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OCCUPATIONAL CONGRUENCE AND PSYCHOLOGICAL
ADJUSTMENT AMONG WOMEN CLERGY

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the
Graduate School of The Ohio State University

By

Bobbie L. Celeste, M.A.

****

The Ohio State University

1996

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ABSTRACT

This study explored the self-reported psychological adjustment for congruent, midrange, and incongruent female clergy. Psychological adjustment was operationally defined by the clinical and validity scales of the Minnesota Multiphasic Personality Inventory. Congruence was defined using the Strong Interest Inventory Minister Scale. All participants were ordained by their church or denomination and employed in ministry at the time of the assessment. The multivariate analysis of variance revealed a significant finding for the main effect of groups on the MMPI scales. The univariate analysis showed significant findings on eight MMPI scales. In general, the results indicate that the three groups tend to vary in psychological adjustment as assessed by the MMPI scales. Follow-up tests further suggest that the congruent ministers tend to be psychologically healthier and more comfortable than the incongruent ministers.
DEDICATION

This work is dedicated to my parents Elizabeth Ellen Nisley and Robert Fulton Baker and to their parents before them, for providing their children with a love of nature, a love of words and books, and the love of God and family.
ACKNOWLEDGMENTS

I would like to acknowledge some of the many people who have made this dissertation possible. Three faculty stand out as deserving of special thanks. First, Dr. Nancy Betz who supported my interest in studying psychology beginning in 1978, continued her support throughout my program, and concluded with decisive assistance on my dissertation. Her own research about women has inspired and reassured me. Dr. Bruce Walsh deserves special note also for his keen enthusiasm of my research interests and for invaluable assistance in research design and publication. Dr. Richard Russell is in a class by himself as adviser extraordinaire. A good adviser is a combination of coach, counselor, and teacher and he played all roles expertly, with grace and good humor. His steady support through the dissertation kept me on track and moving through the process efficiently and effectively.

Within the Counseling Psychology program I found unfailing support and guidance: Dr. Don Dell, Dr. Pam Highlen, Dr. Fred Leong, Dr. Sam Osipow, and Dr. Lyle Schmidt, welcomed me into their offices, listening, advising and encouraging. Special thanks also goes to Sandra Daly and Linda Hixon whose competence and willingness to help students often makes the difference between
sinking and swimming through the program. In addition, Linda also deserves appreciation for the final typing of this document as well as frequent words of encouragement.

I also want to thank the students with whom I began the program who continue to be supporters and friends. Fred Ruhlen and a number of assistants in Baker Systems computer lab were very helpful in designing programs. Dr. Nygren helped in the final analysis of the data.

Midwest Career Development Service provided outstanding resources in the form of a talented staff, assistance in data collection and interpretation, and continued emotional support and encouragement. Thanks also to the consulting psychologists who wrote letters of reference and cheered me along the way. Jan Kiecolt-Glaser not only encouraged me to pursue the degree but periodically fed me lunch at the Faculty Club to keep me going.

Last, but not least, are my family and friends. Mary Irene Moffitt and my sister Beth Baker helped by proofreading and editing. My circle of friends constantly assured me that I was on the right track and that they would still be there when I was finished. It would have been almost impossible to do this without the support of my husband, Ted, who provided emotional and financial support, love and laughter and took up the slack left by my hours away or at the computer. My daughters Liz and Christiana provided regular doses of reality, love, tears and laughter. Thank you all.
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Assisting people in making vocational choices across the life span is a significant aspect of the field of counseling psychology. In earlier time periods, sons followed in their father’s footsteps and daughters in their mother’s; people did not "choose" their vocations. With compulsory education, a more mobile society, and fewer discriminatory practices, new occupational worlds have opened to each succeeding generation. In the rapidly changing economy of the late 20th century, an individual can expect to have more than one occupation in a lifetime and numerous jobs within each occupation. Understanding what constitutes a comfortable vocational fit could become even more important in the future than it is at present.

At the beginning of the 20th century, Frank Parsons began what was to become the first career counseling service. His approach is still the basis of much of current career counseling. He advocated the following process: "(1) a clear understanding of (oneself), (one’s) aptitudes, abilities, interests, ambitions, resources, limitations and their causes; (2) a knowledge of the requirements and conditions of success, advantages and disadvantages, compensation, opportunities, and prospects in
different lines of work; (3) true reasoning on the relations of these two groups of facts" (Parsons, 1909, p. 5). At about the same time that Parsons was working to assist adolescent boys in his vocational guidance center, psychologists were developing ways of measuring individual differences in human processes and behavior. Galton began the use of quantitative methods followed by Cattel and Binet (Hothersall, 1990). These early psychologists focused on physiological and intellectual differences. Realizing the need for aptitude and abilities measures during World War I, the armed services contributed to the research and development of occupational tests. With the increased use of testing, psychologists began to understand the limits of ability measures and became interested in issues of vocational preference. In the 1920’s, E. K. Strong, a military psychologist working at Stanford University, began collecting data on the interests of people working in various occupations. The idea behind the interest testing was two-fold—to assist people in making vocational and educational choices and to describe the interests of people in each occupation.

