 100 public school 8th graders. The study included a semantic differential scale for concepts of "God" and "prayer", the ROS, and Rokeach's Value Survey. On all three measures significant differences were observed between the two groups. Christian school subjects had a greater positive orientations to the concepts of "God and "prayer", more intrinsic religious orientation, and a greater preference for moral (interpersonal) behaviors than public school subjects.

Joe, McGee, and Dazey (1977) studied undergraduate student responses to a case account of a rape using Allport's ROS. Intrinsically religious subjects devalued the victim less than did subjects who were extrinsically oriented, indiscriminately proreligious, or indiscriminately non-religious. No significant effect was noted for marital status of the victim, nor were there any significant interactions.

McClain's (1978) study of personality traits using the California Personality Inventory and the ROS reported that intrinsically oriented religious persons scored significantly higher on self-control, personal and social adequacy and stereotyped femininity. Non-religious subjects scored higher on egocentric sexuality and restlessness.

Baither and Saltzberg (1978) explored the relationship between religious attitudes and rational thinking. The primary hypothesis was that there would be no sex differences on the measures. The ROS was administered along with Ellis' Rational Belief Test and Bard's self-rating scale for rationality. Correlations were found to be significant but low in magnitude. Intrinsically oriented religious subjects were more rational than extrinsically oriented subjects. Female subjects were more rational and intrinsically oriented than male subjects.

Paloutzian and Ellison (1979) found that intrinsically oriented subjects scored higher than extrinsically oriented subjects on the Spiritual Well-Being Scale. Sturgeon and Hamley (1979) reported that intrinsics displayed significantly less existential anxiety and less trait anxiety, and had a greater internal locus of control than did extrinsics. But the two groups did not differ in state anxiety.

Ernsberger and Manaster (1981) investigated three aspects of moral development as related to religious orientation. These

included whether personal, internalized "intrinsic" religious orientation is related to moral development; whether level of moral development differs according to denomination, and whether active and/or conflictual involvement with moral teaching of denomination are related to moral development. 80 females and 80 males over the age of 18 from four Protestant churches (two having moral teachings at the principled level and two at the conventional level) were given measures of moral judgment and religious orientation (ROS). Religious orientation was related positively to each aspect. Kohlberg's assertion of irrelevance of religious factors in moral development was questioned.

Bahr and Gorsuch (1982) investigated the relationship of extrinsic and intrinsic scales to trait anxiety factors measured by the Institute for Personality and Ability Testing (IPAT) Anxiety Scale Questionnaire. Subjects also completed the ROS. Results indicated that intrinsics were less anxious than nonintrinsics, as extrinsics were more anxious than non-extrinsics on some components of trait anxiety. These researchers concluded that using a general measure of religiousness may find a positive correlation with anxiety if the sample contains more extrinsics than intrinsics. A negative relationship would be found if the sample contained more intrinsics than extrinsics, or no relationship if an appropriate component is measured.

Quinn's (1983) study found a positive correlation between extrinsic religious orientation and marital dissatisfaction as measured by the Marital Satisfaction Inventory. Additionally, no significant relationship was found between intrinsic religious orientation and marital satisfaction.

Bradford (1978) investigated the relationship between the ROS and the MMPI with a sample of 136 undergraduate students from East Texas State University. In addition to the ROS, subjects were given the 173 item Hugo (1971) short form of the MMPI. On the basis of median scores four religious orientations were constructed: intrinsic religious (IR), extrinsic religious (ER), indiscriminately proreligious (IP), and indiscriminately irreligious (II). Median MMPI profiles for each of the four religious orientations and gender were constructed, with 2 point interpretations of characteristic personality patterns. Mental abnormality was defined as one standard deviation above or below the mean of 50 T-points. Males scored significantly higher in mental abnormality than females. The mean of all MMPI scales K-corrected T-score was 63.74 for males, and the corresponding K-corrected T-score for females was 61.22. However, there were no significant differences between the religious orientations, nor between the interaction of religious orientation and gender, on this measure.

The IR and the ER orientations were not significantly different on any of the MMPI scales, but the IP and and II orientations differed significantly from each other and from the IR and ER orientations. These differences occurred primarily on the D, Pa, Sc, and Si scales. Bradford (1978) suggested that the IP and IR orientations were not compatible with feelings of belonging and social competency. Furthermore, he stated that with the IR and ER orientations showing no difference, "that this result does not support Allport's view that a unified belief promotes mental health" (p.123).

Summary

Studies involving the intrinsic dimension of ROS have found that it is positively related to the Purpose in Life Test, and a higher sense of meaning. "Born-again Christians" were significantly more intrinsically motivated and higher in social interest than "ethical Christians". "Sudden converts" were significantly more intrinsic than "unconscious converts". A more positive death perspective was correlated with "born-again Christians" displaying an intrinsic orientation. Christian school subjects were more intrinsically religiously oriented than public school subjects. In another study intrinsically oriented subjects devalued rape victims less than extrinsically oriented ones.

Intrinsically religiously oriented subjects have been noted to score significantly higher on self-control, personal and social inadequacy, and stereotyped femininity. Intrinsically oriented subjects have been found to be more rational than extrinsics on the Rational Belief Test. Intrinsics also scored significantly higher than extrinsics on the Spiritual Well-Being scale. Intrinsics have displayed less existential anxiety, less trait anxiety, and greater internal locus of control than extrinsics. Intrinsically religious orientation has been shown to be positively related to moral development.

No significant relationship has been found between an extrinsic religious orientation and the Purpose in Life Test. A positive relationship has been noted between extrinsic religious orientation and marital dissatisfaction. No relationship has been observed with personality characteristics vs. role activities in clergyman as expressed by intrinsic vs. extrinsic oriented members of a church congregation. Intrinsic vs. extrinsic oriented college students have shown no significant differences on MMPI scales.

Spiritual Well-Being Scale Studies

Ellison (1983) observed that studies evaluating the subjective well-being of the American populace have frequently overlooked the spiritual dimension of the human experience.

Ellison noted that previous researchers such as Campbell (1981) have suggested that well-being depends on three basic kinds of needs. First is the need for having which is the acquisition of material necessities and related to the impersonal resources of life. Second is the need for relating which refers to patterns of social relationships which have as a focus the need to belong and experience intimacy. Third is the need for being which relates to a sense of satisfaction with one's self. Self-fulfillment would relate to feelings of competence, and direction over one's life and worth.

Ellison believed that a fourth dimension, the need for transcendence, has been overlooked. This need would refer to the sense of well-being individuals experience when they find purposes to commit themselves to which involve ultimate meaning in life. Ellison noted that in various surveys, including a recent Gallup (1977) poll, religious faith was considered highly important for the quality of life by many Americans.

Moberg and Brusek (1978) pioneered the two dimensional conceptualization of spiritual well-being. The horizontal dimension, existential well-being (EWB), reflects one's perception of life's purpose and satisfaction apart from any religious reference. The vertical dimension, religious

well-being (RWB) refers to one's relation to God. This instrument was formally developed by Paloutzian and Ellison (1979).

The Spiritual Well-Being Scale (SWB) has been administered to men and women from high school age to senior citizen, married and single, religious and non-religious, and from rural and urban areas. Studies investigating the SWB have been increasing over the last few years. Campise, Ellison, and Kinsman (1979) noted significant positive relationships between the SWB and self-esteem, perceived quality of parent-child relationships, family togetherness, and social skills. Significant negative correlations were obtained between SWB and individualism, success orientation, and importance of personal freedom.

Paloutzian and Ellison's (1979) study concluded that SWB, RWB, and EWB positively correlated with intrinsic religious orientation, the Purpose in Life Test (Crumbaugh & Maholick, 1969) and self-esteem and social skills. SWB and extrinsic orientation were negatively correlated. The SWB, RWB, and EWB were also negatively correlated with the UCLA Loneliness Scale (Ellison & Paloutzian, 1982). EWB was also negatively correlated with a sense of rejection.

Ellison and Economos' (1981) study indicated that SWB and its subscales RWB and EWB were significantly related to a number of variables: self-esteem, doctrinal beliefs which affirm the valuing of the individual; worship orientations and devotional

practices which promote a sense of personal acceptance and communion with God; one's own positive self-evaluation of God's acceptance; the average number of Sunday services attended each month; the average amount of time spent per daily devotional period. These researchers concluded that "born again Christians" had higher levels of spiritual, religious, and existential well-being than "ethical Christians."

Quinn's (1983) study found there was a significant positive relationship between SWB and marital satisfaction as measured by the Marital Satisfaction Inventory. However, no significant relationship was found with the religious well-being subscale and marital satisfaction. Campbell's (1983) study of 28 patients with renal failure receiving hemodialysis found that there was a positive correlation between spiritual well-being scores and adjustment. Spiritual well-being had a significant negative correlation with depression as measured by the Beck Depression Inventory. Significant positive correlations were found between spiritual well-being and measures of acceptance of disability, assertiveness, and religious coping.

Summary

Research with the SWB has indicated significant positive relationships with self-esteem, perceived quality of parent-child relationships, family togetherness, social skills, and

intrinsic religious orientation. Additionally, SWB has been positively related to doctrinal beliefs which affirm valuing of the individual, worship orientation, devotional practices which promote a sense of personal acceptance and communion with God, and one's own positive self-evaluation of God's acceptance.

SWB has been also positively related to the average number of Sunday services attended each month, average amount of time spent per daily devotional period, marital satisfaction, adjustment to renal failure, acceptance of disability, assertiveness, and religious coping. Negative relationships with SWB include individualism, success orientation, importance of personal freedom, extrinsic religious orientation, loneliness, sense of rejection, and depression.

Relevant Conclusions from Review of the Literature

1. In the studies investigating the relationship between religiosity measures and scores on standard MMPI scales, no consistent relationships were found except for the D and M-f scales. The D scale has been negatively correlated with a variety of religiosity instruments. Religious college students were significantly lower than nonreligious males on the D scale. The M-f scale has been noted to be negatively correlated with religiously oriented college students. Nonreligious college students scored higher on the M-f scale than religious students.

Since most of these studies involved college populations the generalizability of their conclusions to more clinical populations remains in question.

2. In the only known study comparing REL scores with level of psychopathology, no significant relationship was found. However, that study (Penner, 1982) involved an inpatient population. With an outpatient population results might be more consistent with a few studies (Lindethal, Myers, Pepper, & Stern, 1970, Stark, 1971) that involved outpatient or non-clinical populations which found a negative relationship between religiosity measures and general indicators of psychopathology. A general review of all the studies utilizing a religiosity measure and a psychopathology measure is beyond the scope of this study. Recently, Lea (1982) and Bergin (1983) have conducted comprehensive reviews of the literature involving religiosity and psychopathology measures.

3. Previous studies evaluating the REL scale's psychometric qualities are encouraging. The REL scale has been shown to correlate positively with other religious instruments. This scale has also demonstrated a high degree of internal consistency across a variety of samples. However additional research could strengthen the empirical support and validation of the REL.

4. Previous research has concluded that the intrinsic-extrinsic scales of the ROS are two separate dimensions and are

not opposite in nature. Studies have shown that intrinsics score significantly different than extrinsics on variables such as purpose in life, "born again" vs. "ethical" Christian, rape devaluation, rational thinking, and spiritual well-being. There are no known studies comparing REL with the ROS.

5. The SWB has shown increasing promise as a measure of religious and existential well-being. SWB and its two scales have been positively correlated with variables such as intrinsic religious orientation, purpose in life, doctrinal beliefs, frequency of church attendance, average amount of time spent daily per devotional period, and self-esteem. There are no known studies comparing REL with SWB.

Rationale and purpose for the Study

The empirical relationship between religious belief, personality, and other important variables in clinical populations has been inadequately studied. Often highly opinionated statements that are woefully lacking a research basis are made by professionals and laypersons involving this subject area. For clinicians increased knowledge of the distinct contributions of and relationships between the psychological and spiritual aspects of a person's nature to aid the healing process is highly important.

The issue of religious belief and personality functioning will be further explored in this study by focusing on the influence of religious variables on MMPI scales and psychiatric diagnoses in adult outpatient populations. There are no known studies using the MMPI (with particular focus on the REL content scale), Diagnostic and Statistical Manual (DSM) III diagnoses (American Psychiatric Association, 1980), the Religious Orientation Scale, and the Spiritual Well-Being Scale in one research design.

In this study the relationship between scores on the REL content scale and scores on the standard MMPI validity and clinical scales will be evaluated. The relationship between REL scores and DSM III diagnoses will also be examined. This study will also evaluate the relationship between the REL and the ROS and the REL and the SWB. Additionally, scores on the REL will be compared with a variety of demographic and religious variables. Presently there is little information known about these relationships.

Hypotheses and Questions

The following hypotheses will be tested in this study:

1. There will be a statistically significant negative correlation between REL scores and the MMPI Depression (D) scale.

2. There will be a statistically significant negative correlation between REL scores and the MMPI Masculinity-Femininity (M-f) scale.
3. There will be a statistically significant negative correlation between REL scores and the subjects' overall level of psychopathology.
4. There will be a statistically significant positive correlation between REL scores and the Intrinsic scale of the Religious Orientation Scale.
5. There will be a statistically significant positive correlation between REL scores and the Existential Well-Being Scale of the Spiritual Well-Being Scale.
6. There will be statistically significant positive correlation between REL scores and the Religious Well-Being Scale of the Spiritual Well-Being Scale.

In addition to these hypotheses the following research questions will be evaluated:

1. Will there be statistically significant correlations between REL scores and each of the following MMPI scales: Lie (L), Frequency (F), Correction (K), Hypochondriasis (Hs), Hysteria (Hy), Psychopathic Deviate (Pd), Paranoia (Pa), Psychasthenia (Pt), Hypomania (Ma), Schizophrenia (Sc), and Social Introversion (Si)?

2. Will there be a statistically significant correlation between REL scores and DSM III diagnoses?
3. Will there be a statistically significant correlation between REL scores and the Extrinsic scale of the Religious Orientation Scale?
4. What relationship do the following demographic variables have with REL scores?

The demographic variables are: sex, client's age, father's age, mother's age, birth order, education, income, marital status, religious affiliation, frequency of attendance, Christian belief, moral Christian, savior Christian, importance of religion, protestant denomination, race, and counseling center.

CHAPTER TWO

METHODS

This chapter includes all of the information related to data collection for this research study. Information is provided related to the subjects used and the counseling centers involved. Information concerning the instruments used and accompanying psychometric properties is presented. Additionally a discussion of the procedure, research design, and statistical tests is provided.

Subjects

Subjects in this study were from two outpatient centers in the Portland area. One was Christian Counseling Services in Gresham, Oregon. The second center was Western Psychological & Counseling Services Center affiliated with Western Conservative Baptist Seminary in Portland, Oregon. All clients requesting initial counseling services, who were subsequently seen in an intake session between June 1st to November 16, 1984, were requested to participate in the study. The voluntary aspect of involvement in the study was emphasized. Subjects were required to be 18 years of age or older. Clients referred by other mental

health professionals for medication evaluation at the Western center were automatically excluded.

Psychiatric Diagnosis

The psychiatric diagnosis was obtained through an interview using the DSM III. This interview was conducted by students who were completing doctorates in clinical psychology or, in several cases by doctoral level clinicians in clinical psychology or psychiatry. Only Axis I DSM III diagnoses were included in the data analysis comparing diagnosis with REL scores. In the first classification system, all diagnoses were divided into six categories: affective disorders, adjustment disorders, V codes, anxiety disorders, bulimia, and inhibited sexual disorder. In the alternative DSM III classification system the categories included adjustment disorder with depressed mood, all other adjustment disorders, major depression, all other affective disorders, V codes, and anxiety and other disorders (bulimia and inhibited sexual disorder). Please see Appendix B for coding chart.

Level of Psychopathology

Each subject's overall measure of psychopathology was determined by scoring 1 point for each standard deviation range of 10 points above a T-score of 70 or below a T-score below 30 on the clinical scales on the MMPI. For example, a T-score of 71 on

the Pd scale would earn one point and a T-score of 80 on the Sc scale would earn two points. Assuming that no other clinical scales had a T-score of 70 or above, the total psychopathology score for this subject would be three. There is no consensus measure noted in a review of the literature for level of psychopathology derived from the MMPI (Shaffer, Ota, & Hanlon, 1964; Sines & Silver, 1963). Some studies have used the average of the clinical scale scores (Graham, 1977a; Penner, 1982). However, clinical scale scores over 70 T-score points can be lost by the averaging of scores. In reviewing guidebooks to interpreting the MMPI low scores are frequently seen as indicators of some degree of maladjustment (Duckworth, 1979; Graham, 1977a). Thus scores below 30 T-score points are included in the overall total.

Demographic Variables

A demographic sheet was completed by the subjects at the time of completing the other assessment instruments. The demographic variables were chosen as significant after reviewing a variety of studies within this general field of research. Data was collected regarding each person's age, sex, parents' age, siblings' age, education, race, family income, marital status, religious affiliation, profession of Christian commitment, savior

or moral Christian, and level of importance of religion in the subject's life (see Appendix C).

Instruments

Minnesota Multiphasic Personality Inventory

Many and varied research studies have been completed using the MMPI since its inception. Over 5,000 studies are cited in Buross' Eighth Measurement Yearbook (1978). Reliability and validity of the MMPI has been well established with a wide variety of populations. Dahlstrom et al. (1975) and Graham (1977b) report short interval (one day to two weeks) test-retest coefficients range from .70 to .85, and coefficients for longer intervals of a year or more range from .35 to .45. Internal consistency data for individual MMPI scores have correlations from .60 to .90 which has been summarized from a wide range of populations. The validity of the MMPI has also been investigated in numerous studies. Responding to this issue King (1978) states

Although a great deal of the research literature on the MMPI is easily criticized, it remains an objective test with an extremely diverse and relatively sound research literature, all of which contributes to its versatility and power as a predictive instrument. The MMPI still holds the place as the

sine qua non in the psychologist's armamentarium of psychometric aids. (p. 938).