In contrast to the psychologists concerned with individual differences, others began to focus on the impact of the environment on the individual. Kurt Lewin (1935) suggested that human behavior is the function of the person and the environment (cited in Walsh, Craik & Price, 1992). This idea is at the heart of what is now called person-environment psychology. Murray (1938) further elaborated on this theory by suggesting that an individual’s behavior is a function of the individual needs in interaction with the psychological "press" of the environment (Walsh, Craik
Person-environment psychology in effect adds an "interaction" term to the matching model first described by Parsons.

A contemporary approach to vocational choice includes an understanding of the personality of the individual, the requirements of the environment, and the person-environment interaction. Perhaps this interactional component of the person-environment model is what Parsons had in mind when he recommended using "true reasoning" to understand the relationship between the individual and the occupation.

One of the most well articulated and useful theories in relation to the vocational person-environment psychology is that of John Holland (Holland, 1992). In keeping with the person-environment fit approach, his theory assumes that there are individual differences in personality and interests that can be matched with compatible environments. According to the theory, congruence leads to greater satisfaction and comfort on the part of the individual while incongruent choices lead to dissatisfaction and discomfort (Holland, 1992).

Vocational congruence is thus associated with job satisfaction and understood to affect persistence and fulfillment within an occupation. Industrial/organizational psychologists have been concerned with the effect of vocational satisfaction on job performance and retention, whereas counseling psychologists have been concerned with the effects of vocational satisfaction on the health and happiness of the individual and the family.

The current investigation was designed to further our understanding of vocational choice and its consequences in a sample of women clergy. While the
vocational adjustment of all working adults is a concern to vocational psychologists, members of the clergy may warrant special attention. As spiritual leaders, counselors, and role models their work affects many people often at a deeply personal level. If they are vocationally ill-suited to ministry or psychologically unstable, the impact is felt far beyond themselves. Impaired professionals such as those in the helping professions of medicine, psychology, and the ministry can do psychological and physical damage to the recipients of their services.

A complicating factor in the vocational decision-making of clergy is the sense of call. Clergy are expected to feel called by God to the work of ministry. This sense of a calling can override consideration of interests and personality that are assumed to guide most persons in their quest for a congruent occupation. Without adequate guidance and discernment, clergy candidates can pursue vocational roles for which they are ill-suited and unprepared.

Assessing clergy for vocational congruence and psychological adjustment is a concern for church authorities, and they often turn to psychologists for assistance in this task. A better understanding of the relationship between vocational congruence and psychological adjustment could aid in the assessment of clergy and seminary students, as well as add to the research in the area of congruence and psychological adjustment in a homogeneous employed adult sample.

This study is an attempt to contribute to our knowledge of vocational congruence and psychological adjustment. As counseling psychologists, it is important that we understand vocational adjustment and its relationship to overall life satisfaction
and mental health. Understanding the vocational and psychological issues of clergy
and other people in sensitive occupational groups is especially significant. Given the
relatively recent entrance of women into the role of ordained clergy, it is also hoped
that this investigation will aid in our understanding of women within the vocation of
ministry. Specific statements regarding the purpose and design of the study are
included at the end of the literature review.
Person-environment theory represents one of the central organizing models for contemporary career development theorists (Hackett & Lent, 1992). When E. K. Strong (1927) developed the original interest inventory it was based on having persons provide information which compared their responses to those of people actually working in and satisfied with a particular occupation (Harmon, Hansen, Borgen & Hammer, 1994). This matching of persons and vocational environments is based on the theory that compatible person-environment fit will lead to greater satisfaction for both the worker and the employer.

Holland’s (1992) theory includes definitions of personalities and work environments to assist individuals in choosing appropriate vocations. The theory suggests that there are six basic occupational themes and six corresponding personality types.

Holland theorizes that persons within each of these six vocational environments share much in common with each other and are likely to be more similar in interests and preferences than those working in different environments. One of his background
principles is, "Members of a vocation have similar personalities and similar histories of personal development. If a person enters a given vocation because of a particular personality and history, it follows that each vocation attracts and retains people with similar personalities" (Holland, 1992, p. 10). Individuals working in the same vocation will be interested in similar activities and goals. The various environments require particular approaches and provide different rewards.

The six themes and the personality types with which they are congruent are as follows. The Realistic theme is characterized by work with real objects, for example, using tools and machinery to manipulate materials or nature. Those with Realistic personalities enjoy working with their hands, tend to be concrete in their approach to life, and want limited interaction with people. The Investigative theme is characterized by work with ideas and information often using research, mathematics, and the scientific method to learn more about the world. Those with Investigative personalities tend to see themselves as rational, complex, independent, and reserved. The Artistic theme is characterized by work with words, music, or materials to create works of art or other forms of individual expression. Those with artistic personalities often describe themselves as nonconforming, sensitive, imaginative, and impractical. The Social theme is characterized by work with people in order to help, teach, or heal. Social personality types typically are friendly, empathetic, understanding, and helpful. The Enterprising theme is characterized by working with people to lead, sell, or persuade. Enterprising individuals tend to see themselves as ambitious, domineering, energetic, and acquisitive. The Conventional theme emphasizes working
with data within a structured format in order to provide numerical and clerical services and information. Those with Conventional personalities describe themselves as careful, conforming, efficient, and orderly (Holland, 1992).

**Congruence**

When a person’s interests and personality are well matched to the vocational tasks and expectations, there is said to be congruence between the person and the environment. The highest level of congruence is found when an individual is working in an environment which is the same as the personality type. Congruence is hypothesized to lead to greater satisfaction and a more comfortable vocational fit, while incongruence results in dissatisfaction and a poor occupational match (Holland, 1992). Personalities have been defined by a variety of instruments, especially the Vocational Preference Inventory (VPI, Holland, 1985), the Self-Directed Search (Holland, 1973), and the Strong Interest Inventory (Hansen & Campbell, 1985). Environments and occupations have been classified using instruments such as the Occupations Finder (Holland, 1985) and the Strong Interest Inventory (Hansen & Campbell, 1985). The Strong Interest Inventory not only measures an individual’s General Occupational theme as described by Holland, it also measures an individual’s similarity to people in various occupations, providing a measure of occupation specific person-environment fit.

**Congruence, Satisfaction, and Achievement**

Person-environment theory predicts that those who are in work environments which are congruent with their interests are going to be more satisfied with their work.
that those who are not. This appears to be the case. Research indicates there is a positive relationship between congruence and job satisfaction, although studies are inconsistent and critiques of this congruence-satisfaction connection exist.

In a study of 362 employees from five environmental typologies (Realistic, Investigative, Social, Enterprising, and Conventional) Mount and Muchinsky (1978) found that congruent employees were significantly more satisfied with their jobs than incongruent employees. Congruence was determined by pairing the individual's Self-Directed Search scores with his or her current employment. The environments were coded according to the Occupations Finder (Holland, 1973). Congruence was defined as a match between the one-letter occupational code and the person's first letter of the SDS summary code. Any pair whose occupation code letter did not match its primary SDS was considered incongruent. Job satisfaction was measured by the Job Descriptive Index (JDI; Smith, Kendall, & Hulin, 1969). By choosing from a list of adjectives and phrases, the individual indicates the level of satisfaction in five areas of the job: the work itself, pay, chance for advancement, supervision, and co-workers. Using analysis of variance, results indicated that congruent employees were significantly more satisfied with measures of work, pay, promotions, supervision, and co-workers, as well as overall satisfaction than were those in incongruent pairings.

There were significant Environment X Congruence interactions, indicating differences in the effect of person-environment congruence for different typologies. In particular, no relationship was found between congruence and job satisfaction in the Social type employees. The authors hypothesize that the occupations studied (extension home
economists and professional nurses) may provide sufficient variety to accommodate incongruent types (Mount & Muchinsky, 1978).

In a young adult sample, Swaney and Predigor (1985) found a relationship between congruence and satisfaction when they screened for interest clarity, career salience, and value placed on interesting work. Using sample data from a 6-year longitudinal study, answers from 1688 employed young adults were analyzed to determine the congruence-satisfaction relationship. The sample was 72% Caucasian and 56% female at the time of the second survey. In the first survey, part of a national norming study, students completed the Vocational Interest Profile Alternate Form (VIP-A) which yielded scores corresponding to Holland's (1973) six types. Job satisfaction was measured by assessing the person's current job on the item "chance to do interesting work." The options were: "Good," "Fair," or "Poor." Persons answering "Good" (49%) were categorized as "Satisfied" and those responding "Fair" (33%) or "Poor" (18%) were classified as "Unsatisfied." Congruence was derived from a method devised by Prediger which plots interests and occupations on the Holland hexagon and expresses the difference between the two points as degree of congruence. Individuals classified as "Satisfied" displayed more congruence than those who were "Unsatisfied." When a subsample was studied who met the three screening criteria (interest clarity, career salience, and value placed on interesting work), the congruence-satisfaction relationship was more pronounced. The authors conclude, "This outcome reaffirms the importance of interests as a psychological
construct and as a factor in vocational choice" (Kuder, 1977; Strong, 1943; Swaney and Prediger, 1985, p. 22).

Gottfredson and Holland (1990) found that congruence was a moderately efficient predictor of satisfaction when between-occupation sources of variance were excluded. The authors indicate that "job incumbents must differ in their degree of congruence in order for one to test the congruence hypothesis. This need requires individual differences among workers who are employed in similar jobs" (p. 390). To meet this requirement, bank tellers in similar positions were studied over a four-month interval. The first assessment was during a two-week training period and vocational outcomes were collected months later. Congruence was measured using the Vocational Preference Inventory (VPI; Holland, 1985a). The three highest letters were used as the person measure. The environment was defined as the occupational configuration for the position of bank teller (CES; Gottfredson & Holland, 1989). A congruence index was derived using the procedure devised by Iachan (1984) and the traditional congruence measure using the proximity of each person's highest VPI score to the bank teller occupation score.

Meir and Navon (1992) also found support for the congruence-satisfaction correlation in a study of 95 bank employees. As in the study by Gottfredson and Holland (1990), a homogeneous sample of employed persons was studied in a longitudinal design. In this study the tellers were distinguished by their type of bank, either "enterprising" or "social" branches. The sample was drawn from a large bank in Israel. There was a positive correlation between congruence and satisfaction, but
only when the bank-type was used in the congruence formula (Meir and Navon, 1992). Personality type was measured using a Hebrew version of the Self-Directed Search (SDI) (Holland, 1973). Meir and Yaar's (1988) Satisfaction Inventory was used to determine level of satisfaction four to six months after initial employment, and a supervisor's evaluation also was included in the measures. The predicted congruence-satisfaction relationship was found for level of congruence and for supervisor's evaluations. No relationship was found for persistence in the job.