Religious Orientation Scale

Several studies have investigated the psychometric properties of the Religious Orientation Scale since Allport's original formulation of this scale. Hood (1973) evaluated two different scoring techniques published by Feagin and Allport for a common pool of 21 intrinsic-extrinsic religious orientation scale items. Correlations between both Feagin's and Allport's total scales, their subscales, and a measure of reported religious experience (REEM) were reported. Hood concluded that Feagin's scoring technique was as adequate as was Allport's. Additionally, neither Feagin's or Allport's subscales can be combined to form a single unidimensional scale.

The instrument is constructed so that four classifiable responses can be obtained. One is the intrinsically religious (agreement with intrinsic items and disagreement with extrinsic items); extrinsically religious (agreement with extrinsic and disagreement with intrinsic items); indiscriminately proreligious (agreement with extrinsic and intrinsic items); or non-religious (disagreement with both intrinsic and extrinsic items).

Related to reliability Feagin (1964) reported item-to-scale correlations ranging from .22 to .54 when the whole scale (21

items) was given one score. Two orthogonal factors were evident including intrinsic (18% of variance) and extrinsic (11% of variance). Allport and Ross' (1967) study reported item-to-subscale correlations ranging from .18 to .58. Robinson and Shaver (1973) conclude that ROS research studies have demonstrated this instrument's construct validity.

Spiritual Well-Being Scale

The SWB is a 20 item self-report questionnaire; items are scored from 1 to 6 with a higher number representing more well-being. Reverse scoring is used in negatively worded items. To control for response set problems half of the items from each subscale are worded positively and the other half are worded negatively. Ten items, all odd numbered, assess existential well-being. All of the religious well-being (RWB) items have a reference to God while the existential (EWB) have no such reference.

The SWB is comprised of three scores: (1) a total SWB score; (2) a summed score for religious well-being (RWB) items; (3) a summed score for existential well-being (EWB) items. The correlation between RWB and EWB subscales is .32 at the .001 level. Test-retest reliability coefficients are .93 (SWB), .96 (RWB), and .78 (EWB). The magnitude of these coefficients suggests that the SWB scale and its subscales possess high

reliability and internal consistency (Paloutzian & Ellison, 1979). An examination of the item content suggests face validity of the SWB. A factor analysis of the SWB suggests a religious factor corresponding to the RWB, and that the existential scale is divided into two sub-factors, a life satisfaction factor and a life purpose factor (Paloutzian & Ellison, 1979). Please see Appendix D for Instruments.

Procedure

When potential clients called in for counseling services they were scheduled for an intake interview by the secretarial staff. During the initial interview the client was informed by the intake interviewer that there would also be an assessment session to complete the intake process. The client was informed regarding the research study, and that the MMPI was a mandatory part of the intake process, whereas completing the other religious scales and information sheet was voluntary, but was needed for the research study. The client was provided with the agreement to participate in the research study form and was asked to sign it by the intake interviewer. There was the usual charge for the MMPI, but no charge for the other instruments. The client was informed that it would take an additional 15 minutes to complete the materials in addition to the time needed for the MMPI. The intake interviewer at the conclusion of the intake interview was to see that the

client scheduled a specific time for the assessment session. The intake interviewer was responsible for determining the DSM III diagnosis that was required for the study. This diagnosis was solely determined from the initial interview and was reviewed by the interviewer's supervisor. A separate sheet was provided for listing the client's diagnosis. A copy of the MMPI answers or profile was made by the researcher as the counseling center retained the original answer sheet. The other assessment data was retained by the researcher. The secretarial staff was responsible for collecting the completed assessment package. All data collected from subjects was coded by number. A count was kept of the numbers of clients who either (1) declined to participate, or (2) were referred solely for medication, or other physical evaluation by another mental health professional during the term of the study. A master list was kept by the secretarial staff listing subjects by name and corresponding number. Please see Appendix E for copy of the working procedure and Appendix F for subject agreement to participate.

Data collection

As each subject in the study completed the MMPI and the other assessment instruments, the secretarial staff at Christian Counseling Services and Western Psychological Services collected the materials. MMPI responses were examined to determine whether

there was a large number of missing responses ($Q > 30$ raw score) or of doubtful validity ($F > 25$ raw score). This procedure was recommended by Lachar and Alexander (1978). No MMPI scores were eliminated as a result of this evaluation. Additionally as suggested by Butcher and Tellegen (1978) all analyses of scales in this study used non-K-corrected raw scores. Two scales were converted to T-scores for discussion purposes in Chapter Four.

All the standard MMPI validity and clinical scales and the REL content scale were computer scored. For the Christian Counseling Services sample all the appropriate MMPI scales were also computer scored by the doctoral student who had done the initial interview. Photocopies of the printouts were made as the original data remained in the client's file. For the Western Psychological Services sample the raw data was entered into the computer by a secretary. Printouts of these scales were then photocopied for this researcher. The religious instruments were hand-scored and the demographic information was tallied by this researcher. All of this data was kept by the researcher.

Research Design and Statistical Procedures

This study is primarily correlational in nature with use of multiple regression and T-tests when appropriate. Two-tailed statistical tests are utilized except when a one-tailed statistical test is specified. All results described are

two-tailed unless otherwise noted. Critical values for (r), (F), and (T) were set at a minimum of $p < .05$. All of the correlations were calculated using a Pearson's R formula, and all the T tests that were calculated used a two-tailed independent group statistic. Statistics were calculated using STATPRO and SPSS as computation packages on an IBM XT computer system.

A decision was made to use dummy variables to code the following variables for statistical purposes: DSM III diagnoses, birth order, race, marital status, religious affiliation, sex, protestant denomination, christian belief, savior Christian, and moral Christian. The rationale for this decision included the awareness that the cells within these variables would be too small for meaningful statistical analysis.

CHAPTER THREE

RESULTS

This chapter provides the results of the study. The first area of discussion relates to combining the two samples into one sample for data analysis. Secondly, a summary of the variables from the demographic questionnaire is provided. Finally, the results related to the hypotheses and research questions are provided. Implications of the findings of this study are presented in Chapter 4.

Combining of the Samples

The first stage of data analysis was to evaluate whether the two samples (Christian Counseling Services (CCS) and Western Psychological and Counseling Services (WPS) could be considered together as one sample for further statistical analysis. T-tests between the samples were run on each variable. Significant differences between the two samples were noted on some important variables. These included education $t(72) = -2.63; p < .05$, marital status $t(72) = 4.13; p < .001$, and DSM III diagnoses $t(72) = 2.20; p < .05$. Table 5 summarizes the T-test findings on these two samples. T-tests were also run between the male and female

Table 5

T-tests between the Christian Counseling Services and
Western Psychological Services samples

Variable	<u>CCS</u> (n = 47)		<u>WPS</u> (n = 25)		T-value
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
RWB	47.61	8.91	47.24	8.69	.17
EWB	40.48	10.56	38.40	9.70	.86
SWB	87.63	18.03	85.64	16.10	.48
EXT	27.40	6.63	26.64	6.39	.49
INT	18.36	6.53	18.64	9.34	-.14
REL	9.19	2.41	9.76	3.07	-.90
MMPI	5.02	5.63	4.84	3.63	.17
CAGE	34.48	9.22	30.44	8.99	1.87
FAGE	48.59	27.19	44.40	26.55	.65
MAGE	49.31	22.94	48.12	23.38	.21
BORDER	2.21	1.02	2.24	.92	-.17
DSM	2.29	1.14	1.88	.97	2.20*
EDUC	12.87	2.65	14.44	2.53	-2.63*
INCOME	3.87	1.83	3.40	2.14	1.16
MARITS	2.80	1.52	1.92	.90	4.13**
RELAFF	2.93	.89	3.08	.70	-.96
FREQATT	4.21	1.65	4.72	1.48	-1.54

XN	1.06	.24	1.08	.27	-1.27
SAVXN	1.29	.93	1.20	.40	1.11
IMPORT	5.95	1.51	6.00	1.50	-.15
L	4.02	1.99	4.44	2.59	-.86
F	7.74	4.96	7.56	3.99	.17
K	13.51	4.56	14.04	5.84	-.43
HYP	9.95	6.39	8.76	4.36	.94
D	27.80	7.93	28.84	7.09	-.58
HSY	27.19	5.95	27.48	4.49	-.23
PD	22.27	6.04	23.80	5.29	-1.15
MF	36.74	6.76	36.64	5.83	.00
PA	14.17	3.83	13.88	3.66	.33
PS	21.61	10.20	21.80	9.88	.00
SC	21.31	12.57	21.00	11.21	.11
MA	16.00	5.85	16.32	4.16	-.27
SI	36.17	7.47	34.80	10.87	.62
PSYC	3.59	1.74	3.44	1.41	.46

N = 72. * $p < .05$, two-tailed. ** $p < .001$, two-tailed.

subjects in the samples. There were significant differences on Christian belief $t(72) = -3.05$; $p < .05$, marital status $t(72) = -3.08$; $p < .05$, Mf $t(72) = 6.27$; $p < .05$, and RWB $t(72) = 2.47$; $p < .05$. Table 6 presents the T-test findings of the male and female samples.

These two samples thus appeared similar enough to be considered together as one sample. A multiple regression was performed on each hypothesis and research question to separate out the effects of education, Christian belief, marital status, and sex since these provided the most significant sources of differences between the samples. This is discussed later in this chapter.

Data Collection and Summary of Demographic Variables

The 113 clients requesting initial counseling services, and who were subsequently seen in an intake session between June 1 and November 16, 1984, were potential subjects for this study. Sixty-seven subjects were from Christian Counseling Services and 46 subjects from Western Psychological Services. However, there were significant losses of subjects from the study due to these subjects not completing the assessment process. At the Christian Counseling Services 18 subjects (27%) agreed to participate but did not complete the assessment process and did not continue as clients at the center. Two subjects (3%) refused to respond to

Table 6

T-tests between the Male and Female Samples

Variable	<u>Male</u> (n = 17)		<u>Female</u> (n = 55)		T-value
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
RWB	43.58	9.00	48.69	8.42	2.47*
EWB	37.11	10.85	40.58	10.02	1.40
SWB	80.58	18.53	88.90	16.58	1.99
EXT	26.47	6.63	27.34	6.53	.56
INT	20.29	8.77	17.89	7.14	-1.27
DSM	1.88	.92	2.25	1.18	1.97
REL	9.52	2.96	9.34	2.58	-.28
MMPI	5.82	5.93	4.69	4.70	-.96
CAGE	33.05	9.33	33.09	9.36	0
FAGE	47.47	28.27	47.03	26.67	0
MAGE	48.47	25.49	49.03	22.34	0
BORDER	2.35	.99	2.18	.98	-.96
EDUC	13.41	2.57	13.41	2.76	0
RACE	3.82	.72	4.00	.19	0
INCOME	3.52	1.87	3.76	1.98	.61
MARITS	3.17	1.59	2.29	1.28	-3.08*
RELAFF	3.00	1.00	2.98	.78	-.11
PROTDEN	4.88	5.34	6.74	6.03	.87

FREQATT	4.52	1.58	4.34	1.62	-.53
XN	1.11	.33	1.05	.22	-3.05*
IMPORT	5.82	1.74	6.01	1.43	.54
L	4.35	2.69	4.10	2.06	-.49
F	9.11	5.37	7.23	4.32	-1.68
K	13.94	5.61	13.61	4.86	-.27
HYP	9.41	5.38	9.58	5.93	.13
D	26.47	8.50	28.69	7.32	1.19
HSY	26.47	5.32	27.54	5.52	.84
PD	22.80	6.02	22.82	5.21	0
MF	29.94	7.61	38.80	4.24	6.27**
PA	14.00	4.51	14.09	3.53	0
PS	19.00	10.09	22.50	9.95	1.49
SC	20.11	11.15	21.54	12.38	.51
MA	16.94	5.57	15.85	5.24	-.86
SI	33.29	9.68	36.43	8.39	1.47
PSYC	3.47	1.46	3.56	1.68	.28

N = 72. * $p < .05$, two-tailed. ** $p < .001$, two-tailed.

the religious instruments, and they also were excluded from the study. In the Western Psychological and Counseling Services sample 6 subjects (13%) agreed to participate but did not complete the assessment process and did not continue as clients at the center. Fifteen subjects (33%) refused to participate in the study for a variety of reasons. Of the original 67 subjects at Christian Counseling Services, 47 (70%) were retained in the final pool of subjects. From the Western Psychological and Counseling Services original sample of 46 subjects, 25 (54%) were retained. In combining these two samples of 113 potential subjects, 72 (64%) comprised the final pool of subjects.

Of the 72 subjects included in this study 55 were women and 17 were men. Seventy-seven percent of the CCS sample were women ($n = 36$) and 23% were men ($n = 11$); 76% of the WPS sample were women ($n = 19$) and 24% were men ($n = 6$). In the overall sample 76% were women and 24% were men. The sample was 97% Caucasian with 1 Hispanic in the CCS sample and 1 Black in the WPS sample comprising the remainder of the group.

Age Range

The oldest subject in the combined sample was 61 and the youngest was 19. The mean age for women was 33.09 ($SD = 9.36$). For men the mean age was 33.05 ($SD 9.33$). Seventy-eight percent of the sample was between ages 19 and 39, with only 5% of the sample

being 50 years or older. Table 7 provides a more complete summary of the age range variable.

Table 7

Age range of the Christian Counseling Services and
Western Psychological Services Samples

Age Range	<u>CCS</u> (<u>n</u> = 47)	<u>WPS</u> (<u>n</u> = 25)	Total	%
	<u>n</u>	<u>n</u>		
19-24	7	7	14	20
25-29	6	6	12	17
30-34	10	4	14	20
35-39	11	4	15	21
40-44	7	1	8	11
45-49	3	1	4	6
50-54	1	2	3	4
55-59	0	0	0	0
60-65	1	0	1	1

N = 72. Mean 32.9; S.D. 9.28.

Sibling constellation

Nineteen of the subjects were first born in the sibling constellation, 25 were middle children, 19 were the last child and 9 were only children. A little over one-third of the sample were middle children with first born, last, and only child, in descending order. Table 8 displays the summary of findings related to sibling order.

Table 8

Sibling order of the Christian Counseling Services and Western Psychological Services Samples

Sibling order	<u>CCS</u> (<u>n</u> = 47)	<u>WPS</u> (<u>n</u> = 25)		
	<u>n</u>	<u>n</u>	Total	%
First born	13	6	19	26
Middle	15	10	25	35
Last	12	7	19	26
Only	7	2	9	13

N = 72.

Moral and Savior Christians

Ten subjects (14%) considered themselves "moral Christians." "Moral Christians" were defined as those responding that they ("best answer") respect and attempt to follow the moral and ethical teachings of Christ. Forty-eight subjects (67%) in the sample considered themselves as "savior Christians." "Savior Christians" were defined as those responding that they ("best answer") had received Christ as personal Savior and Lord. Thus, two-thirds of the subjects identified themselves as "savior Christians." Ten subjects classified themselves as both "savior and moral Christians." This could perhaps have been the result of their not understanding or carefully reading the instructions relating to that specific question, or possibly that they felt that they could not distinguish one "best answer" between the choices. Table 9 provides a more complete description of this demographic variable.

Table 9

Savior and Moral Christians of the Christian Counseling
Services and Western Psychological Services Samples

	<u>CCS</u> (<u>n</u> = 47)	<u>WPS</u> (<u>n</u> = 25)		
Christian	<u>n</u>	<u>n</u>	Total	%
Moral	8	2	10	14
Savior	28	20	48	67
Savior & Moral	9	1	10	14
None	2	2	4	5

N = 72.

Religious Affiliation

The overwhelming majority of subjects (86%) identified themselves as Protestants. The rest of the sample included Catholics, a Taoist, and no religious affiliation. Table 10 details the findings related to religious affiliation.

Table 10

Religious Affiliation of the Christian Counseling Services
and Western Psychological Services Samples

	<u>CCS</u> (<u>n</u> = 47)	<u>WPS</u> (<u>n</u> = 25)		
Religious				
Affiliation	<u>n</u>	<u>n</u>	Total	%
Protestants	40	22	62	86
Catholics	5	1	6	9
Taoist	1	0	1	1
None	1	2	3	4

N = 72.

Protestant Denomination

Fifty-four of the 72 subjects identified themselves with a protestant denomination. This sample was heavily oriented towards the more fundamental or conservative protestant denominations in contrast to the traditional or mainline denominations. The group most represented was the foursquare denomination (22%). The mainline denominations (Lutheran & Methodist) comprised 4% of the sample. Table 11 provides the complete findings related to the protestant denomination variable.

Table 11

Protestant Denominations of the Christian Counseling Services
and Western Psychological Services Samples

Denomination	<u>CCS</u> (<u>n</u> = 33)	<u>WPS</u> (<u>n</u> = 21)	Total	%
	<u>n</u>	<u>n</u>		
Foursquare	11	1	12	22
Baptist	2	5	7	13
Conservative Baptist	1	5	6	11
Nondenominational	2	3	5	9
Christian	3	1	4	7
Free Methodist	1	2	3	5
Assembly of God	2	0	2	4
Church of God (Anderson)	1	1	2	4
Open Bible	2	0	2	4
Charismatic	1	0	1	2
Evangelical Congregational	1	0	1	2
Interdenominational	1	0	1	2
Missionary Alliance	1	0	1	2
Methodist	1	0	1	2
Lutheran	1	0	1	2
Nazarene	0	1	1	2
Church of Christ	1	0	1	2

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Fundamentalist	1	0	1	2
Pentecostal	0	1	1	2
Evangelical	0	1	1	2

Marital Status

Over half of the sample was married (53%) with the next most frequent reported status being never married (19%). Only two subjects reported living as married. Table 12 displays a summary of the marital status variable. As noted earlier, there was a significant difference between the OCS and WPS samples on this dummy variable, $t(72) = 4.13$; $p < .001$.