In another study of employed adults, it was found that prediction of job satisfaction from congruence was much stronger for older than younger men (Carson & Mowsesian, 1993). Using archival data on University of Maryland subjects, the authors sent questionnaires to persons one to six years following initial testing. The three top general occupational themes from the Strong (Hansen & Campbell, 1985) were used for vocational personality type identification. Job satisfaction was measured at follow-up using a revised version of the Hoppock (1935) four-item Job Satisfaction Scale (JSS-R, McNichols, Stahl, & Manley, 1978). While general support for the congruence satisfaction relationship was found, differentiation, consistency, and vocational identity did not emerge as moderators of the strength of the relationship (Carson & Mowsesian, 1993).

Unlike the congruence-satisfaction relationship, the correlation between congruence and achievement has not been empirically demonstrated. Schwartz (1991) reviewed studies which tested this relationship and concluded that congruence is probably not a meaningful predictor of achievement. As indicated in several studies
above (Gottfredson & Holland, 1990; Meir & Navon, 1992) persistence has not been demonstrated to be associated with congruence. Assouline and Meir (1987) in their meta-analysis found nonsignificant correlations between congruence and stability and congruence and achievement. The research appears to indicate that there are mediating or moderating variables in the congruence achievement and persistence relationship. The congruence-satisfaction relationship in line with person-environment theory appears to be more direct and in a positive direction.

In a recent development in person-environment congruence research, Muchinsky and Monahan (1987) proposed a model which distinguishes supplementary and complementary congruence. Supplementary congruence is the match between an individual and others within the environmental setting. Complementary congruence is a match between the abilities or characteristics of the individual and the needs of the environment.

Using this supplementary-complementary distinction, personality similarity and work-related outcomes were studied by Day and Bedeian (1995). They investigated the supplementary model of person-environment congruence by looking at the effects of personality similarity on job satisfaction, performance, and organizational tenure among African-American nursing personnel. According to the supplementary model, people seek to be in environments because they see themselves as similar to others in the environment. Their results indicated similarity in person characteristics enhanced job performance and organization tenure. A relationship between personality similarity and job satisfaction was not demonstrated (Day & Bedeian, 1995).
Congruence and Psychological Adjustment

What are the psychological effects of studying or working in an incongruent environment? A number of studies have looked at congruence and psychological adjustment in working adults and college students. The college study research on congruence and psychological factors has not shown a positive relationship between these two variables in the majority of studies (Walsh & Barrow, 1971; Walsh & Osipow, 1973; Walsh, Spokane, & Mitchell, 1976; Tierney, 1990; White, 1993).

Three studies found confirmation for Holland’s theory of person-environment congruence. In Walsh and Russel (1969), Walsh and Lewis (1972), and Walsh (1974) the congruent person-environment pairings were associated with better personal adjustment than were the incongruent pairings. Reasons for these inconsistent results are likely a result of differences in methodology. Gati has written about the problems of person-environment research (Gati, 1989) and Spokane (1985) raised questions about using both expressed interests (person measure) and expressed choice (environment measure) to determine congruence. He suggests that these two measures could be indicative of an individual’s psychological congruence, not the congruence of person-environment pairing (Spokane, 1985).

The studies of working adults, while fewer in number, have had more consistent results. There has been a positive relationship found between congruence and personal adjustment. In 1977, Klein and Wiener reported job congruency demonstrated significant moderator effects for the mental health indices of self-esteem, life-satisfaction, and overall mental health. The sample of 54 middle managers was
given the Strong Vocational Interests Blank (SVIB). Interest-present job congruency was defined using the standard score from the Strong which was judged closest to the subject's job. Mental health was measured using affect and symptom self-report scales (Caplan, Cobb, French, Van Harrison, & Pinneau, 1975). Job tenure and job satisfaction (JDI, Smith, Kendall, & Hulin, 1969) were also measured. Better states of mental health were associated with longer job tenure for high congruency managers. For low congruency workers the relationship was negative but not significant.

Furham and Schaeffer (1984) compared 82 adults on their level of congruence and psychophysical symptoms. Congruence was defined as compatibility between employment and Self-Directed Search scores. The researchers used a three-letter code and the Wiggins and Moody Index (Wiggins & Moody, 1981) to derive a continuous congruence score. All six types on the Holland themes were represented in the sample. The measure of psychological adjustment was the Langner 22 Index of Mental Health (Langner, 1962). Results indicated a significant negative correlation between psychophysical symptoms and congruence. Those who were in more congruent environments indicated fewer signs of psychopathology.

Meir (1989) proposed the following "mapping sentence: congruence→well-being," indicating that variables associated with congruence correlate with variables belonging to well-being (p. 153). Congruence is defined broadly as including vocational congruence, environmental congruence, congruence in one's avocational preferences and between one's religious beliefs and the dominant culture. The idea of
the mapping sentence is "that one should conceive the congruence aspects or variables
and the well-being measures or variables in any given study as the chosen sample out
of the respective general concepts."

Meir and Melamed (1986) found congruence was associated with fewer
personal complaints in their sample of 74 Israeli primary teachers. Vocational,
avocational, and skill utilization congruences were studied. Those in congruent
environments reported fewer bodily ailments than those in an incongruent
environment. No differences were found between the congruent and incongruent
pairings on anxiety. Congruence was operationalized by the Self-Directed Search, a
list of avocational interests, and a utilization of skills measure (Caplan et al., 1975).
Four inventories measured the dependent variables: a two-item occupational
satisfaction measure; a work satisfaction facet from the Job Description Index (Smith,
Kendall, & Hulin, 1969); a 10-item somatic complaints measure (Caplan et al., 1975),
and the anxiety scale of the State-Trait Anxiety Inventory (STAI; Spielberger,
Gorsuch, and Lushene, 1970). Vocational congruence and somatic complaints were
negatively correlated (-0.28, p < .05).

A similar study was conducted by Meir, Melamed, and Abu-Freda (1990) with
a different ethnic group (Bedouins) with similar results regarding the positive
relationship between congruence and well-being measures. In both studies types of
congruence were found to be unrelated to each other, but commutative in their
positive effect on a measure of well-being. Well-being was found to increase as a
function of the number of congruence factors indicated by each subject. Of particular
interest is the compensatory behavior reported in the first study. For the teachers with incongruent vocational choices and/or skill utilization, congruent avocational choice was found to be a way to compensate for the incongruency in other areas (Meir, Melamed, & Abu-Freda, 1990).

Furham and Walsh (1991) studied 46 psychiatric nurses and found congruence was negatively correlated with frustration ($r = -0.49, p < .01$). Frustration was measured using the Job Frustration Questionnaire (Spector, 1975). Congruence was measured using the Self-Directed Search (Holland, 1973) and the Wiggins and Moody (1981) method.

**Vocational Adjustment and Clergy**

The psychological adjustment, personalities, and vocational development of clergy and seminary students have been studied over the years. In 1967, Ashbrook and Powell compared graduating and non-graduating theology students on the MMPI. They found no significant between-group differences (Ashbrook & Powell, 1967). Nauss (1973) reported the composite MMPI profiles of ministers, and this study was repeated by Patrick (1991). Patrick (1991) found that the profile had not changed substantially from the earlier study, with scales K,3 (Hy), 4(Pd), and 9(Ma) being highest for his sample of 67 male and female Protestant pastoral candidates.

Gilbride (1973) compared priests who voluntarily resigned from the ministry with those who did not using Holland's Vocational Preference Inventory (VPI) and found no differences based on personality variables or person-environment interaction. Multivariate analysis of variance revealed similar VPI profiles for both the active and
resigned priests (Gilbride, 1973). These findings are consistent with the literature on congruence and persistence cited above.

Lee (1975) studied seminarians who persisted in seminary training and those who did not and found a difference in their interests in specific ministry tasks as measured by the Religious Activities and Interests Inventory (IRAI; Webb, 1968): In another study, personality characteristics of Catholic clergy were examined (Kennedy, Heckler, Kibler, & Walker, 1977). Using psychological test data, including the MMPI, clergy were classified according to their psychological adjustment. Eight percent were classified as maladaptive, 57% as under-developed, 29% as developing, and 6% as developed.

To explore the differences between men and women clergy candidates, Sullender (1993) evaluated the MMPI profiles of 200 candidates for ministry in two Protestant denominations. He found the average MMPI profiles to be normal, but there were a number of significant differences between the male and female participants. On the ten clinical scales, the difference in the Pt (Psychasthenia) scale which measures worry and anxiety was most significant, with the men having higher mean scores than the women (57.0 and 50.9, \( p > .001 \)). The men had statistically higher elevations on 6 of the 13 scales (three validity and ten clinical scales). Consistent with other studies of clergy men, the mean score on the Mf scale was 69.0, higher than for men in the general population. In a second analysis of clergy candidates of different ages (over 35 years old and under 35), only one scale reached
significance. Candidates under 35 years old were somewhat higher (means 55.4 and
52.6, p > 0.05) on the Pt scale than were the over 35 years old (Sullender, 1993).

Congruence and Psychological Adjustment in Clergy

While there has been research involving the psychological well-being of clergy
and studies of psychological adjustment and congruence in working adults, there have
been only two studies that have examined congruence and psychological adjustment in
the important population of working clergy and those aspiring to religious vocations.