Table 12

Marital Status of the Christian Counseling Services and
Western Psychological Services Samples

	<u>OCS</u> (<u>n</u> = 47)		<u>WPS</u> (<u>n</u> = 25)			
Marital						
Status	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	Total	<u>%</u>
Married	22	47	16	64	38	53
Never Married	7	15	7	28	14	19
Separated	8	17	1	4	9	12
Divorced	7	15	0	0	7	10
Widowed	1	2	1	4	2	3
Living as Married	2	4	0	0	2	3

N = 72.

Family Income

The subjects' income level in the study was widely distributed. Each category was represented by at least 10% of the sample with the largest category (\$20,000-\$29,999) comprising 18%. Table 13 provides a complete description of this demographic variable.

Table 13

Family Income of the Christian Counseling Services and
Western Psychological Services Samples

	<u>CCS</u> (<u>n</u> = 47)	<u>WPS</u> (<u>n</u> = 25)		
Family				
Income	<u>n</u>	<u>n</u>	Total	%
0-\$5,000	2	7	9	10
\$5,000-\$9,999	8	4	12	17
\$10,000-\$14,999	7	5	12	17
\$15,000-\$19,999	7	2	9	12
\$20,000-\$29,999	10	3	13	18
\$30,000-\$49,999	7	5	12	16
\$50,000-	6	1	7	10

N = 72.

Frequency of attendance

Nearly two-thirds of the sample reported attending religious services either weekly or more than once a week. Fifteen percent of the sample reported attending services at the most one to two times a year. Table 14 provides additional information related to this variable.

Education

The level of education in this sample varied from 8th grade to graduate degrees. Fifty-eight percent of the sample had at least one year of college credit. Subjects with less than a high school education comprised 10% of the sample. Table 15 shows other pertinent information related to this variable. This dummy variable also showed a significant difference between the CCS and WPS samples, $t(72) = -2.63$; $p < .05$.

Importance of Religion

Importance of religion was measured by a Likert scale ranging from one to seven with higher scores reflecting a subject's acknowledgement of increasing importance of religion in his life. Slightly over one-half (54%) of the sample rated importance of religion at 7. This variable was rated by 75% at either 6 or 7. The mean for the sample was 5.93 (SD = 1.54).

Less than 15% of the sample rated importance of religion in their life at 4 or below. Table 16 summarizes this variable.

Table 14

Frequency of attendance at religious services of Christian
Counseling Services and Western Psychological Services Samples

	<u>CCS</u> (<u>n</u> = 47)		<u>WPS</u> (<u>n</u> = 25)	
Frequency of				
attendance	<u>n</u>	<u>n</u>	Total	%
Less than				
once/year	7	0	7	10
1-2 times				
a year	0	3	3	4
3-12 times				
a year	7	2	9	12
once a month-				
once a week	5	1	6	8
weekly	18	9	27	38
more than				
once a week	10	10	20	28

N = 72.

Table 15

Educational level of the Christian Counseling Services and
Western Psychological Services Samples

	<u>CCS</u> (<u>n</u> = 47)	<u>WPS</u> (<u>n</u> = 25)		
Educational				
Level	<u>n</u>	<u>n</u>	Total	%
8th grade	1	1	2	3
less than				
high school	4	1	5	7
high school	19	4	23	32
Some college	16	7	23	32
College				
graduates	5	9	14	19
Advanced				
degrees	2	3	5	7

N = 72. Mean 13.41; S.D. 2.70

Table 16

Importance of Religion of the Christian Counseling Services
and Western Psychological Services Samples

Importance of Religion	<u>CCS</u> (<u>n</u> = 47)	<u>WPS</u> (<u>n</u> = 25)	Total	%
	<u>n</u>	<u>n</u>		
7	25	14	39	54
6	11	4	15	21
5	3	5	8	11
4	2	0	2	3
3	5	1	6	8
2	0	0	0	0
1	1	1	2	3

N = 72. Mean 5.93; S.D. 1.54

Hypotheses

The Relationship between REL Scores and
the MMPI Depression Scale

The first hypothesis was (1) there will be a statistically significant negative correlation between REL scores and the MMPI

Depression D scale. A correlation coefficient calculated to examine this first hypothesis failed to find a significant negative relationship. A multiple regression was performed to separate out the possible effects of education, Christian belief, sex, and marital status. No significant relationship was found between REL scores and the D scale.

The Relationship between REL Scores and
the Masculinity-Femininity Scale

The second hypothesis was (2) there will be a statistically significant negative correlation between REL scores and the MMPI Masculinity-Femininity M-f scale. A correlation coefficient calculated between these two variables failed to find a significant correlation. A multiple regression was then performed to separate out the possible effects of education, Christian belief, sex, and marital status. No significant relationship was found.

The Relationship between REL Scores and
Level of Psychopathology

The third hypothesis was (3) there will be a statistically significant negative correlation between REL content scores and the subjects' overall level of psychopathology. Results indicated no significant correlation. After a multiple regression was performed that separated out the possible effects of education,

Christian belief, sex, and marital status, there was still no significant relationship.

The Relationship between REL Scores and Intrinsic
Orientation of the Religious Orientation Scale

The fourth hypothesis was (4) there will be a statistically significant positive correlation between REL content scores and the Intrinsic orientation of the Religious Orientation Scale. A correlation coefficient calculated found a strong positive correlation, $r(72) = .7123$, $p < .001$, one-tailed. The lower the subject's score on this scale, the more intrinsically oriented the person is. Thus the sign in the correlation matrix needed to be reversed from negative to positive to give a true indication of the direction of the relationship. After a multiple regression was performed that separated out the possible effects of education, Christian belief, sex, and marital status a strong relationship continued, $F(1, 70) = 72.10$, $p < .0001$.

The Relationship between REL Scores and
Existential Well-Being Scale of
Spiritual Well-Being Scale

The fifth hypothesis was (5) there will be a statistically significant positive correlation between REL scores and the Existential Well-Being Scale of the Spiritual Well-Being Scale.

This hypothesis was substantiated with a positive correlation noted $r(72) = .2348$, $p < .025$, one-tailed. A multiple regression was performed to separate out the effects of education, Christian belief, sex, and marital status. A significant relationship continued $F(1, 70) = 4.08$, $p < .05$.

The Relationship between REL Scores and
Religious Well-Being Scale of
Spiritual Well-Being Scale

The sixth hypothesis was (6) there will be a statistically significant positive correlation between REL scores and the Religious Well-Being Scale of the Spiritual Well-Being Scale. A highly significant positive correlation was found between these two variables, $r(72) = .5443$, $p < .001$, one-tailed). A multiple regression was performed to separate out the effects of education, Christian belief, sex, and marital status. A significant relationship was found, $F(1, 70) = 29.46$, $p < .0001$.

Research Questions

The Relationship between REL Scores and
the Validity and other Clinical Scales
on the MMPI

1. Will there be statistically significant correlations between

REL scores and each of the following MMPI scales: Lie (L), Frequency (F), Correction (K), Hypochondriasis (Hs), Hysteria (Hy), Psychopathic Deviate (Pd), Paranoia (Pa), Psychasthenia (Pt), Schizophrenia (Sc), Hypomania (Ma), and Social Introversion (Si)?

Correlation coefficients were calculated with no significant correlations noted between REL scores and various MMPI scales except the Ma scale. The K scale approached significance, $r(72) = .2309$, $p < .05$. To reach a significant relationship at .05 required a .2319 correlation coefficient. The Ma scale, $r(72) = -.2341$, $p < .05$ had a significant negative correlation with REL. After education, Christian belief, sex, and marital status were separated out in a multiple regression a significant relationship emerged between the K scale and REL scores, $F(1, 70) = 3.94$, $p < .05$, and continued between the Ma scale and REL scores, $F(1, 70) = 4.05$, $p < .05$. Table 17 presents a summary of correlations between REL scores and the MMPI validity and clinical scales.

The Relationship between REL Scores and DSM III Diagnoses

2. Will there be statistically significant correlations between REL scores and DSM III diagnoses?

Two DSM III classification systems were utilized to examine

this question. One system of Axis I diagnoses included affective, adjustment, V codes, anxiety, bulimia, and inhibited sexual desire. There were no significant correlations between correlations between this diagnostic system and REL scores. After a multiple regression was performed with education, sex, Christian belief, and marital status separated out there was no significant relationship. Table 18 provides a more complete summary of the DSM III psychiatric diagnoses for this sample.

Table 17

Correlations between REL Content Scale
and Standard MMPI Validity and Clinical Scales

MMPI Scale	REL
<u>L</u>	.1969
<u>F</u>	-.1115
<u>K</u>	.2309
<u>Hs</u>	-.1452
<u>D</u>	-.1014
<u>Hy</u>	-.0411
<u>Pd</u>	-.0938
<u>Mf</u>	.0703
<u>Pa</u>	-.0365
<u>Ps</u>	-.1182

<u>Sc</u>	-.1640
<u>Ma</u>	-.2341*
<u>Si</u>	.0700

N = 72. * $p < .05$

Table 18

DSM III Axis I Diagnoses of the Christian Counseling Services
and Western Psychological Services Samples

Diagnosis	<u>CCS</u> (<u>n</u> = 47)		<u>WPS</u> (<u>n</u> = 25)		Total	%
	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>		
Affective	13	27	12	48	25	35
Adjustment	16	34	8	32	24	34
V codes	10	22	3	12	13	18
Anxiety	6	13	2	8	8	11
Bulimia	1	2	0	0	1	1
Inhibited						
Sexual Desire	1	2	0	0	1	1

N = 72.

The second DSM III Axis I classification system included adjustment disorder with depressed mood, all other adjustment disorders, major depression, all other affective disorders, V codes, and anxiety and other disorders (bulimia and inhibited sexual disorder). There were no significant correlations between this classification system and REL scores. After a multiple regression was performed with education, Christian belief, sex, and marital status held constant, there continued to be no significant relationship. Table 19 summarizes the data of this classification system.

Table 19

Alternative DSM III Classification System of the Christian Counseling Services and Western Psychological Services Samples

Diagnosis	<u>CCS</u> (n = 47)		<u>WPS</u> (n = 25)		Total	%
	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>		
Adjustment Disorder,						
Depressed Mood	7	15	2	8	9	12
All other						
Adjustment Disorders	9	19	6	24	15	20
Major Depressive	6	13	3	12	9	12

All other					
Affective	7	15	9	36	16 22
V codes	10	21	3	12	13 18
Anxiety	8	17	2	8	10 16

N = 72.

The Relationship between REL scores
and the Extrinsic scale of the
Religious Orientation Scale

3. Will there be a statistically significant correlation between REL scores and the Extrinsic scale of the Religious Orientation Scale?

There was a strong statistically significant negative correlation between REL scores and the Extrinsic scale of the Religious Orientation Scale, $r(72) = -.5831, p < .001$. After a multiple regression was performed that held constant education, Christian belief, sex, and marital status there remained a highly significant negative relationship, $F(1, 70) = 36.05, p < .0001$.

The Relationship between REL scores and
Demographic Variables

4. What relationship do the following variables have with REL scores?

The variables are: sex, client's age, father's age, mother's age, birth order, education, income, marital status, religious affiliation, frequency of attendance, Christian belief, moral Christian, savior Christian, importance of religion, race, protestant denomination, and center.

Strong statistically significant positive correlations were found between REL scores and importance of religion variable, $r(72) = .6677$, $p < .001$; REL scores and frequency of attendance, $r(72) = .6575$, $p < .001$; and REL scores and Christian belief, $r(72) = .3974$, $p < .001$. Additionally, a positive correlation was found between REL scores and protestant denomination, $r(72) = .2943$, $p < .01$; and REL scores and education, $r(72) = .2890$, $p < .01$. A negative correlation was found between REL scores and marital status, $r(72) = -.2430$, $p < .05$, and a positive correlation between REL scores and client's age, $r(72) = .2446$, $p < .05$. The remaining specified variables displayed no significant correlations. Table 20 summarizes the relationships between REL scores and these variables.

Summary

This study investigated the relationship between outpatients' religious belief, as measured by the REL content scale of the MMPI, and their performance on standard MMPI validity and clinical scales, level of psychopathology, psychiatric

Table 20

Correlations between REL Content Scores
and Demographic Variables

Demographic Variables	REL
client's age	.2446*
age	.0509
mother's age	.1342
birth order	.0641
education	.2890**
income	.0130
marital status	-.2430*
religious affiliation	-.1064
frequency of attendance	.6575***
Christian belief	.3974***
moral Christian	.2285
savior Christian	.1941
importance of religion	.6677***
protestant denomination	.2943**
sex	-.0634
race	-.0920
center	.1177
N = 72. *p<.05. **p<.01. ***p<.001.	

diagnosis, religious orientation (intrinsic or extrinsic), spiritual well-being, and selected demographic variables. REL was negatively correlated with the Ma scale and positively correlated with the K scale. Otherwise no significant correlations were found between REL and the other MMPI scales. No significant relationships were noted between outpatient's REL scores and their level of psychopathology or psychiatric diagnosis. Positive correlations were found between REL scores and the Intrinsic scale of the ROS, the Existential Well-Being scale of the SWB, and the Religious Well-Being scale of the SWB. REL scores were negatively correlated with the Extrinsic scale of the ROS. Significant positive correlations were found between REL scores and importance of religion, frequency of attendance, Christian belief, protestant denomination, education, and client's age. A negative correlation was found between REL scores and marital status. Please see Appendix G for raw data and Appendix H for statistical calculations.

CHAPTER FOUR

DISCUSSION

This chapter focuses on the discussion of the results of this study. The five sections include (a) discussion of the hypotheses and research questions, (b) limitations, (c) implications, (d) recommendations for future research, and (e) conclusions.

Discussion of the Hypotheses

REL and MMPI Depression Scale

This study found no correlation between the REL scale and the MMPI Depression scale. This is in contrast to previous studies which have found the D scale the most frequent MMPI scale showing a significant relationship with a religiosity measure (Brown & Lowe, 1951; Broen, 1955, Johnson, cited in Dahlstrom & Welsh, 1960; Bohrnstedt et al., 1969, Mayo et al., 1969). One other study (Penner, 1982) did find a significant negative correlation between inpatient scores on the D scale and REL. Compared to these studies, this study is the first involving an outpatient population.

This lack of a significant relationship between REL and D scale is interesting given that there is an overlap of three items common to both scales. These three items (booklet numbers 58, 95, and 98; see Table 1) are scored false for D scale and true for the REL scale. As a result, a true response decreases the total score on the D scale but increases the REL score. A false response to these items lowers the total score on the REL scale and raises the total score on the D scale. Thus, in this study deletion of these three items might have resulted in an even lower correlation between REL and D.

REL and MMPI Masculinity-Femininity Scale

Although some earlier studies (Brown & Lowe, 1951; Johnson, cited in Dahlstrom & Welsh, 1960; Martin & Nichols, 1962; Vaughan, 1965; Bohrnstedt, et al., 1968) found negative relationships between various religiosity instruments and M-f, this study found no significant relationship. This finding is similar to Penner's (1982) study. Graham's (1977a) study noted that M-f scores are positively related to education, intelligence, and socio-economic level. Positive M-f relationships are more likely to be found in college populations compared to psychiatric or outpatient populations. Interestingly, in the above cited studies, which were comprised of students professing a religious affiliation, there was a negative, rather

than a positive relationship between the M-f scale and the REL. In this study, controlling for education did not make any appreciable difference in this outcome. One possible explanation of the difference in findings on the M-f scale in the previous studies with religious subjects and this study is the 17 to 34 year time difference. It is this writer's opinion that many religiously oriented persons, along with the general American population, may have become more sex role flexible independent of educational level. Duckworth's (1979) guidebook to interpreting M-f scores suggests that low scores on this scale would be reflective of a very traditional masculine vs. feminine role expectations, with high scores more indicative of role fluidity.

REL and Level of Psychopathology

In the one other study (Penner, 1982) using REL scores and a measure of psychopathology no significant correlation was found between these two variables. He used a different measure of psychopathology (the mean of eight non-K corrected MMPI T-scores) than utilized in this study. Penner (1982) believed that in a "normal or outpatient populations a wider range of potential levels of psychopathology exists in comparison to a psychiatric population in which the level of psychopathology tends to be more clustered at a much more pathological level" (p. 82). Since this

study involved an outpatient population Penner's expectation of finding a negative relationship was not borne out.

This lack of a significant positive relationship between REL and level of psychopathology in this study of outpatients suggests that the religious beliefs reflected in the REL are not inherently pathological. This conclusion may be in contrast to the view some clinicians who strongly advocate a positive relationship between religious belief and psychopathology on the basis of anecdotal evidence.

Albert Ellis, founder of rational-emotive therapy, is probably one of the most best-known clinicians advocating this view. He has stated that "virtually all the commonly accepted accepted goals of emotional health are antithetical to a truly religious viewpoint" (1970).

Sigmund Freud's (1928, 1955) uncomplimentary views on religion are also clearly etched into psychological folklore. Freud championed the concept that religion was a form of universal neurosis. Religious experience could be explained, according to him, as the result of an Oedipal experience with God, and as merely the end product of unfulfilled dependency needs.

Bergin (1983) conducted an extensive review of studies utilizing at least one religiosity measure and at least one clinical pathology measure. The majority of studies found no

significant relationship: "23 outcomes showed no significant relationship, 5 showed a positive relationship, and 2 showed a negative relationship" (p. 176). Bergin (1983) cautioned that these findings "provide no support for an Ellis-type theory [a negative relationship], they also do not provide much more than marginal support for a positive effect of religion" (p.176).