Celmer and Winer (1990) investigated the relationship between psychological
adjustment, job satisfaction, and congruence in a clergy sample. They also compared
women who aspired to the priesthood but were barred from it by their denomination
and male parish and nonparish priests. The study was done by mail using a survey
method. The Vocational Preference Inventory was used to measure vocational
interests and the MMPI to measure psychological adjustment. Their findings indicated
that the women scored in the psychologically more well-adjusted direction than the
priests on three scales: the 1(Hs), 2(D), and 3(Hy). The authors concluded that these
findings do not provide support for Holland’s theory. However, when looking at the
women’s alternate occupations, it appears that they are working in other congruent
occupations which may provide the opportunity to meet basic interests and sustain a
sense of well-being. Adding to support for the Holland theory was the fact that the
women’s job satisfaction score was lower than the male priests (Celmer & Winer,
1990).
Celeste, Walsh, and Raote (1995) investigated the psychological adjustment of 1276 male protestant clergy. The study explored the self-reported psychological adjustment for congruent, incongruent, and moderately congruent ministers. Psychological adjustment was operationally defined by the clinical and validity scales of the MMPI. The concept of congruence was defined using the Strong Interest Inventory Minister Scale. All participants were employed in a church-related position at the time of the assessment. The multivariate analysis of variance revealed a significant finding for the main effect of groups on the MMPI scales. In general, the results indicated that the three minister groups tend to vary in psychological adjustment. Follow-up tests revealed that the congruent ministers tend to be psychologically healthier and more comfortable than the incongruent minister group.

Congruence and Psychological Adjustment in Women Clergy

Rayburn, Richmond, and Rogers (1986) have studied stress and depression in religious women professionals, seminary students, nuns, and women clergy. The 1986 investigation included 250 religious leaders—50 Roman Catholic priests, 50 brothers, 50 nuns, 50 ministers (25 male and 25 female) and 50 seminarians (25 male and 25 female)—who responded to self-report measures including a devised Religion and Stress Questionnaire and the Occupational Environment Scales, Personal Strain Questionnaire, and Personal Resources Questionnaire by Osipow and Spokane (1981, 1983). In addition to the written measures 10% of the participants were interviewed. Compared to the general population norms, the religious leaders as a group evidenced lower overall occupational stress and strain and reported higher levels of personal
resources. However, the ministers as a group (male and female) had the highest occupational environmental stress and vocational strain. Seminarians had the second highest rates of stress. In addition, the ministers rated their personal resources as lower than most of the other religious leaders. Comparing the men and women, men scored significantly higher on Role Overload \( (t = -2.68, p < .01) \) and Role Ambiguity \( (t = -3.3, p < .01) \) than the women. Men reported having less clarity about what was expected and how to spend their time than did the women religious professionals and seminary students.

As indicated above, Celmer and Winer (1990) studied female aspirants to the Roman Catholic priesthood. Patrick (1991) investigated personality characteristics of female pastoral candidates. Beyond these studies, little empirical work has been done with regard to the psychological and vocational adjustment of practicing women clergy.

The Current Study

Purpose

The purpose of the present study was to investigate the relationship between occupational congruence and psychological adjustment in a sample of professional women clergy \((N=227)\).

A relationship between congruence and psychological adjustment was found in a similar sample of clergy men (Celeste, Walsh, & Raote, 1995). In the earlier study, the incongruent and midrange clergy groups exhibited more psychological discomfort than did a group of congruent clergy, as indicated by significantly different T-score
means on eight MMPI scales. From the literature regarding men and women clergy and vocational congruence research, it was hypothesized that psychological adjustment also would differ in women clergy based on their congruence with ministry. To test this hypothesis and the generalizability of these findings to both women and men, a study similar to the investigation of male clergy was conducted on an equivalent group of women clergy.

**Hypothesis**

It was hypothesized that there would be significant differences in the T-score means for the congruent and incongruent minister groups on the three validity (L, F, K) and ten clinical scales (Hs, D, Hy, Pd, Mf, Pa, Pt, Sc, Ma, Si) of the MMPI.

**Overview of Analysis**

For the purposes of the study, congruence was operationally defined as the score on the Minister (female) Occupational Scale of the Strong Interest Inventory. All clergy women were employed as ministers at the time of the evaluation. The environment was their stated profession of ministry which is defined as a Social Artistic environment (SA) by the Strong Interest Inventory. Psychological adjustment was operationally defined as the standard K-corrected scores on the three validity scales (L, F, K) and the 10 clinical scales (Hs, D, Hy, Pd, Mf, Pa, Pt, Sc, Ma, Si) of the MMPI.

The hypothesis was tested using a one-way multivariate analysis of variance (MANOVA). The MANOVA was significant and was followed by univariate analyses for main effect by group.
The data was analyzed by dividing the 227 clergy women into groups determined by their scores on the Strong Female Minister Scale. The main analysis was followed by two additional analyses of the data. In each analysis congruence and incongruence were defined using slightly different cut-off scores. In Analysis 1 and Analysis 2, the sample of 227 was divided into three groups: congruent, midrange, and incongruent. In Analysis 3, the sample was divided into two groups. A detailed description of the divisions is provided below in the Design and Procedure section.
CHAPTER 3

METHODS

Participants

Participants in this investigation were clergy women who attended a career development counseling and assessment program at a denominationally sponsored career center in the United States between the years 1977-1989 (N=227). Participants were referred to the center for counseling for one of the following reasons: an assessment of their suitability for ministry as required by their denomination; personal and career counseling assistance (self-referred or denomination-referred). The women in the sample were ordained clergy in Protestant denominations and were professionally employed in ministry at the time of their testing.

Measures

Strong Interest Inventory (SII)

The SII is a widely used measure of vocational interest. The Strong defines six occupational environments as described by Holland and measures an individual’s interests in these six general occupational themes (GOT’s). In addition, the Strong measures an individual’s interest in a number of basic activities within these general
themes. These interests are measured by homogeneous content items called the Basic Interest Scales (BIS’s).

The third measure is an occupational interest scale. The Occupational Scales (Os’s) compare an individual’s responses with those of people employed in over 100 occupations. The Occupational Scales were the scales first developed by E. K. Strong when he created the Strong Vocational Interest Blank in 1927. The Occupational Interest Scales were derived by empirically assessing individuals working in the occupation and comparing their scores to the responses of the general population. Those items which distinguish the occupational group from the general population norm are included in the Occupational Scale. From these occupational interest scales a person can determine how similar her/his interest pattern is compared to those in various occupations. The results of the scales answer the question, "Does the respondent have likes and dislikes similar to men or women in this occupation?" (Harmon, Hansen, Borgen, & Hammer, 1994, p. 105).

The Strong Occupational Interest scores are used to suggest who is likely to find satisfaction within an occupation by comparing an individual’s interest pattern with that of the occupational norm group. Since all participants in the study were employed as ministers at the time of testing, the Occupational Scale score for Minister was used in this investigation as the measure of congruence.

Because empirically men’s and women’s occupational interests differ, there are two distinct scales for the majority of occupational scales. The Minister scale is made up of two scales, a male and a female scale. Individuals are given two scores on the
Occupational Scale—one compares their interests to female ministers and the other to male ministers. The higher the score, the more items have been endorsed in a manner consistent with the sample of employed ministers used to create the minister scale. Because the participants were all women, and the same gender scale is the preferred scale for interpretation, the Minister (female) scale score was used for analysis.

The occupational environment as operationalized by the Strong is derived from the General Occupational Themes score of the occupational norm group in question. The Occupational Theme most preferred by ministers was the Social theme followed to a lesser degree by an interest in the Artistic theme. Fifty-eight percent of the female ministers and fifty-four percent of the males scored highest on the Social theme (Harmon et al., 1994). The minister’s preferred working environment is a Social-Artistic environment according to the ministers who made up the norm group (Hansen & Campbell, 1985). Gilbride also found the Social and Artistic environments as the preferred Holland themes for his sample of Roman Catholic priests (Gilbride, 1973).

**Reliability and validity.** Test-retest reliability was reported by Hansen & Campbell (1985) as 0.87 for a three-year period and 0.92 for a two-week period. Swanson and Hansen (1988) investigated test-retest reliability over a 12-year period using the 1985 Strong. The results indicated the median correlation overall was 0.72 for the male and female Occupational Scales for the 242 females studied. The correlation for males was 0.73. While the range of correlations was great for both females and males, -0.04 to 0.96 and 0.11 to 0.96 respectively, the fact that the
median correlations were in the 0.72-0.73 range after 12 years, is evidence of reliability over time in the Strong.

The test-retest reliability of the Minister Occupational Scale also is high. The two-week test-retest correlation for females and males was 0.94. The thirty-day statistics dropped to 0.89. The three-year test-retest reliability remained high and for both females and males was reported as 0.86 (Hansen & Campbell, 1985).

Predictive validity for the Strong has been evaluated by its ability to predict future occupational choice for students who took the inventory during school and were sent questionnaires at a later date (e.g., Strong, 1955; McArthur, 1954; Brandt & Hood, 1968; Hansen & Swanson, 1983). Evidence of good predictive validity has generally been reported for college men and women (Walsh & Betz, 1990). The "hit" rate for effective prediction of later occupational choice from the Strong is about 65% (Harmon et al., 1994).

Studies of concurrent validity include Betz and Taylor (1982) who found that 89% of their sample of counseling psychology graduate students scored "similar" or above on the Psychologist scale. In 1992, Hansen and Tan replicated Hansen and Swanson's (1983) study finding concurrent validity for the Strong scores and current college major selection (Hansen & Tan, 1992).

Scoring. Scoring on the Occupational Scales is standardized and based on a score of 50 being average for people within the occupation. A score of 50 by the respondent indicates that she scored in the "similar" range compared to the female minister norm. A score of 40 and above indicates the respondent is moderately
similar in interest pattern. A score of 55 or higher places the respondent in the "very similar" range. Scores below 39 indicate the person is not similar to the occupation of ministry (female). The 28-39 range is considered midrange and scores below 28 indicate that the person is "dissimilar" to those in ministry. Those respondents who score in the dissimilar range are answering items in an opposite direction compared to other female ministers. These respondents are indicating that they have less in common with the minister norm than do persons in the general population who would be expected to score in the 28-39 range.

The Minnesota Multiphasic Personality Inventory (MMPI)

The MMPI was developed by Hathaway and McKinley in 1943 and is a widely used instrument to assess the degree and nature of psychological difficulties. It is a self-report measure designed to assess personality characteristics and current emotional states. The many studies published using the MMPI are indicative of its usefulness in clinical and research applications (Buros, 1978; Mitchell, 1985; Kramer & Conoley, 1992). Walsh and Betz indicate that the MMPI "is the most useful psychological test available in clinical and counseling settings for assessing the degree and nature of emotional upset. It is cited more than any other instrument in print" (Walsh & Betz, 1990, p. 117).