Lea (1982) has also reviewed a variety of studies involving religiosity and mental health. Some of his conclusions appear to be opposite to those of Bergin's (1983) review and this present study. Two of Lea's (1982) prominent conclusions are that religiosity is related to personal inadequacy in students, and that religiosity is not significantly related to moral behavior. One possible explanation is that Lea did not review most of the studies that Bergin and this author did. Additionally, Bergin did not review most of the studies that Lea did. This author did not review the studies in Lea's review since they were not MMPI based, and thus not within the scope of this study.

Bergin (1983) suggested that "such conflicting results are common, partly because of the different views of investigators and partly because of the different personality and religiosity measures used" (p. 174). Bergin commented also that "the researcher's construct system may then guide the choice of measures and the interpretation of results to confirm his or her predilections" (p. 174).

Biased attitudes towards religion could be counter-productive to the development of a facilitative client-therapist relationship when the client does not have the therapist's view in this regard. It is this author's observation that many therapists, who do not themselves hold to a theistic orientation, nonetheless work cooperatively within a client's theistic value system.

While the holding of the Judeo-Christian beliefs and practices, as reflected in the REL scale, does not seem to be directly associated with psychopathology, the misapplication or misinterpretation of this religious system could at times cause difficulties. Cosgrove and Mallory (1977) observe that:

some Christians present Christianity as a repressive, guilt-provoking system instead of a new life of joy, love, and strength in the inner self. Christianity has also been misapplied in that not everyone who professes to be a Christian has actually embraced a personal relationship with Christ. To such individuals Christianity is only institutionalized and not internalized. (p. 73)

REL and the Religious Orientation Scale

The finding of a strong positive correlation between REL and the Intrinsic scale of the ROS, $r(72) = .7123$, $p < .001$, confirms an intuitive sense that endorsing a high number of REL items would

be associated with an intrinsic orientation. There were no previous studies examining the relationship between these two variables. Intrinsically oriented persons tend to live their religion, rather than using their religion. Spilka (1977) observes that "where faith has become a guide to living and is flexible and open (intrinsic-committed) the superficiality of materialistic concerns with money, prestige, and power seems to be understood" (p. 232).

The majority of items on the REL scale have a belief focus. Consequently, it is likely that individuals who are more intrinsically oriented are interested in knowing and accepting the accompanying beliefs and teachings of the faith. Generally, those individuals responding affirmatively to the majority of items on the REL might be characterized by a more conservative, as compared to a more liberal, view of the Christian faith. Wiggins (1966), in labeling this scale the Religious Fundamentalism Scale, also implies that it measures a more conservative conceptualization of the Christian experience.

Intrinsically oriented persons would also probably display their faith through actions. These individuals would likely endorse items on the REL such as "I go to church almost every week; I pray several times every week; I read the Bible several times a week." In this study a highly significant positive correlation was found between REL and the frequency of attendance

variable $r(72) = .6575$, $p < .001$. Additionally a highly significant positive correlation was found between REL and importance of religion $r(72) = .6677$; $p < .001$.

A strong negative correlation between REL and the extrinsic scale of the ROS was found $r(72) = -.5831$, $p < .001$. This was contrary to an intuitive expectation that there would be no correlation between these two variables. There were no previous studies involving these two variables. Spilka (1977) has noted that "when a person's religion remains external, opportunistic, and generally self-serving (extrinsic-consensual), it appears to be part of a general approach to the world which is similarly self-aggrandizing and short-sighted" (p. 227). Extrinsics have been shown in other studies to display more existential anxiety, more trait anxiety, less of an internal locus of control, less of a sense of purpose in life, and less spiritual well-being than intrinsics.

Although it has been argued that the intrinsic and extrinsic scales of the ROS are not at different ends of one continuum (Hunt & King, 1971), the results of this study do not necessarily support this contention. In this study a strong negative relationship was found between the intrinsic and extrinsic scales of the ROS, $r(72) = -.6038$; $p < .001$. A strong positive correlation between the intrinsic and REL scale was noted, while a strong negative correlation was evident between the extrinsic

and REL scale. This author's expectation had been that extrinsically oriented individuals would likely affirm the belief statements of the REL, but that they would be less likely to endorse items related to practices. The assumption was that extrinsics' scores would "balance out" with a resulting lack of correlation between the extrinsic orientation and REL.

The expectation that extrinsics would be less likely to endorse items related to practices was supported, as the extrinsic scale was negatively correlated with frequency of attendance, $r(72) = -.5138$, $p < .001$. The extrinsic scale was also noted to be negatively correlated with importance of religion, $r(72) = -.4891$, $p < .001$. This was not unexpected since several statements in the ROS explicitly question the respondent's priority of religion in his life. For example, if the respondent answers affirmatively to the statement "Although I believe in my religion, I feel there are many more important things in life", it is classified as an extrinsic response.

REL and the Spiritual Well-Being Scale

The results of this study found a significant positive correlation between REL scores and Existential Well-Being $r(72) = .2348$, $p < .025$, one-tailed. This is the first known study comparing these two variables. Existential well-being is considered to reflect one's perception of life's purposes and

satisfaction apart from any religious reference. There are no items on the EWB with a reference to God.

EWB has been shown in other studies to positively correlate with such variables as intrinsic religious orientation, purpose in life, self-esteem, and social skills. In this study EWB and the intrinsic scale on the ROS were found to have a significant positive correlation $r(72) = .3382$; $p < .01$, one-tailed. Blaikie and Kelsen (1979) suggest that to have a sense of existential well-being is "to know what to do and why, who (we) are, and where (we) belong in relationship to ultimate concerns" (p. 137). EWB and the MMPI level of psychopathology were noted in this study to have a significant negative correlation $r(72) = -.5141$, $p < .001$. This would suggest that individuals suffering considerable psychological distress are much less likely to have a positive sense of direction and sense of rootedness.

The findings of this study indicate a highly significant positive correlation between REL scores and the religious well-being scale of the Spiritual Well-Being Scale $r(72) = .5443$, $p < .001$, one-tailed. This is the first known study comparing these two variables. On the Religious Well-Being scale all the items include a reference to God on an experiential or relationship plane. In comparison, items on the REL are more reflective of doctrinal or practice concerns. In another study Ellison and Economos (1981) found that spiritual well being was positively

correlated with doctrinal beliefs $r = .60$; $p < .001$, and devotional practices $r = .40$; $p < .001$. In this study REL and SWB were found to have a significant positive correlation $r(72) = .4026$; $p < .001$.

Although the REL and RWB have an overlapping Judeo-Christian conception of religious commitment and well-being, Ellison (1983) noted that the latter scale:

is non-sectarian and can be utilized across Catholic, Protestant, Jewish and other religions which conceive of God in personal terms. It is even possible that those from Eastern religions such as Hinduism and Buddhism may be able to use the scale if they can meaningfully interpret the statements about relationship with God. (p. 339)

In comparing the relationship between REL and EWB, and REL and RWB, it is noted that REL and RWB have a much stronger significant correlation $r(72) = .5443$, $p < .001$, one-tailed than REL and EWB $r(72) = .2348$, $p < .025$, one-tailed. A possible explanation might be that REL and RWB contain items with a Judeo-Christian orientation, while EWB has no items that directly reflect a theistic stance.

Discussion of the Research Questions

REL and the Validity and other Clinical Scales
on the MMPI

This study found no significant relationship between REL and the remaining MMPI validity and clinical scales, except between the K and Ma scales and the REL. This is consistent with the general conclusions of other studies. This would support the view that religious beliefs are operating independently of MMPI scales. This would also suggest that in an outpatient population individuals with religious beliefs as described in REL do not appear to be more or less pathological than patients denying any religious beliefs or practices.

As mentioned earlier in this study, a positive relationship was found between REL and the K scale. Among other studies, only one found a significant relationship between religiosity and the K scale. In that study a Q-sort measure of religious conflict was negatively correlated with Veteran's Administration psychiatric inpatients' K scores (Campbell, 1958). That is in the opposite direction of this study.

The finding of a positive relationship between REL and the K scale is especially surprising after controlling for the effect of education. It was only after controlling for education, Christian belief, sex, and marital status that a significant

relationship emerged between REL and the K scale. Education and the K scale have been noted to be positively correlated, and it is commonly noted in MMPI scale interpretation guidebooks that K scores need to be interpreted in light of the person's educational level.

The mean T-score on the K scale was 53 for both males and females (raw score 13.69; SD 5.01). For males the range of T-scores was 35 to 66 (raw score 13.94; SD 5.61). For females the range of T-scores was 33 to 72 (raw score 13.61; SD 4.86). There is no unanimous agreement in MMPI interpretive guidebooks as to how to evaluate this score. Duckworth (1979) believes that this is an average score on the K scale and indicates a balance between self-disclosure and self-protection.

Graham (1977a) suggests that this K score is slightly below a level that would be expected given the subjects' educational and socio-economic level. In this sample the mean level of education was one year of college. When this occurs, Graham notes that subjects could be presenting themselves in an unfavorable light. Graham states "low scorers tend to be very critical of themselves and of others and to be quite ineffective in dealing with problems in their daily lives, and thus have little insight into their own motives and behaviors" (Graham, 1977a, p. 24).

Since the subjects in this study were from an outpatient population, Graham's interpretation of the K mean score seems more likely. Since the mean score was in a "borderline" area between an average and low score on the K scale, caution is required in drawing conclusions on this finding.

The Ma scale was the only other MMPI scale found to have a significant relationship with REL in this study. In this case a significant negative correlation emerged $r(72) = -.2341, p < .05$. This remained after controlling for education, Christian belief, sex, and marital status. None of the previous MMPI studies found a significant relationship between a religiosity measure and the Ma scale.

The mean K-corrected T-scores on the Ma scale were 58 points for males and 54 points for females. For the entire sample the raw score was 15.93 with a SD of 5.07. For the male sample (raw score 16.94; SD 5.57) the range of K-corrected T-scores was 33 to 75 points. For females (raw score 15.85; SD 5.24) the range of K-corrected T-scores was 30 to 86 points. The mean T-scores for this study are well within the average range. Individuals scoring at this level are seen as having an average amount of psychic energy which relates to goal-oriented active thinking and a desire to act on it. Neither extreme of overactivity and unrealistic self-appraisal with high scorers, nor low energy and activity levels with low scorers is descriptive of this group.

Because of the negative correlation found in this study between REL and Ma, higher REL scores would be associated with lower Ma scores. Conversely, lower REL scores would be associated with higher Ma scores. However, since the correlation between these two variables barely reached statistical significance there may be only a minor influence of one variable on the other. The correlational finding accounts for only 5% of the variance between REL and the Ma scale. Since this was the first study using a outpatient population outside of the Goldberg studies (cited in Graham, 1977a), additional outpatient studies comparing REL and the Ma scale are needed before any conclusions can be drawn in this regard.

REL and DSM III Diagnoses

As noted in chapter III, REL was found to have no significant relationship with psychiatric diagnosis on either DSM III classification system. In the one other known study comparing REL and psychiatric diagnosis, Penner (1982) found a significant relationship between these two variables. In his study patients with bipolar disorders scored higher on the REL scale than patients with depressive disorders. Additionally, no differences on the REL were noted between patients diagnosed as having schizophrenic disorders and patients with either bipolar or depressive disorders.

Wiggins (1966) has developed REL scale means and standard deviations for several male diagnostic samples (see Table 3). But Wiggins' diagnostic categories differed significantly from the DSM III classification systems used in this study.

One obvious limitation of this study was that there were no patients with schizophrenia or bipolar disorder within the sample. That could be one possible reason for the difference in findings between this study and Penner's study. Since each of the cell sizes were fairly small it is possible that with a larger sample significant relationships might have emerged between psychiatric diagnosis and REL.

Additionally, some of the diagnostic categories (V codes and adjustment disorders) contained a wide variety of disorders within each category. The process of determining diagnosis could have also been strengthened by the use of a structured interview for determining diagnosis, such as the Diagnostic Interview Schedule.

REL and Demographic Variables

The two most significant relationships between REL and demographic variables were with importance of religion and frequency of attendance. This would seem to demonstrate that high scorers on the REL tend to be associated with both subjective and objective signs of religious involvement. The more subjective

indicator, importance of religion, would seem to describe a core integrative value of the person's life. Supporting this view is the strong positive relationship found between importance of religion and an intrinsic religious orientation $r(72) = .6704$; $p < .001$. As noted earlier, intrinsically oriented persons attempt to live consistently a life of high sacrifice and commitment.

The significant relationship between frequency of attendance and REL is not surprising given that one of the items of the REL scale states "I go to church almost every week." Additionally, there are other items on the REL which also focus on objective signs of religious involvement.

The significant relationship between REL and Christian belief is also not unusual since many of the items on the REL are reflective of a Judeo-Christian viewpoint. It was surprising that savior Christian was not significantly related since it would seem on it's face that this variable might correspond with high scores on the REL. Education's significant relationship with REL is interesting given a popular cultural expectation that more highly educated individuals would be less likely to subscribe to a belief system which might include a literal hell and miracles.

Protestant denomination and marital status variables displayed significant relationships with REL. Since these

were coded as dummy variables, the data must be further examined before any conclusions can be drawn. As noted earlier, the the protestant denomination variable was comprised almost entirely of fundamental or conservative denominations (96%), compared to more traditional or mainline denominations. On marital status over 50% of the sample was married with 19% never married.

Limitations of the Study

One possible confounding factor which may have significantly affected the results of this study was the disproportionate ratio of females to males (3:1). However, the effects of this variable were minimized by the use of a multiple regression which removed the linear effect of the sex variable.

Another important limitation of the study was the loss of subjects through attrition. In the overall sample 36% of the group did not complete the assessment process. In the Western Psychological Services sample there was a 46% loss, compared with a 30% loss in the Christian Counseling Services sample.

The higher level of attrition in the WPS sample might have been significantly related to an experimenter effect. There were multiple intake interviewers at WPS, whereas at CCS one interviewer did the vast majority of intakes. Although interviewers were given the same instructions at both centers,

there may have been "active experimenter effects" (Moore, 1983) related to differences in the interviewer's behavior, such as facial expression and tone of voice when the client was asked to participate in the study. Perhaps, if the interviewer appeared to be too tentative, or too overexplaining about the study, this could also have brought refusal to participate. Additionally, "passive experimenter effects" (Moore, 1983) such as age, sex, height, and weight may have played a part.

A significant source of attrition was not directly related to the research design. It is a frequent occurrence in many counseling centers for a number of clients not to return after the initial visit. Although clients were encouraged to complete the testing process on the same day as the intake interview, some did not comply with this. If the client refused to continue involvement in counseling, it was also likely they would not complete the assessment process. Factors such as low motivation, high level of psychological disturbance, and insufficient financial resources could have been some of the factors related to not continuing in counseling.

The generalizability of this study to other outpatient samples is also limited by the demographic composition of the sample. The following are major characteristics of this sample: 97% Caucasian, 75% women, average age 33 years, 53% married, 13 years of formal education, 67% Savior Christians,

67% attend religious services weekly or more than once a week, 96% identifying protestant denomination of a fundamentalist or evangelical church compared to traditional or mainline churches, and 75% rating importance of religion at 6 or 7 on a 7 point scale. Additionally, the mean REL score was 9.3 on a 12 point scale.

Recommendations for Future Research

Additional criterion validity studies involving the REL with a broad range of populations are recommended. Studies of outpatient populations, of inpatient populations, and of the general population would be especially important since there are few studies of these groups. Methodology which would minimize attrition among subjects would be important as well.

Development of new religiosity scales which would quantify behaviors appearing consistent within a variety of formal belief systems is suggested. These scales could then be compared with REL scores. A variety of measureable behaviors could be used as criteria for these scales. These behaviors might include the amount of participation in church activities, percentage of one's income devoted to religious causes, amount of time spent witnessing to potential converts, family support for one's religious beliefs, and time spent in Bible study and prayer. Penner (1982) also suggested that REL scores be compared with

adherence to specific theological doctrines of major religious organizations and denominations.

Additional studies could compare REL scores with certain psychological constructs. These constructs could include self-concept as measured by the Tennessee Self-Concept Scale, internal vs. external locus of control as measured by the Rotter Internal vs. External Locus of Control Scale, and basic value orientation as measured by the Allport, Vernon, and Lindzey Scale.

Glock and Stark (1966) have suggested that there are five relevant dimensions in evaluating an individual's religiosity. First is the experiential, which relates to the view that a religious person may at times experience unique feelings of direct knowledge of ultimate reality" (e.g., the "presence" or "nearness of God"). A second dimension is the ideological, which refers to an assumption in all formal religions that adherence to a core of beliefs is essential to the religious life. The third dimension is the ritualistic, which focuses on the specifically religious activities sanctioned by all religions, such as prayer and fasting. The fourth is the intellectual dimension which assumes the religious person is knowledgeable about the basics of the faith. The fifth is the consequential dimension which focuses on the effects of religiosity in the person's life such as the doing of good works or showing of "love of neighbor."

Glock and Stark (1966) have developed the Dimensions of Religious Commitment Scale that attempts to evaluate the first four dimensions of religious experience. Faulkner and DeJong (1965) have developed Religiosity Scales which attempt to evaluate all five dimensions. The ROS covers primarily the experiential and ritualistic dimensions with limited emphasis on the consequential and ideological and no focus on the intellectual.

The only dimension of religiosity the SWB taps is the experiential of the Glock and Stark model. It would be of value to compare Glock and Stark's instrument and Faulkner and DeJong's religiosity measure with the REL, in order to tap other significant relationships (ideological, intellectual, and consequential dimensions) not covered by the ROS and SWB.

King and Hunt's Scales for Eleven Religious Dimensions (1969) should also be compared with the REL. This instrument is the result of factor and cluster analyses of the religiosity concept. Some of the scales of this measure overlap with other instruments previously discussed, but there are some areas not included. These include: involvement with church friends in the social activities of the congregation, participation in the organizational activities, and loyalty to the institutional church.

Studies comparing REL scores and other measures of religiosity with psychiatric diagnoses derived from use of the

Diagnostic Interview Schedule are recommended. The use of this instrument would strengthen the reliability and validity of the diagnoses.

General Summary

Summary of Results

In this study of outpatients, the REL content scale was not significantly correlated to standard MMPI validity and clinical scales except for the K and Ma scales. There were also no correlations between the REL scale and level of psychopathology and psychiatric diagnosis. REL scores were found to be positively correlated with the Intrinsic scale of the ROS, the Existential Well-Being scale of the SWB, and the Religious Well-Being scale of the SWB. REL scores were negatively correlated with the Extrinsic scale of the ROS.

The first hypothesis predicted that REL scores would be negatively correlated to the D scale. This hypothesis was not supported; the D scale had no significant correlation with REL. The second hypothesis predicted that REL scores would be negatively correlated to the M-f scale. There was no significant correlation found between these two variables. The third hypothesis predicted that REL scores would be negatively related

to level of psychopathology. This hypothesis was not supported; no correlation was found between these two variables.

The fourth hypothesis predicted that REL scores would be positively correlated with the intrinsic scale of the ROS. This hypothesis was strongly supported. The fifth hypothesis predicted that REL scores would be positively correlated with the existential well-being scale of the SWB. This hypothesis was supported. The sixth hypothesis predicted that REL scores would be positively correlated with the religious well-being scale of the REL. This was supported with a strong positive correlation.

The first research question asked whether there would be a significant correlation between REL scores and all of the other validity and clinical scales of the MMPI except the D and M-f. The only significant correlations between REL scores and these scales were a positive correlation with REL and the K scale and a negative correlation between REL and the Ma scale. The second research question asked whether there would be significant correlations between REL scores and DSM III diagnoses. No significant correlations were found.

The third research question asked whether REL scores and the Extrinsic scale of the Religious Orientation Scale would be significantly correlated. A strongly significant negative correlation was found between these two variables.

The fourth research question asked whether there would be any significant correlations between REL scores and a variety of demographic variables. Strong positive correlations were found between REL and the variables of importance of religion, frequency of attendance, and Christian belief. A positive correlation was found between REL and the variables of: protestant denomination and education. A negative correlation was found between REL and marital status.

Summary of Implications

The results of this study suggest that religious belief, as measured by the MMPI Religious Fundamentalism content scale, is not a relevant factor in the interpretation of standard validity and clinical scales of outpatient MMPI profiles. Additionally, there was no significant correlation between outpatient's religious responses on the REL and their level of psychopathology. The view of some clinicians that religious beliefs are inherently pathological did not receive support in this study. However, the position that assumes that endorsing religious beliefs automatically increases psychological functioning was also not empirically validated. The REL scale showed no significant correlation with general categories of psychiatric diagnosis. Additional criterion validity is demonstrated for the REL scale through its observed relationships with the ROS and SWB.

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APPENDIX A

Legend for MMPI Validity and Clinical Scales

L = Lie

F = Frequency

K = Correction

Hs = Hypochondriasis

D = Depression

Hy = Hysteria

Pd = Psychopathic Deviate

M-f = Masculinity-femininity

Pa = Paranoia

Pt = Psychasthenia

Sc = Schizophrenia

Ma = Hypomania

Si = Social Introversion

APPENDIX B

DSM III Axis I Diagnoses Code

<u>Affective</u>	<u>N</u>
Major depression, single episode	9
Dysthymic disorder	15
Cyclothymic disorder	1
Total	25

<u>Anxiety</u>	<u>N</u>
Generalized anxiety disorder	6
Panic disorder	1
Atypical anxiety disorder	1
Total	8

<u>Adjustment Disorders</u>	<u>N</u>
Depressed mood	9
Mixed emotional features	10
Anxious mood	3
Academic inhibition	1
Withdrawal	1
Total	24

<u>V Codes</u>	<u>N</u>
Other interpersonal problem	4
Marital problem	2
Parent-child problem	3
Phase of life problem	3
Uncomplicated bereavement	1
Total	13

APPENDIX C

Demographic Data Sheet

BACKGROUND INFORMATION

Age: _____ Date of Birth _____
 Father's Age _____ Mother's Age _____ Brother(s) age _____ Sister(s) _____

Education:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Graduate degree
 Grade School High School College _____

Race:

_____ American Indian
 _____ Arab
 _____ Black
 _____ Caucasian
 _____ Hispanic
 _____ Oriental
 _____ Other: specify _____

Family Income:

_____ less than \$5,000 per year
 _____ \$5,000 to \$9,999 per year
 _____ \$10,000 to \$14,999 per year
 _____ \$15,000 to \$19,999 per year
 _____ \$20,000 to \$29,999 per year
 _____ \$30,000 to \$49,999 per year
 _____ \$50,000 or more per year

CurrentMarital Status:

_____ Never Married
 _____ Married
 _____ Divorced
 _____ Widowed
 _____ Separated
 _____ Living as Married

Religious
Affiliation

_____ Catholic
 _____ Jewish
 _____ Protestant -specify denomination _____
 _____ Other: specify _____
 _____ None

Frequency of
Attendance at
Religious
Services

_____ Less than one time per year
 _____ Once or twice per year
 _____ Between three and 12 times per year
 _____ Between once per month and once per week
 _____ Weekly
 _____ More than once per week

Do you profess to be a Christian? Yes No

If yes, which of the following best describes your views:

____ I respect and attempt to follow the moral and ethical teachings of Christ.

____ I have received Jesus Christ into my life as my personal Savior and Lord.

Circle the number which indicates how important religion is to you:

Not at all 1 2 3 4 5 6 7 Extremely important; my religious
have no faith is the center of my entire
religion life.

KEY

BACKGROUND INFORMATION

Age: _____ Date of Birth: _____
 Father's Age: _____ Mother's Age: _____ Brother(s) age: _____ Sister(s): _____
 Education: _____
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Graduate degree
 Grade School High School College _____

Race: _____
 1 American Indian
 2 Arab
 3 Black
 4 Caucasian
 5 Hispanic
 6 Oriental
 7 Other: specify _____

Family Income: _____
 1 less than \$5,000 per year
 2 \$5,000 to \$9,999 per year
 3 \$10,000 to \$14,999 per year
 4 \$15,000 to \$19,999 per year
 5 \$20,000 to \$29,999 per year
 6 \$30,000 to \$49,999 per year
 7 \$50,000 or more per year

Current
 Marital Status: _____
 1 Never Married
 2 Married
 3 Divorced
 4 Widowed
 5 Separated
 6 Living as Married

Religious
 Affiliation: _____
 1 Catholic
 2 Jewish
 3 Protestant -specify denomination: _____
 4 Other: specify (6) Taoist
 5 None

Frequency of
 Attendance at
 Religious
 Services: _____
 1 Less than one time per year
 2 Once or twice per year
 3 Between three and 12 times per year
 4 Between once per month and once per week
 5 weekly
 6 More than once per week

KEY

Do you profess to be a Christian? 1 Yes 2 No

If yes, which of the following best describes your views:

1 I respect and attempt to follow the moral and ethical teachings of Christ.

1 I have received Jesus Christ into my life as my personal Savior and Lord.

Circle the number which indicates how important religion is to you:

Not at all	1 2 3 4 5 6 7	Extremely important: my religious faith is the center of my entire life.
have no religion		

Counseling Center

1 = Christian Counseling Services

2 = Western Psychological and Counseling Services

Birth Order

1 = First born

2 = Middle

3 = Last

4 = Only

Father's age

00 = deceased

Mother's age

00 = deceased

Sex

1 = female

2 = male

DSM III Diagnosis

1 = Affective Disorder

2 = Adjustment Disorders

3 = V Codes

4 = Anxiety

5 = Bulimia

6 = Inhibited Sexual Disorder

Alternative DSM III Diagnosis

1 = Adjustment Disorder with Depressed Mood

2 = All other Adjustment Disorders

3 = Major Depressive, Single Episode

4 = All other Affective Disorders

5 = V Codes

6 = All Anxiety and other disorders (Bulimia, Inhibited Sexual Disorder)

KEYProtestant Denominations

- 1 Foursquare
- 2 Baptist
- 3 Conservative Baptist
- 4 Nondenominational
- 5 Christian
- 6 Free Methodist
- 7 Assembly of God
- 8 Church of God (Anderson)
- 9 Open Bible
- 10 Charismatic
- 11 Evangelical Congregational
- 12 Interdenominational
- 13 Missionary Alliance
- 14 Methodist
- 15 Lutheran
- 16 Nazarene
- 17 Church of Christ
- 18 Fundamentalist
- 19 Pentacostal
- 20 Evangelical

APPENDIX D

Instruments

RELIGIOUS ORIENTATION SCALE

For each of the following statements circle the letter of the choice which best describes your personal experience.

1. What religion offers most is comfort when sorrow and misfortune strike.
 - a. I definitely disagree
 - b. I tend to disagree
 - c. I tend to agree
 - d. I definitely agree
2. I try hard to carry my religion over into all my other dealings in life.
 - a. I definitely disagree
 - b. I tend to disagree
 - c. I tend to agree
 - d. I definitely agree
3. Religion helps to keep my life balanced and steady in exactly the same way as my citizenship, friendships, and other memberships do.
 - a. I definitely agree
 - b. I tend to agree
 - c. I tend to disagree
 - d. I definitely disagree
4. One reason for my being a church member is that such membership helps to establish a person in the community.
 - a. Definitely not true
 - b. Tends not to be true
 - c. Tends to be true
 - d. Definitely true
5. The purpose of prayer is to secure a happy and peaceful life.
 - a. I definitely disagree
 - b. I tend to disagree
 - c. I tend to agree
 - d. I definitely agree
6. It doesn't matter so much what I believe as long as I lead a moral life.
 - a. I definitely disagree
 - b. I tend to disagree
 - c. I tend to agree
 - d. I definitely agree
7. Quite often I have been aware of the presence of God or of the Divine Being.
 - a. Definitely not true
 - b. Tends not to be true
 - c. Tends to be true
 - d. Definitely true

8. My religious beliefs are what really lie behind my whole approach to life.
 - a. This is definitely not so
 - b. Probably not so
 - c. Probably so
 - d. Definitely so
9. The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services.
 - a. Almost never
 - b. Sometimes
 - c. Usually
 - d. Almost always
10. Although I am a religious person, I refuse to let religious considerations influence my everyday affairs.
 - a. Definitely not true for me
 - b. Tends not to be true
 - c. Tends to be true
 - d. Clearly true in my case
11. The church is the most important as a place to formulate good social relationships.
 - a. I definitely disagree
 - b. I tend to disagree
 - c. I tend to agree
 - d. I definitely agree
12. Although I believe in my religion, I feel there are many more important things in life.
 - a. I definitely disagree
 - b. I tend to disagree
 - c. I tend to agree
 - d. I definitely agree
13. If not prevented by unavoidable circumstances, I attend church:
 - a. more than once a week
 - b. about once a week
 - c. two or three times a month
 - d. less than once a month
14. If I were to join a church group, I would prefer to join (1) a Bible study group, or (2) a social fellowship.
 - a. I would prefer to join (1)
 - b. I probably would prefer (1)
 - c. I probably would prefer (2)
 - d. I would prefer to join (2)
15. I pray chiefly because I have been taught to pray.
 - a. Definitely true of me
 - b. Tends to be true of me
 - c. Tends not to be true
 - d. Definitely not true of me

16. Religion is especially important to me because it answers many questions about the meaning of life.
 - a. Definitely disagree
 - b. Tend to disagree
 - c. Tend to agree
 - d. Definitely agree
17. A primary reason for my interest in religion is that my church is a congenial social activity.
 - a. Definitely not true of me
 - b. Tends not to be true
 - c. Tends to be true
 - d. Definitely true of me
18. I read literature about my faith (or church):
 - a. Frequently
 - b. Occasionally
 - c. Rarely
 - d. Never
19. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.
 - a. Definitely disagree
 - b. Tend to disagree
 - c. Tend to agree
 - d. Definitely agree
20. It is important to me to spend periods of time in private religious thought and meditation.
 - a. Frequently true
 - b. Occasionally true
 - c. Rarely true
 - d. Never true
21. The primary purpose of prayer is to gain relief and protection.
 - a. I definitely agree
 - b. I tend to agree
 - c. I tend to disagree
 - d. I definitely disagree

SPIRITUAL WELL-BEING SCALE

For each of the following statements circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

SA = Strongly Agree	D = Disagree
MA = Moderately Agree	MD = Moderately Disagree
A = Agree	SD = Strongly Disagree

- | | |
|--|-----------------|
| 1. I don't find much satisfaction in private prayer with God. | SA MA A D MD SD |
| 2. I don't know who I am, where I came from, or where I'm going. | SA MA A D MD SD |
| 3. I believe that God loves me and cares about me. | SA MA A D MD SD |
| 4. I feel life is a positive experience. | SA MA A D MD SD |
| 5. I believe that God is impersonal and not interested in my daily situations. | SA MA A D MD SD |
| 6. I feel unsettled about my future. | SA MA A D MD SD |
| 7. I have a personally meaningful relationship with God. | SA MA A D MD SD |
| 8. I feel very fulfilled and satisfied with life. | SA MA A D MD SD |
| 9. I don't get much personal strength and support from my God. | SA MA A D MD SD |
| 10. I feel a sense of well-being about the direction my life is headed in. | SA MA A D MD SD |
| 11. I believe that God is concerned about my problems. | SA MA A D MD SD |
| 12. I don't enjoy much about life. | SA MA A D MD SD |
| 13. I don't have a personally satisfying relationship with God. | SA MA A D MD SD |
| 14. I feel good about my future. | SA MA A D MD SD |
| 15. My relationship with God helps me not to feel lonely. | SA MA A D MD SD |
| 16. I feel life is full of conflict and and unhappiness. | SA MA A D MD SD |
| 17. I feel most fulfilled when I'm in close communion with God. | SA MA A D MD SD |
| 18. Life doesn't have much meaning. | SA MA A D MD SD |
| 19. My relation with God contributed to my sense of well-being. | SA MA A D MD SD |
| 20. I believe there is some real purpose for my life. | SA MA A D MD SD |

APPENDIX E

Procedure

Instructions for Center Staff:

When new clients call in for counseling services they will be scheduled for an intake interview by the secretarial staff. During the initial interview the client will be informed by the intake interviewer that there will also be an assessment session to complete the intake process. The client will be informed that the MMPI is a mandatory part of the intake process whereas completing the other religious scales and information sheet is voluntary, but is needed for the research study. The client will be provided with the agreement to participate in the research study form and will be asked to sign it by the intake interviewer. There will be the usual charge for the MMPI, but no charge for the other instruments. The client will be informed that it will take an additional 15 minutes to complete the materials in addition to the time needed for the MMPI. The intake interviewer will at the conclusion of the intake interview see that the client schedules a specific time for the assessment session.

Subjects in this study will be limited to adults age 18 and over seeking initial counseling services through each center. This does not include clients referred to the center solely for medication, or other psychical evaluation by another mental health professional. Subjects will include individuals, each marital partner if marriage counseling is sought, and all members of families seeking who are age 18 or over. The criteria of the age 18 will be determined by the person's age at the time of seeking counseling. If the intake interviewer would like a client under age 18 to take the MMPI that is an option but the results would not be in the study.

The intake interviewer will be responsible for determining the initial DSM III diagnosis that is required for the study. This diagnosis will be solely determined from the initial interview, and it will be reviewed by the interviewer's supervisor. A separate sheet will be provided for listing the client's diagnosis. A copy of the MMPI answers will be made by the researcher as the counseling center will retain the original answer sheet. The other assessment data will be retained by the researcher. The secretarial staff will be responsible for collecting the completed assessment package. All data collected from subjects will be coded by number. There will be data collected from the first 50 consecutive subjects at each center, who agree to participate after the initiation of the study. A count will be kept of the numbers of clients who either (1) decline to participate; (2) or are referred solely for medication, or other physical evaluation by another mental health professional during the term of the study. A master list will be kept by the secretarial staff listing subjects by name and corresponding number.

APPENDIX F

Subject Agreement to Participate

AGREEMENT TO PARTICIPATE IN RESEARCH STUDY

Researcher: James L. Frantz

I, _____, as a client at this counseling center hereby agree to participate as a volunteer in a scientific investigation as an authorized part of the educational and research program of Western Conservative Baptist Seminary.

My involvement will be to participate in the initial interview and to complete one personality assessment inventory, two religious scales, and a background information sheet, requiring approximately fifteen minutes in addition to the counseling center's usual intake procedures.

I understand that any data or answers to questions will remain entirely confidential with regard to my identity in the results of the study. If I so request, I will be given an opportunity to read the results of the study after its conclusion.

I understand that I am free to withdraw my consent and terminate my participation at any time.

Date

Signature, research participant

APPENDIX G

Raw Data

Legend for Raw Data

ID = Identification Number
SEX = Sex
RWB = Religious Well-Being
EWB = Existential Well-Being
SWB = Spiritual Well-Being
EXT = Extrinsic Orientation of the Religious Orientation Scale
INT = Intrinsic Orientation of the Religious Orientation Scale
(the lower the score the more intrinsically oriented)
DSM = DSM III Axis I Diagnosis System
REL = Religious Fundamentalism Scale
MMPI = MMPI Level of Psychopathology
CAGE = Client's Age
FAGE = Father's Age
MAGE = Mother's Age
BIRTH ORDER = Birth Order
EDUC = Education
RACE = Race
INCOME = Income
MARITS = Marital Status
RELAFF = Religious Affiliation
PROTDEN = Protestant Denomination
FREQATT = Frequency of Attendance
XN = Christian Belief
MXN = Moral Christian
SAVXN = Savior Christian
IMPORT = Importance of Religion
CENTER = Center
L = Lie
F = Frequency
K = Correction
HS = Hypochondriasis
D = Depression
HY = Hysteria
PD = Psychopathic Deviate
MF = Masculinity-Femininity
PA = Paranoia
PT = Psychasthenia
SC = Schizophrenia
MA = Hypomania
SI = Social Introversion
PSYC = Alternative DSM III Axis I Diagnosis System

RAW DATA

ID	SEX	RWB	EWB	SWB	BRT	INT	DSM	REL	MMPI	CAGE	FAGE	MAGE	Birth Order	EDUC	RACE	INCOME	MARITS	RELAFE	PROT DEN	FREQ ATT	AN	MTN	SAVING	IMPORT	CENTER	L	F	K	MYP	D	HSY	PD	MF	PA	PS	SC	FA	SI	PSYC
01	1	44	33	077	31	16	2	11	19	39	73	69	4	14	4	1	5	3	01	5	1	1	1	6	1	01	19	10	21	33	33	37	37	20	38	58	29	46	1
02	1	33	23	056	36	32	1	09	13	28	51	49	3	14	4	5	2	3	00	1	1	2	1	3	1	00	17	10	19	36	35	32	33	20	32	40	16	38	3
03	2	52	47	097	23	14	2	10	01	47	70	62	1	08	4	5	5	5	00	1	1	2	1	7	1	04	04	13	04	22	24	25	25	10	12	11	13	37	2
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05	2	41	43	084	38	29	1	07	09	33	63	58	3	12	4	4	5	3	00	3	2	2	2	3	1	04	14	05	12	27	23	26	29	18	33	36	26	43	4
06	1	45	43	088	20	13	2	09	01	46	73	71	1	12	4	4	3	3	02	5	1	2	1	6	1	04	04	14	09	22	25	22	41	08	19	16	21	35	1
07	1	51	33	084	31	17	1	09	14	22	62	56	3	10	4	2	2	3	00	4	1	2	1	7	1	05	10	13	18	42	34	25	41	21	34	36	18	48	3
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REL Validation 159

ID	SEX	RWB	EWB	SWB	EXT	INT	DSM	REL	MMPI	CAGE	FAGE	MAGE	BIRTH ORDER	EDUC	RACE	INCOME	MARITS	REL AFF	PROT DEN	FREQ ATT	XV	MAXN	SAVXN	IMPORT	CENTER	L	F	K	HP	D	HSY	PD	MF	PA	PS	SC	MA	SI	PSYC
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51	1	54	44	098	19	09	2	12	03	19	50	48	3	15	4	1	1	3	08	6	1	2	1	7	2	06	06	16	09	28	25	25	41	13	23	19	14	34	1
52	1	59	41	100	29	12	2	12	03	31	62	60	1	14	4	4	2	3	10	6	1	2	1	7	2	02	06	03	11	35	26	24	43	10	33	25	20	52	2
53	1	44	37	081	33	16	2	09	01	31	59	52	2	16	4	3	1	3	10	3	1	2	1	5	2	02	11	13	12	23	27	20	29	16	22	15	21	18	2
54	1	42	27	069	29	17	1	10	02	50	00	00	2	18	4	0	1	3	11	5	1	2	1	5	2	07	06	20	03	34	28	21	37	14	13	08	09	31	3
55	2	53	54	107	19	09	2	12	01	45	00	00	3	18	4	5	2	3	10	6	1	2	1	7	2	04	04	21	05	20	26	15	22	09	12	10	12	21	2
56	1	32	19	051	21	18	1	09	08	31	54	54	2	13	4	6	2	3	15	5	1	1	1	6	2	06	12	15	06	39	31	20	39	15	33	24	06	45	3
57	2	32	41	073	34	34	3	02	04	19	43	43	1	13	4	6	1	5	00	2	2	2	2	3	2	03	06	19	05	17	22	29	27	11	07	14	20	12	5
58	2	24	21	045	35	37	1	01	11	24	00	00	4	10	4	2	5	5	00	3	2	2	2	1	2	02	13	11	16	39	28	29	28	07	23	24	16	48	4
59	1	42	37	079	26	14	1	11	03	25	64	64	3	14	4	4	2	3	12	6	1	2	1	7	2	11	04	24	10	23	33	22	29	09	04	09	18	18	4
60	1	48	32	080	20	13	3	11	06	43	70	66	2	16	4	6	2	3	10	5	1	2	1	6	2	07	04	19	09	35	32	27	39	17	17	16	12	29	5
61	1	36	32	068	23	19	1	10	05	22	00	55	2	15	4	1	1	3	10	4	1	2	1	6	2	01	16	10	09	28	18	33	41	18	27	31	18	36	4
62	2	48	37	085	28	13	1	08	08	24	43	42	1	16	4	2	2	3	16	5	1	2	1	7	2	06	08	15	04	29	30	18	37	16	24	17	10	35	4
63	1	48	37	065	21	15	1	12	00	35	65	68	1	16	4	3	2	3	02	6	1	2	1	7	2	05	03	19	04	20	25	18	37	12	14	06	15	31	4
64	1	50	46	096	30	21	4	10	15	37	00	00	4	08	3	3	4	3	06	6	1	2	1	7	2	04	15	07	17	37	31	30	39	17	42	48	24	55	6
65	1	49	39	088	18	27	2	11	04	29	49	46	1	12	4	7	2	3	12	5	1	2	1	7	2	05	03	13	05	28	32	31	37	11	20	17	14	30	1
66	1	52	60	112	21	12	2	12	00	25	53	50	2	16	4	2	2	3	16	5	1	2	1	6	2	06	00	22	00	21	21	16	38	09	06	06	12	30	2
67	2	60	52	112	24	12	3	12	02	32	60	59	1	18	4	2	2	3	12	6	1	2	1	7	2	04	03	12	05	20	20	16	36	11	14	17	18	35	5
68	1	52	46	098	24	14	4	12	04	23	64	65	3	16	4	6	2	3	06	5	1	2	1	7	2	06	10	21	14	30	33	21	36	12	12	13	16	28	6
69	1	54	28	082	20	13	1	12	01	36	75	74	3	16	4	0	2	3	12	6	1	2	1	7	2	02	08	07	08	21	22	23	33	12	26	21	19	45	4
70	2	48	25	073	27	11	1	12	04	35	65	64	2	16	4	5	2	3	19	6	1	2	1	7	2	04	09	11	06	21	25	20	37	17	25	21	20	42	4
71	1	39	31	070	34	34	1	06	08	22	60	45	2	12	4	0	1	1	00	2	1	1	2	5	2	02	07	14	12	39	35	22	35	18	36	30	21	34	4
72	1	41	39	080	38	36	2	07	08	25	62	62	3	12	4	6	2	3	20	2	1	1	2	5	2	01	11	06	10	33	30	29	44	19	34	42	21	39	2

APPENDIX H
Statistical Calculations

ENTIRE SAMPLE

Descriptive Statistics

Field	Number	Sums	Means	Variance	Standard Deviation	Standard Error
ID	72	2575.0000	35.7639	477.1688	21.8442	2.5744
SEX	72	89.0000	1.2361	0.1829	0.4277	0.0504
AGE	72	3408.0000	47.3333	79.8310	8.9348	1.0530
EMB	72	2853.0000	39.6250	108.4912	10.4159	1.2275
SMB	72	6239.0000	86.6528	311.3566	17.6453	2.0795
EXT	72	1959.0000	27.2083	43.4067	6.5684	0.7764
INT	72	1345.0000	18.6806	59.6853	7.7256	0.9105
DSM	72	154.0000	2.1389	1.2199	1.1045	0.1302
REL	72	674.0000	9.3611	7.0227	2.6500	0.3123
MMPI	72	351.0000	4.8750	23.1532	4.8118	0.5671
CAGE	72	2371.0000	32.9306	86.1500	9.2817	1.0939
FRAGE	72	3372.0000	46.8333	712.1408	26.6860	3.1450
MAGE	72	3501.0000	48.6250	520.5194	22.8149	2.6888
BORDER	72	159.0000	2.2083	0.9278	0.9632	0.1135
EDUC	72	966.0000	13.4167	7.2887	2.6998	0.3182
RACE	72	285.0000	3.9583	0.1532	0.3914	0.0461
INCOME	72	271.0000	3.7639	3.7040	1.9246	0.2268
MARITS	72	177.0000	2.4583	1.8856	1.3732	0.1618
RELAFF	72	215.0000	2.9861	0.6899	0.8306	0.0979
PROTDEM	72	463.0000	6.4306	36.5585	6.0464	0.7126
FREDATT	72	312.0000	4.3333	2.7324	1.6530	0.1948
IX	72	77.0000	1.0694	0.0655	0.2560	0.0302
MXN	72	125.0000	1.7361	0.1970	0.4438	0.0523
SAVIN	72	91.0000	1.2639	0.6195	0.7871	0.0928
IMPORT	72	427.0000	5.9306	2.3754	1.5412	0.1816
CENTER	72	97.0000	1.3472	0.2299	0.4794	0.0565
L	72	299.0000	4.1528	5.0045	2.2371	0.2636
F	72	351.0000	4.8750	23.1532	4.8118	0.5671
K	72	986.0000	13.6944	25.1166	5.0116	0.5906
HYP	72	685.0000	9.5139	32.7040	5.7187	0.6740
DEP	72	2031.0000	28.2083	58.5616	7.6526	0.9019
MYS	72	1967.0000	27.3194	30.1923	5.4948	0.6476
PD	72	1637.0000	22.7361	32.0561	5.6618	0.6673
MF	72	2639.0000	36.6528	41.3003	6.4265	0.7574
PA	72	1013.0000	14.0694	14.0937	3.7542	0.4424
PS	72	1555.0000	21.5972	98.3284	9.9161	1.1686
SC	72	1509.0000	20.9583	130.9137	11.4418	1.3484
MA	72	1147.0000	15.9306	25.7275	5.0722	0.5978
SI	72	2562.0000	35.5833	75.1197	8.6672	1.0214
PSYC	72	257.0000	3.5694	2.5585	1.5995	0.1885

REL Validation 162

Correlations:	ID	SEX	RWB	EWB	SWB	EXT	INT
ID	1.0000	-.0291	-.0377	-.0550	-.0365	-.1093	.0177
SEX	-.0291	1.0000	-.2106	-.1133	-.1669	.0033	.1289
RWB	-.0377	-.2106	1.0000	.7071**	.9103**	-.4103**	-.6760**
EWB	-.0550	-.1133	.7071**	1.0000	.9216**	-.2312	-.3382*
SWB	-.0365	-.1669	.9103**	.9216**	1.0000	-.3349*	-.5275**
EXT	-.1093	.0033	-.4103**	-.2312	-.3349*	1.0000	.6038**
INT	.0177	.1289	-.6760**	-.3382*	-.5275**	.6038**	1.0000
DSM	-.0484	-.1033	.3479*	.4353**	.4073**	-.0840	-.1915
REL	.0611	-.0634	.5443**	.2348	.4026**	-.5831**	-.7123**
MMPI	-.1528	.1166	-.3522*	-.5141**	-.4930**	.2675	.3205*
CAGE	-.1435	.0113	.1725	.0799	.0977	-.1792	-.3017*
FAGE	-.0524	-.0423	.0778	.0034	.0197	-.0768	-.0454
MAGE	-.0974	-.0568	.1826	.0507	.1027	-.2676	-.1351
BORDER	-.0265	-.0519	-.0249	-.0605	-.0430	.1467	.0632
EDUC	.1762	.0572	.1672	.0188	.1125	-.3081*	-.3375*
RACE	-.0679	-.1928	.0084	-.0292	-.0149	.0264	-.1009
INCOME	-.0863	-.0176	.0969	.2342	.1840	-.0856	.0800
MARITS	-.2876*	.2697	-.1762	-.0699	-.1271	.3206*	.1152

N of cases: 72 Significance: * - .01 ** - .001

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Correlations:	ID	SEX	RWB	EWB	SWB	EXT	INT
RELAFF	-.0774	.1680	-.0107	.0426	.0158	-.0662	-.0718
PROTDEN	.5328**	.0091	.1502	.1299	.1524	-.1835	-.3055*
FREDATT	.1304	.0350	.4861**	.1823	.3398*	-.5138**	-.6522**
XN	-.0460	.2341	-.1835	.0447	-.0609	.2267	.3100*
MXN	.0880	.0527	.1580	.0732	.1120	-.2475	-.3343*
SAVINX	-.0052	-.0105	-.0594	.1079	.0397	.1756	.2407
IMPORT	.0250	-.1048	.6008**	.3182*	.4784**	-.4891**	-.6704**
CENTER	.8247**	.0067	-.0395	-.1314	-.0851	-.1077	-.0291
L	.1310	-.0753	.2466	.1736	.2430	-.2873*	-.2799*
F	-.1544	.1862	-.4142**	-.5258**	-.5193**	.2653	.2604
K	.1439	-.1265	.2046	.2676	.2706	-.3428*	-.2867*
HYP	-.1516	-.1211	-.1893	-.2819*	-.3058*	.2066	.1794
DEP	.0086	-.2362	-.2739*	-.4855**	-.4542**	.0958	.2204
HYS	.0143	-.2601	-.0530	-.2264	-.1965	.0453	.1206
PD	-.0504	.0139	-.3566*	-.4453**	-.4581**	.1868	.3305*
WF	-.0645	-.5897**	.2577	-.0404	.0925	-.0546	-.1260
PA	-.1630	.0334	-.1888	-.4514**	-.3818**	.2446	.1655
PS	-.0528	-.1360	-.2313	-.4244**	-.3982**	.2417	.2171

N of cases: 72 Significance: * - .01 ** - .001

REL Validation 163

Correlations:	RELAFF	PROTDEN	FREQATT	IN
ID	-.0774	.5328**	.1304	-.0460
SEX	.1680	.0091	.0350	.2341
RWB	-.0107	.1502	.4861**	-.1835
EWB	.0426	.1299	.1823	.0447
SWB	.0158	.1524	.3398*	-.0609
EXT	-.0662	-.1835	-.5138**	.2267
INT	-.0718	-.3055*	-.6522**	.3100*
DSM	.0910	.1642	.0719	.0113
REL	-.1064	.2943*	.6575**	-.3974**
MMPI	-.0578	-.2676	.0005	-.0087
CRGE	.0774	.0086	.1376	-.0823
FRGE	.0683	.0846	-.0511	.0079
MRGE	-.0076	.1756	.0072	-.0311
BORDER	-.1178	-.0650	.1142	-.0586
EDUC	-.0413	.2961*	.1806	.0173
RACE	-.0018	-.0663	-.0616	.0293
INCOME	.0933	.0783	-.0318	.0412
MARITS	.0785	-.2813*	-.1300	.0588

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Correlations:	RELAFF	PROTDEN	FREQATT	IN
RELAFF	1.0000	.0183	-.0061	.4683**
PROTDEN	.0183	1.0000	.2691	-.2039
FREQATT	-.0061	.2691	1.0000	-.4227**
IN	.4683**	-.2039	-.4227**	1.0000
MXN	.2527	-.0714	.4069**	-.0745
SOVXN	-.1246	.0160	-.4977**	.5448**
IMPORT	-.0455	.2781*	.5916**	-.4387**
CENTER	.0830	.3765**	.1901	.0303
L	.0096	.0932	.2465	-.1050
F	.0282	-.1550	-.0356	.0063
K	.1301	.0958	.1492	.0212
MYP	-.1451	-.3218*	-.0632	-.0802
DEP	-.1359	-.2028	-.0286	-.1446
MYS	-.1572	-.2161	.0090	-.1763
PD	.0402	-.1566	-.0387	-.0038
RF	-.1210	-.0151	.1375	-.2180
PA	-.2056	-.1932	-.0418	-.1345
PS	-.1699	-.1981	-.0379	-.1227

REL Validation 164

Correlations:	MIN	SAVIN	IMPORT	CENTER	L	F	K
ID	.0880	-.0052	.0250	.8247**	.1310	-.1544	.1439
SEX	.0527	-.0105	-.1048	.0067	-.0753	.1862	-.1265
RWB	.1580	-.0594	.6008**	-.0395	.2466	-.4142**	.2046
EWB	.0732	.1079	.3182*	-.1314	.1736	-.5258**	.2676
SWB	.1120	.0397	.4784**	-.0851	.2430	-.5193**	.2706
EXT	-.2475	.1756	-.4891**	-.1077	-.2873*	.2653	-.3428*
INT	-.3343*	.2407	-.6704**	-.0291	-.2799*	.2604	-.2867*
DSX	-.0802	.1766	.2886*	-.2260	.0527	-.2881*	.2742*
REL	.2285	-.1941	.6677**	.1177	.1969	-.1115	.2309
WPI	-.1425	-.0944	-.1713	-.0174	-.2329	.7319**	-.3688**
CRGE	-.0563	-.1149	.0185	-.1976	.1343	-.0547	-.0479
FRGE	-.0774	.0896	.1488	-.0807	-.1866	.0332	-.0368
MRGE	-.1380	.1043	.1676	-.0318	-.0653	-.0385	-.0880
BORDER	.0053	-.1242	-.0269	-.0063	-.0101	.2071	.0488
EDUC	.1461	.0531	.1272	.2860*	.1566	-.1619	.2912*
RACE	-.0665	.0345	-.0732	.0031	-.0541	-.0848	-.0113
INCOME	-.0294	.1040	.0566	-.1164	.0395	-.1928	.0943
MARITS	-.0889	-.1025	-.1575	-.3034*	-.0343	.2447	-.3673**

N of cases: 72 Significance: * - .01 ** - .001

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Correlations:	MIN	SAVIN	IMPORT	CENTER	L	F	K
RELAFF	.2527	-.1246	-.0455	.0830	.0096	.0282	.1301
PROTDEN	-.0714	.0160	.2781*	.3765**	.0932	-.1550	.0958
FREDATT	.4069**	-.4977**	.5916**	.1901	.2465	-.0356	.1492
IX	-.0745	.5448**	-.4387**	.0303	-.1050	.0063	.0212
MIN	1.0000	-.3989**	.2029	.2569	.0388	-.0816	.0722
SAVIN	-.3989**	1.0000	-.2134	-.0844	-.1252	-.1263	.0265
IMPORT	.2029	-.2134	1.0000	.0264	.0826	-.2262	.1543
CENTER	.2569	-.0844	.0264	1.0000	.1354	-.0150	.0865
L	.0388	-.1252	.0826	.1354	1.0000	-.4104**	.6247**
F	-.0816	-.1263	-.2262	-.0150	-.4104**	1.0000	-.5349**
K	.0722	.0265	.1543	.0865	.6247**	-.5349**	1.0000
HYP	-.0231	-.1112	-.0708	-.1125	-.2758*	.5470**	-.4686**
DEP	-.0162	-.1250	-.2098	.0791	-.0511	.4316**	-.2692
MYS	-.0222	-.1201	.0642	.0288	.0409	.1500	.0402
PD	.0845	-.1443	-.1686	.0967	-.4330**	.6748**	-.4287**
MF	-.0698	-.0693	.1090	-.0230	.0628	.0512	-.0578
PA	-.0734	-.0885	.0102	-.0582	-.3157*	.6339**	-.4228**
PS	.0166	-.1222	-.0812	.0068	-.4566**	.6650**	-.6791**

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Correlations:	AGE	MAGE	BORDER	EDUC	RACE	INCOME	MARITS
ID	-.0524	-.0974	-.0265	.1762	-.0679	-.0863	-.2876*
SEX	-.0423	-.0568	-.0519	.0572	-.1928	-.0176	.2697
RWB	.0778	.1826	-.0249	.1672	.0084	.0969	-.1762
EWB	.0034	.0507	-.0605	.0188	-.0292	.2342	-.0699
SWB	.0197	.1027	-.0430	.1125	-.0149	.1840	-.1271
EXT	-.0768	-.2676	.1467	-.3081*	.0264	-.0856	.3206*
INT	-.0454	-.1351	.0632	-.3375*	-.1009	.0800	.1152
DSM	.1194	.0216	.0592	.0377	-.1112	.1655	.0219
REL	.0509	.1342	.0641	.2890*	-.0920	.0130	-.2430
MPI	.0625	-.0111	.1429	-.2995*	-.0225	-.1966	.1654
CAGE	-.1689	-.0917	-.0179	-.1369	.1149	.1155	.1932
AGE	1.0000	.5221**	-.1480	-.0356	.1155	-.0239	-.1156
MAGE	.5221**	1.0000	-.2818*	.2028	.1546	.0846	-.2451
BORDER	-.1480	-.2818*	1.0000	-.0238	-.2715	.0472	.1180
EDUC	-.0356	.2028	-.0238	1.0000	.0974	.0162	-.4336**
RACE	.1155	.1546	-.2715	.0974	1.0000	.1318	-.0897
INCOME	-.0239	.0846	.0472	.0162	.1318	1.0000	-.1984
MARITS	-.1156	-.2451	.1180	-.4336**	-.0897	-.1984	1.0000

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Correlations:	AGE	MAGE	BORDER	EDUC	RACE	INCOME	MARITS
RELAFF	.0683	-.0076	-.1178	-.0413	-.0018	.0933	.0785
PROTDEM	.0846	.1756	-.0650	.2961*	-.0663	.0783	-.2813*
FREGATT	-.0511	.0072	.1142	.1806	-.0616	-.0318	-.1300
YN	.0079	-.0311	-.0586	.0173	.0293	.0412	.0588
MXN	-.0774	-.1380	.0053	.1461	-.0665	-.0294	-.0889
SOVYN	.0896	.1043	-.1242	.0531	.0345	.1040	-.1025
IMPORT	.1488	.1676	-.0269	.1272	-.0732	.0566	-.1575
CENTER	-.0807	-.0318	-.0063	.2860*	.0031	-.1164	-.3034*
L	-.1866	-.0653	-.0101	.1566	-.0541	.0395	-.0343
F	.0332	-.0385	.2071	-.1619	-.0848	-.1928	.2447
K	-.0368	-.0880	.0488	.2912*	-.0113	.0943	-.3673**
HYP	.0564	-.0046	.1088	-.3759**	.0402	-.2124	.2540
DEP	.0152	-.0193	.0304	-.2841*	.0689	-.1623	-.0052
HYS	.1378	-.0171	.0696	-.2069	.0982	-.1265	-.0587
PD	.0842	.1033	.0594	-.3046*	-.1058	-.1414	.0357
MF	.0604	.1580	-.0421	.0667	.1750	.0369	-.2634
PA	.1495	.1430	.0264	-.0415	.0101	-.2219	-.0257
PS	.1245	-.0259	.0734	-.3224*	-.0323	-.2234	.1473

REL Validation 166

Correlations:	FACE	WAGE	BORDER	EDUC	RACE	INCOME	PARITS
SC	-.1187	-.1087	-.1222	-.0423	-.4973**	.7709**	-.7020**
MA	-.1847	.0158	-.1605	-.0249	-.3837**	.4797**	-.5415**
SI	.0799	-.1287	-.0376	-.0615	-.2095	.3687**	-.5712**
PSYC	.1120	.2129	.0494	-.0459	.1098	-.1553	.2039

N of cases: 72 Significance: * - .01 ** - .001

	RELAFF	PROTDEN	FREQATT	IN
SC	.7703**	.5876**	.4054**	.7260**
MA	.5119**	.0240	.1131	.4169**
SI	.4222**	.6095**	.1090	.3423*
PSYC	-.1870	-.1222	-.1170	-.2035

Correlations:	AF	PA	PS	SC	MA	SI	PSYC
SC	.0362	-.0253	.1742	-.3895**	-.0370	-.1865	.2982*
MA	.0199	.0175	.0813	-.1974	-.0886	-.2024	.2963*
SI	.0400	.1108	.0905	-.3430*	-.0150	-.1221	.2505
PSYC	.0210	-.0276	-.0011	.1131	-.1189	.1262	-.1387

N of cases: 72 Significance: * - .01 ** - .001

Correlations:	ID	SEX	RWB	EWB	SWB	EXT	INT
SC	-.1368	-.0092	-.2719	-.3779**	-.3833**	.3797**	.3187*
MA	-.0806	.0955	-.1295	-.1357	-.1536	.3592**	.2549
SI	-.0951	-.1092	-.0686	-.2563	-.2120	.0665	.0205
PSYC	.0846	-.0447	.1269	.1782	.1469	.0576	-.0478

N of cases: 72 Significance: * - .01 ** - .001

	DSM	REL	WPI	DAGE
SC	-.2652	-.1640	.8230**	.0064
MA	-.1090	-.2341	.3580*	-.0347
SI	-.2253	.0700	.4606**	.2253
PSYC	.5516**	-.0631	-.2049	-.1268

REL Validation 167

Correlations:	DSM	REL	MMPI	CRGE
ID	-.0464	.0611	-.1528	-.1435
SEX	-.1033	-.0634	.1166	.0113
MBB	.3479*	.5443**	-.3522*	.1725
DMB	.4353**	.2348	-.5141**	.0799
BMB	.4073**	.4026**	-.4930**	.0977
EXT	-.0640	-.5631**	.2575	-.1792
INT	-.1915	-.7123**	.3205*	-.3017*
DSM	1.0000	.1275	-.3083*	-.0264
REL	.1275	1.0000	-.1095	.2446
MMPI	-.3083*	-.1095	1.0000	-.0513
CRGE	-.0264	.2446	-.0513	1.0000
FRGE	.1194	.0509	.0625	-.1689
MRGE	.0216	.1342	-.0111	-.0917
BORDER	.0592	.0641	.1429	-.0179
EDUC	.0377	.2890*	-.2995*	-.1369
RACE	-.1112	-.0920	-.0225	.1149
INCOME	.1655	.0130	-.1966	.1155
PARITS	.0219	-.2430	.1654	.1932

N of cases:

1/19/85

Correlations:	DSM	REL	MMPI	CRGE
RELFF	.0910	-.1064	-.0578	.0774
PROTDEN	.1642	.2943*	-.2676	.0086
FREDATT	.0719	.6575**	.0005	.1376
XN	.0113	-.3974**	-.0087	-.0823
ROM	-.0802	.2285	-.1425	-.0563
SAVON	.1766	-.1941	-.0944	-.1149
IMPORT	.2886*	.6677**	-.1713	.0185
CENTER	-.2260	.1177	-.0174	-.1976
L	.0527	.1969	-.2329	.1343
F	-.2881*	-.1115	.7319**	-.0547
K	.2742*	.2309	-.3688**	-.0479
MYT	-.1267	-.1452	.6767**	.1336
DEP	-.3122*	-.1014	.7360**	.0724
MYB	-.0435	-.0411	.5261**	-.0099
PD	-.2822*	-.0938	.7230**	-.1366
MF	.0135	.0703	.2200	-.0018
PA	-.2820*	-.0365	.7317**	-.1052
PG	-.3182*	-.1182	.7181**	.0189

REL Validation 168

Correlations:	MF	PA	PS	SC	MA	SI	PSYC
TD	-.0645	-.1650	-.0528	-.1388	-.0806	-.0951	.0846
GEX	-.5897**	.0334	-.1360	-.0092	.0955	-.1092	-.0447
MBB	.2577	-.1888	-.2313	-.2719	-.1295	-.0686	.1269
EMB	-.0404	-.4514**	-.4244**	-.3779**	-.1357	-.2563	.1782
GBB	.0925	-.3818**	-.3982**	-.3833**	-.1536	-.2120	.1469
EXT	-.0546	.2446	.2417	.3797**	.3592**	.0665	.0576
INT	-.1260	.1655	.2171	.3187*	.2549	.0205	-.0478
DSM	.0135	-.2820*	-.3182*	-.2652	-.1090	-.2253	.5516**
REL	.0703	-.0365	-.1182	-.1640	-.2341+	.0700	-.0631
MAWI	.2200	.7317**	.7181**	.8230**	.3560*	.4606**	-.2049
CAGE	-.0018	-.1052	.0189	-.0064	-.0347	.2253	-.1288
FAGE	.0604	.1495	.1345	.0362	.0199	.0400	.0210
WAGE	.1580	.1430	-.0259	-.0253	.0175	.1108	-.0276
BORDER	-.0421	.0264	.0734	.1742	.0813	.0905	-.0011
EDUC	.0667	-.0415	-.3224*	-.3895**	-.1974	-.3430*	.1131
RACE	.1750	.0101	-.0323	-.0370	-.0886	-.0150	-.1189
INCOME	.0369	-.2219	-.2234	-.1865	-.2024	-.1221	.1262
MARITS	-.2634	-.0257	.1473	.2982*	.2963*	.2505	-.1387

N of cases: 72 Significance: * - .01 ** - .001; + - .05

* . * is printed if a coefficient cannot be computed

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Correlations:	MF	PA	PS	SC	MA	SI	PSYC
RELAFF	-.1210	-.2056	-.1699	-.1726	-.2358	.0092	.0578
PROTDEN	-.0151	-.1932	-.1981	-.2246	-.2242	-.0569	.2015
FREDATT	.1375	-.0418	-.0379	-.0662	-.1616	.1191	.0832
XN	-.2180	-.1345	-.1227	-.0970	.0661	-.1180	.1113
WIN	-.0698	-.0734	.0166	-.1187	-.1847	.0799	.1120
SAVIN	-.0693	-.0885	-.1222	-.1087	.0158	-.1287	.2129
IMPORT	.1090	.0102	-.0812	-.1222	-.1605	-.0376	.0494
CENTER	-.0230	-.0582	.0068	-.0423	-.0249	-.0615	-.0459
L	.0628	-.3157*	-.4566**	-.4973**	-.3837**	-.2095	.1098
F	.0512	.6339**	.6650**	.7709**	.4797**	.3687**	-.1553
K	-.0578	-.4228**	-.6791**	-.7020**	-.5415**	-.5712**	.2039
HYP	.2269	.5733**	.7228**	.7703**	.5119**	.4222**	-.1870
DEP	.4343**	.5238**	.7070**	.5876**	.0240	.6095**	-.1222
HYS	.3094*	.4712**	.4369**	.4054**	.1131	.1090	-.1170
PD	.1078	.5447**	.6032**	.7260**	.4169**	.3423*	-.2035
MF	1.0000	.2385	.3450*	.2202	-.0544	.3410*	.0464
PA	.2385	1.0000	.7085**	.7336**	.3769**	.2768*	-.1506
PS	.3450*	.7085**	1.0000	.8788**	.4485**	.6648**	-.2214

N of cases: 72 Significance: * - .01 ** - .001

REL Validation 169

	HYP	DEP	HYS	PD
ID	-.1516	.0086	.0143	-.0504
SEX	-.1211	-.2362	-.2601	.0139
RWB	-.1893	-.2739*	-.0530	-.3566*
DWB	-.2819*	-.4855**	-.2264	-.4453**
BWB	-.3058*	-.4542**	-.1965	-.4581**
EXT	.2066	.0958	.0453	.1868
INT	.1794	.2204	.1206	.3305*
DSM	-.1367	-.3122*	-.0435	-.2822*
REL	-.1452	-.1014	-.0411	-.0938
WPI	.6767**	.7360**	.5261**	.7230**
AGE	.1336	.0724	-.0099	-.1366
FACE	.0564	.0152	.1378	.0842
WAGE	-.0046	-.0193	-.0171	.1033
BORDER	.1088	.0304	.0696	.0594
EDUC	-.3759**	-.2841*	-.2069	-.3046*
RACE	.0402	.0689	.0982	-.1058
INCOME	-.2124	-.1623	-.1265	-.1414
MARITS	.2540	-.0052	-.0567	.0357

N of cases

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Correlation	HYP	DEP	HYS	PD
RELATF	-.1451	-.1359	-.1572	.0402
PROTDEN	-.3218*	-.2028	-.2161	-.1566
FREDDATT	-.0632	-.0286	.0090	-.0387
XN	-.0802	-.1446	-.1763	-.0038
ROX	-.0231	-.0162	-.0222	.0845
SAVXN	-.1112	-.1250	-.1201	-.1443
IMPORT	-.0708	-.2098	.0642	-.1686
CENTER	-.1125	.0791	.0288	.0967
L	-.2758*	-.0511	.0409	-.4330**
F	.5470**	.4316**	.1500	.6746**
K	-.4686**	-.2692	.0402	-.4287**
HYP	1.0000	.6360**	.6773**	.5409**
DEP	.6360**	1.0000	.6123**	.5334**
HYS	.6773**	.6123**	1.0000	.3390*
PD	.5409**	.5334**	.3390*	1.0000
WE	.2269	.4343**	.3094*	.1078
PA	.5713**	.5238**	.4712**	.5447**
PS	.7228**	.7070**	.4269**	.6032**

MULTIPLE REGRESSION

Beginning Block Number 1. Method: Enter EDUC SEX MARITS IN MA

Variable(s) Entered on Step Number

1..	MA
2..	IN
3..	EDUC
4..	SEX
5..	MARITS

Multiple R	.52539	Analysis of Variance			
R Square	.27604		DF	Sum of Squares	Mean Square
Adjusted R Square	.22119	Regression	5	136.77719	27.35544
Standard Error	2.33135	Residual	66	358.72281	5.43519

F = 5.03302 Signif F = .0006

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
MA	-.06872	.05391	-.14046	-1.275	.2069
IN	-4.12432	1.11304	-.39966	-3.705	.0004
EDUC	.21069	.11673	.22309	1.874	.0654
SEX	.35116	.70356	.05685	.499	.6194
MARITS	-.18153	.23702	-.09649	-.766	.4465
(Constant)	12.00279	2.27292		5.281	.0000

End Block Number 1 All requested variables entered.

.....

Beginning Block Number 2. Method: Remove EDUC SEX MARITS IN

Variable(s) Removed on Step Number

6..	MARITS
7..	SEX
8..	EDUC
9..	IN

***** MULTIPLE REGRESSION *****

Equation Number 11 Dependent Variable.. REL

Multiple R	.23406	Analysis of Variance			
R Square	.05479		DF	Sum of Squares	Mean Square
Adjusted R Square	.04129	Regression	1	27.14968	27.14968
Standard Error	2.58664	Residual	70	468.35032	6.69072

F = 4.05781 Signif F = .0478

(The relationship between Ma and REL after controlling for marital status, sex, education, and Christian belief.)

***** MULTIPLE REGRESSION *****

Equation Number 2 Dependent Variable.. REL

Beginning Block Number 1. Method: Enter EDUC SEX MARITS IN K

Variable(s) Entered on Step Number

1..	K
2..	IN
3..	SEX
4..	EDUC
5..	MARITS

Multiple R	.52744	Analysis of Variance			
R Square	.27819		DF	Sum of Squares	Mean Square
Adjusted R Square	.22351	Regression	5	137.84393	27.56879
Standard Error	2.32788	Residual	66	357.65607	5.41903
		F =	5.08740	Signif F = .0005	

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
K	.06277	.06125	.15442	1.251	.1812
IN	-4.27616	1.11174	-.41437	-3.846	.0003
SEX	.40264	.70432	.06318	.572	.5695
EDUC	.20480	.11778	.20893	1.739	.0867
MARITS	-.16726	.23846	-.08891	-.701	.4853
(Constant)	10.01580	2.25095		4.450	.0000

End Block Number 1 All requested variables entered.

Beginning Block Number 2. Method: Remove EDUC SEX MARITS IN

Variable(s) Removed on Step Number

6..	MARITS
7..	EDUC
8..	SEX
9..	IN

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* * * * MULTIPLE REGRESSION * * * *

Equation Number 2 Dependent Variable.. REL

Multiple R	.23066	Analysis of Variance			
R Square	.05330		DF	Sum of Squares	Mean Square
Adjusted R Square	.03977	Regression	1	25.40918	25.40918
Standard Error	2.56869	Residual	70	469.09082	6.70130

F = 3.94091 Signif F = .0510

(The relationship between K and REL after controlling for marital status, sex, education, and Christian belief.)

REL Validation 174

Equation Number 19 Dependent Variable.. REL

Beginning Block Number 1. Method: Enter EDUC SEX MARITS IN RMB

Variable(s) Entered on Step Number

1..	IN
2..	EDUC
3..	SEX
4..	RMB
5..	MARITS

Multiple R	.67252	Analysis of Variance			
R Square	.45228		DF	Sum of Squares	Mean Square
Adjusted R Square	.41079	Regression	5	224.10587	44.82117
Standard Error	2.02781	Residual	66	271.39413	4.11203

F = 10.90001 Signif F = .0000

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
IN	-3.50957	.97786	-.34009	-3.591	.0006
EDUC	.16044	.10222	.16367	1.570	.1213
SEX	.82279	.62019	.13320	1.327	.1892
RMB	.13713	.02836	.46383	4.836	.0000
MARITS	-.19983	.20152	-.10622	-.992	.3250
(Constant)	4.00295	2.35279		1.701	.0936

End Block Number 1 All requested variables entered.

.....

Beginning Block Number 2. Method: Remove EDUC SEX MARITS IN

Variable(s) Removed on Step Number

6..	MARITS
7..	SEX
8..	IN
9..	EDUC

REL Validation 175

• • • • MULTIPLE REGRESSION • • • •

Equation Number 19 Dependent Variable.. REL

Multiple R	.54427	Analysis of Variance			
R Square	.29623		DF	Sum of Squares	Mean Square
Adjusted R Square	.28618	Regression	1	146.78164	146.78164
Standard Error	2.23197	Residual	70	348.71836	4.98169

F = 29.46422 Signif F = .0000

(The relationship between RWB and REL after controlling for marital status, sex, education, and Christian belief.)

REL Validation 176

***** MULTIPLE REGRESSION *****

Equation Number 16 Dependent Variable.. REL

Beginning Block Number 1. Method: Enter EDUC SEX MARITS IN INT

Variable(s) Entered on Step Number

1..	IN
2..	EDUC
3..	SEX
4..	INT
5..	MARITS

Multiple R	.76142	Analysis of Variance			
R Square	.57975		DF	Sum of Squares	Mean Square
Adjusted R Square	.54792	Regression	5	287.85804	57.45361
Standard Error	1.77624	Residual	66	208.23196	3.15503

F = 18.21016 Signif F = .0000

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
IN	-2.21533	.89158	-.21467	-2.485	.0153
EDUC	-.01726	.09527	-.01760	-.181	.8568
SEX	.76739	.53941	.12423	1.423	.1595
INT	-.23441	.03299	-.64503	-7.106	.0000
MARITS	-.37099	.17717	-.19720	-2.094	.0401
(Constant)	16.85470	1.76578		9.108	.0000

End Block Number 1 All requested variables entered.

Beginning Block Number 2. Method: Remove EDUC SEX MARITS IN

Variable(s) Removed on Step Number

6..	EDUC
7..	IN
8..	SEX
9..	MARITS

* * * * MULTIPLE REGRESSION * * * *

Equation Number 16 Dependent Variable.. REL

Multiple R	.71234	Analysis of Variance		
R Square	.50742		DF	Sum of Squares
Adjusted R Square	.50039	Regression	1	251.42804
Standard Error	1.86728	Residual	70	244.07196
				Mean Square
				3.48674

F = 72.10973 Signif F = .0000

(The relationship between Intrinsic and REL after controlling for marital status, sex, education, and Christian belief.)

***** MULTIPLE REGRESSION *****

Equation Number 17 Dependent Variable.. REL

Beginning Block Number 1. Method: Enter EDUC SEX MARITS IN EXT

Variable(s) Entered on Step Number

1..	IN
2..	EDUC
3..	SEX
4..	EXT
5..	MARITS

Multiple R	.65897	Analysis of Variance			
R Square	.43424		DF	Sum of Squares	Mean Square
Adjusted R Square	.39138	Regression	5	215.16656	43.03331
Standard Error	2.06094	Residual	66	280.33344	4.24748
		F =	10.13150	Signif F =	.0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
IN	-3.03058	1.01573	-.29367	-2.984	.0040
EDUC	.14086	.10473	.14370	1.345	.1832
SEX	.01562	.62569	2.5293E-03	.025	.9802
EXT	-.19220	.04241	-.46771	-4.531	.0000
MARITS	-.02662	.21026	-.01415	-.127	.8996
(Constant)	15.98372	2.18257		7.223	.0000

End Block Number 1 All requested variables entered.

Beginning Block Number 2. Method: Remove EDUC SEX MARITS IN

Variable(s) Removed on Step Number

6..	MARITS
7..	IN
8..	EDUC
9..	SEX

•••• MULTIPLE REGRESSION ••••

Equation Number 17 Dependent Variable.. REL

Multiple R	.58308	Analysis of Variance			
R Square	.33999		DF	Sum of Squares	Mean Square
Adjusted R Square	.33056	Regression	1	168.46365	168.46365
Standard Error	2.16147	Residual	70	327.03635	4.67195

F = 36.05835 Signif F = .0000

(The relationship between Extrinsic and REL after controlling for marital status, sex, education, and Christian belief.)

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***** MULTIPLE REGRESSION *****

Equation Number 18 Dependent Variable.. REL

Beginning Block Number 1. Method: Enter EDUC SEX MARITS IN EMB

Variable(s) Entered on Step Number

1..	IN
2..	EDUC
3..	EMB
4..	SEX
5..	MARITS

Multiple R	.36541	Analysis of Variance			
R Square	.31969		DF	Sum of Squares	Mean Square
Adjusted R Square	.26815	Regression	5	158.40635	31.68127
Standard Error	2.25997	Residual	66	337.09365	5.10748

F = 6.20292 Signif F = .0001

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
IN	-4.38781	1.08061	-.42519	-4.061	.0001
EDUC	.22949	.11274	.23411	2.036	.0458
EMB	.06274	.02569	.25044	2.442	.0173
SEX	.51844	.68614	.08393	.756	.4526
MARITS	-.22881	.22445	-.12162	-1.019	.3117
(Constant)	8.48064	2.31077		3.670	.0005

End Block Number 1 All requested variables entered.

Beginning Block Number 2. Method: Remove EDUC SEX MARITS IN

Variable(s) Removed on Step Number

6..	MARITS
7..	SEX
8..	IN
9..	EDUC

**** MULTIPLE REGRESSION ****

Equation Number 18 Dependent Variable.. REL

Multiple R	.23482	Analysis of Variance			
R Square	.05514		DF	Sum of Squares	Mean Square
Adjusted R Square	.04164	Regression	1	27.32242	27.32242
Standard Error	2.58617	Residual	70	468.17758	6.68825

F = 4.06514 Signif F = .0471

(The relationship between BMB and REL after controlling for marital status, sex, education, and Christian belief.)

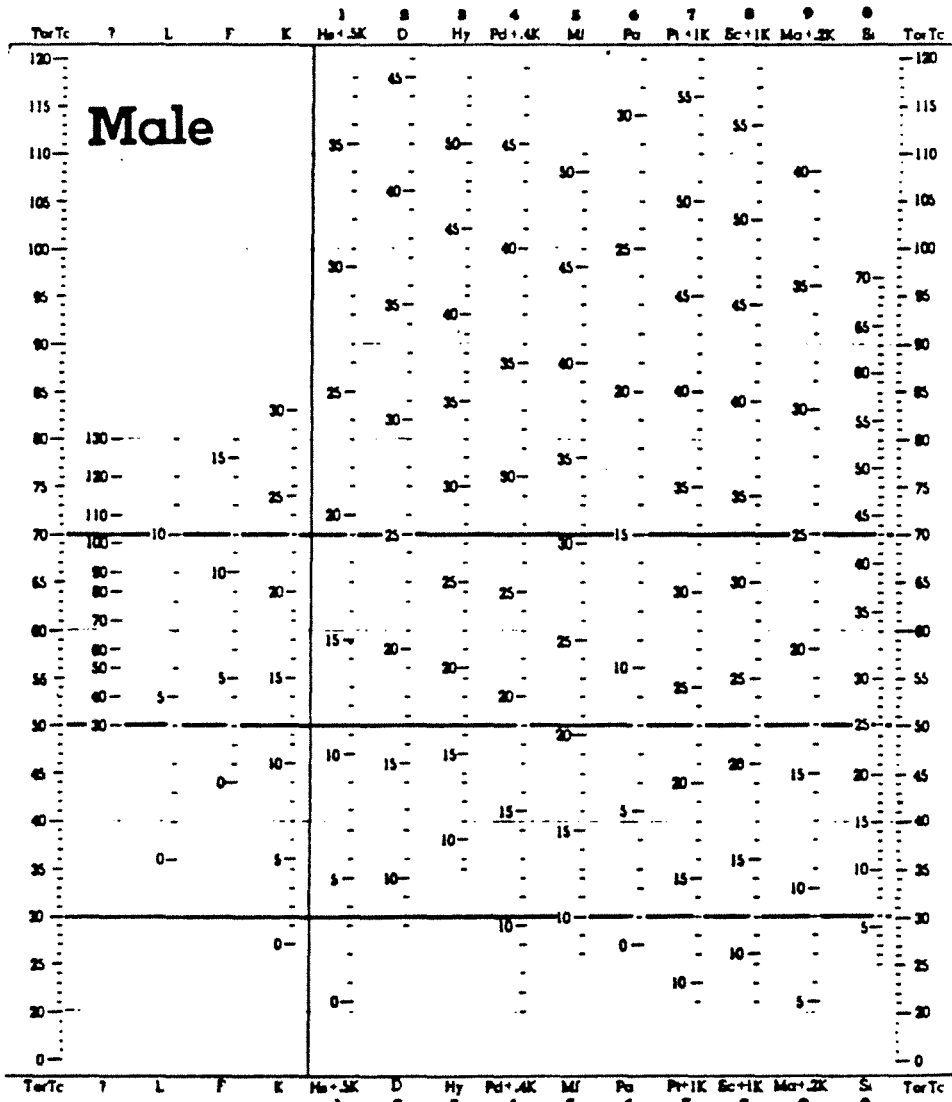
APPENDIX I

Raw Score Conversion to T-Score Points

The Minnesota Multiphasic Personality Inventory

Starke R. Hathaway and J. Charnley McKinley

Scorer's Initials _____



Score _____

K to be added _____

Raw Score with K _____



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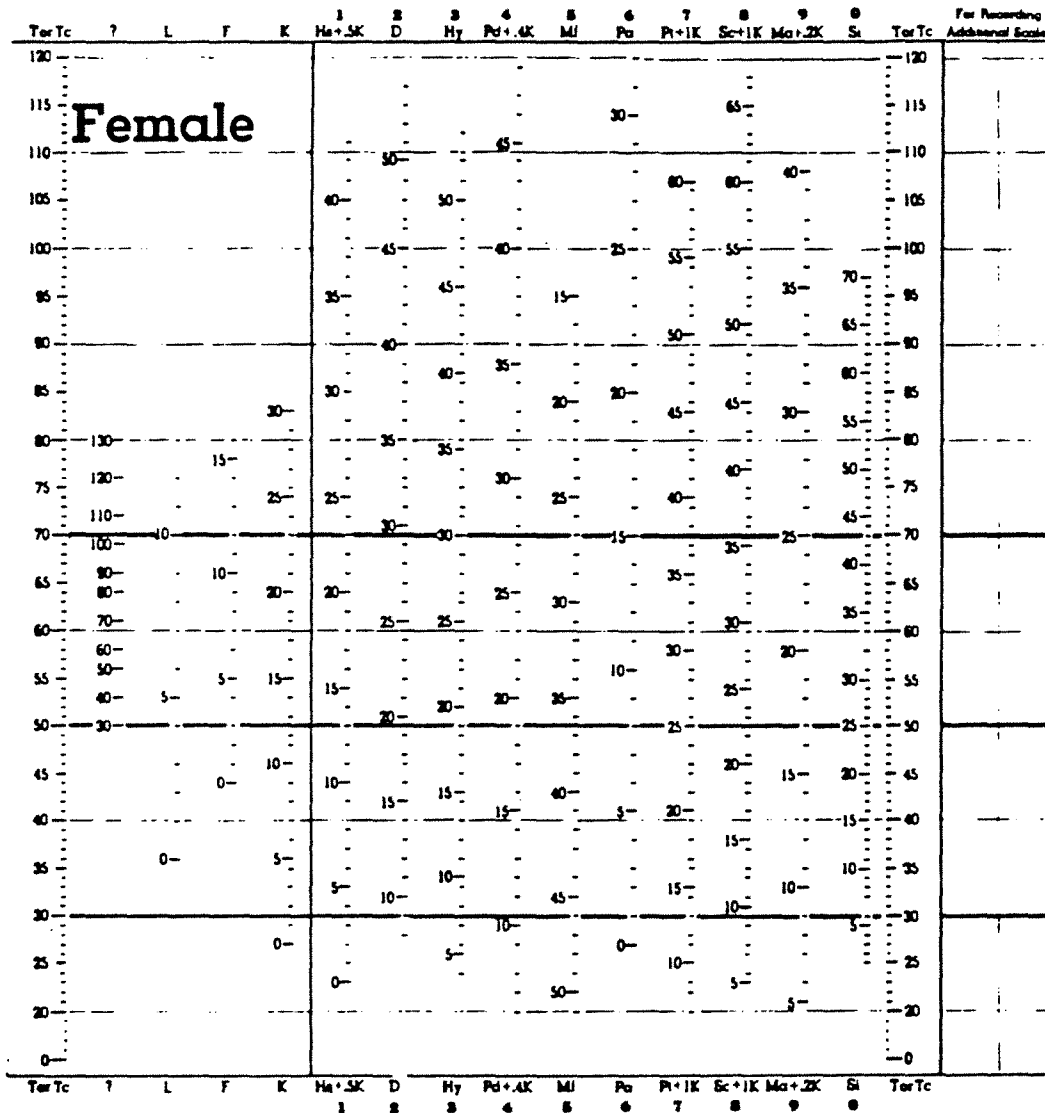
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Profile and Case S

The Minnesota Multiphasic Personality Inventory

Starke R. Hathaway and J. Charnley McKinley

Scorer's Initials _____



Score _____

K to be added _____

Raw Score with K _____



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APPENDIX J
Curriculum Vitae

James Lynn Frantz
1112 N.E. 81st
Portland, Oregon
97213
(503) 254-9267

Birthdate: November 8, 1949
Marital Status: Single
Health: Excellent

EDUCATION

Ph.D. (candidate) in Clinical Psychology: Western Baptist
Seminary: Portland, Oregon.
Dissertation Title: MMPI and DSM III Diagnosis Related to
Selected Measures of Religious and Demographic Variables in
Adult Out-Patients.

M.A., Clinical/Counseling Psychology: Western Baptist Seminary:
Portland, Oregon. (1982)

M.S., Counseling Psychology: University of Oregon: Eugene,
Oregon. (1977)

B.A., Social Science: Tabor College; Hillsboro, Kansas. (1971)

PROFESSIONAL TRAINING IN CLINICAL/COUNSELING PSYCHOLOGY

Half-Time Internship in Clinical Psychology (Alcohol &
Corrections)

September 1984 - Present: Clackamas County Mental Health Center;
Milwaukee, Oregon.

Activities performed: individual and group therapy with court
mandated and voluntary alcohol and corrections clients.
Psychological testing and evaluations, neuropsychological
assessments.

Half-Time Internship in Clinical Psychology (Child and Family)

September 1983 - August 1984: Clackamas County Mental Health
Center: Milwaukie, Oregon.

Activities performed: individual psychotherapy with children and
adolescents; family therapy (especially single-parent families);
psychological/intellectual testing and evaluation.

Practica in Counseling Psychology

September 1975 - June 1977: University of Oregon; Eugene, Oregon.

Activities performed: individual adult therapy; vocational
testing and counseling; career entry for adult women education
groups; test anxiety desensitization groups; vocational (job-
getting, interviewing, and resume-writing skills)

PROFESSIONAL EXPERIENCE IN CLINICAL SETTINGS

Private Practice

June 1982 - Present: Christian Counseling Services; Gresham, Oregon.

Activities performed: individual, marital and family therapy; specialities: anger management, anxiety and depression reactions, singleness issues, single parenting, cognitive-behavioral approaches.

Mental Health Therapist

July 1981 - Present; part-time: Providence Medical Center, Portland, Oregon.

Activities performed: individual and group therapy with adults and adolescents displaying wide range of psychiatric disorders; dictating admission and discharge summaries; mental status evaluations.

Mental Health Specialist

September 1977 - September 1980; full-time: Cedar Hills Hospital; Portland, Oregon.

Activities performed: individual and group therapy with adults and adolescents with wide range of psychiatric disorders; lead skill-building groups.

PROFESSIONAL EXPERIENCE IN ACADEMIC SETTINGS

Graduate Teaching Fellowship

September 1983 - June 1984; Western Baptist Seminary; Portland, Oregon.

Duties performed: clinical supervision of a group of practicum clinical psychology students, present lectures on therapeutic topics to large group classes.

APPENDIX K
Definition of Terms

Born-again Christian- a person who has received Jesus Christ as personal Savior and Lord

Ethical Christian- a person who respects and attempts to follow the moral and ethical teachings of Christ

Existential Well-Being- see pg. 49

Extrinsic orientation- see pg. 40

Intrinsic orientation- see pg. 41

Gradual conversion- takes place over an intermediate length of time, wherein the person moves from a point of rejection to a point of acceptance of the faith, and is thought to involve a more cognitive and rational process.

Religious well-being- see pg. 49

Spiritual well-being- see pg. 49

Sudden conversion- takes place in a very short period of time, sometimes within only a few hours, and is thought of as being emotionally based

Unconscious conversion- is said to have occurred when the person cannot remember ever not believing the faith; this is thought to be a result of social learning