The MMPI contains 566 statements covering a wide range of subjects including somatic complaints, social attitudes, personal relationships, and mood states. Many questions are obvious but others, which have been found to discriminate between persons of various mood states, are not. The large number of items and the wide-
range of item content (e.g., psychiatric symptoms, bodily functioning, educational problems, and morals) make it a comprehensive instrument. Originally designed as a diagnostic tool, the scales were named for psychiatric labels of the time: Hypochondriasis, Depression, Hystery, Psychopathic-deviate, Paranoia, Psychasthenia, Schizophrenia, and Hypomania. Validity scales, the Masculinity/Femininity scale, and a Social Introversion scale were added later. The three validity scales (Lie, Infrequency, and K-Correction scales) and the ten clinical scales are the most common scales scored although many other research scales have been developed over the years.

The development of the MMPI was based upon empirical criterion keying. Items were chosen which discriminated between the general population and various clinical populations. Interpretations of the scores are done in a number of ways, including looking at the overall profile and describing behavior associated with individual scale elevations. Questions are answered as "true," "false," or "cannot say." The validity indicators are used to identify people who may not be answering the questions in a proper manner, for example, are malingering or defensive in their approach to the test. The test is appropriate for those 16 or older with at least a sixth grade education. Age, gender, and ethnic differences have been found and, along with social history, are taken into account in test interpretation.

Reliability and validity. Evidence indicates that the MMPI scales have reasonable stability over time. Hathaway and McKinley (1967) reported test-retest reliability coefficients ranging from 0.57 to 0.83. Cottle (1950) re-tested "normals"
within a one-week interval and reported test-retest coefficients ranging from 0.46 to 0.91. Studies with psychiatric populations had similar levels of reliability. In a meta-analysis (1970-1981; N = >5000) of test-retest reliability studies ranging from one day to two years, the reliability was found to be in a range between .71 for the 9 (Ma) scale to a high of .84 for the 7 (Pt) scale (Hunsley, Hanson, & Parker, 1988). The authors’ conclusion following the analysis was that all MMPI scales were quite reliable.

The MMPI scales are not independent of one another and item content overlaps various scales. Intercorrelations between scales is not unusual. Scale 7 (Psychasthenia) and scale 8 (Schizophrenia) have an especially high correlation coefficient ranging from 0.64 to 0.89 depending on the sample (Butcher, Graham, Williams, & Ben-Porath, 1989).

The validity of the MMPI to measure current emotional states is indicated by the fact that following the stabilization of a crisis for psychiatric patients, tests scores are lowered in the less troubled direction. Bergin (1971) reported that successful treatment lowers scores on the MMPI Depression scale. Walsh and Betz (1990) reported that the findings of over 5000 studies using the MMPI indicate that a high score will predict a diagnosis in more than 60% of new psychiatric admissions.

**MMPI Scales Descriptions**

**Validity Scales**

Lie (L). This scale is measuring the degree to which a person is trying to look good in an obvious way.
Frequency or Confusion Scale (F). This scale is measuring the degree to which a person's thoughts are different from those of the general population.

Correction Scale (K). This scale measures defensiveness and guardedness.

Clinical Scales

Hypochondriasis (Hs) (Scale 1). This scale measures the number of bodily complaints claimed by a person.

Depression (D) (Scale 2). This is a mood scale that measures the degree of pessimism and sadness the person feels at the time of testing.

Conversion Hysteria (Hy) (Scale 3). This measures the degree of denial being used by people to avoid facing personal difficulty and conflict.

Psychopathic Deviate (Pd) (Scale 4). This scale is measuring the degree to which an individual is fighting something (parents, friends, spouse, society, school).

Masculinity-Femininity (MF) (Scale 5). This scale is attempting to measure whether a person is more or less masculine or feminine. A problem here is that these definitions have changed significantly over the past years.

Paranoia (Pa) (Scale 6). This scale is measuring a person's suspiciousness, sensitivity, and self-righteousness.

Psychasthenia (Pt) (Scale 7). This scale measures anxiety and a tendency to worry a great deal.

Schizophrenia (Sc) (Scale 8). This scale measures mental confusion.

Hypomania (Ma) (Scale 9). This scale measures a person's level of psychic energy in terms of thought and behavior.
Social Introversion (Si) (Scale 10). This scale measures a person's preference for being alone or being with others.

**Design and Procedures**

Congruence was set as the independent variable and was measured by the Strong Interest Inventory Occupational Scale score on the female minister scale. Psychological adjustment was the dependent variable. Psychological adjustment was operationally defined by thirteen scores on the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1967); the 3 validity scales—Lie (L), Frequency (F), and Correction (K); and the 10 clinical scales—Hypochondriasis (Hs), Depression (D), Hysteria (Hy), Psychopathic Deviate (Pd), Masculinity-Femininity (MF), Paranoia (Pa), Psychasthenia (Pt), Schizophrenia (Sc), Hypomania (Ma), Social Introversion (Si).

The sample was divided into three groups defined as congruent, midrange, and incongruent based on the Strong Interest Inventory occupational score on the Minister (female) scale. Group 1 (the incongruent groups; n = 22) was defined as those scoring 27 (standard score) or less on the SII Female Minister scale and practicing in a religious work environment (code SA). Scores of 27 and below are described as moderately dissimilar, dissimilar, and very dissimilar to the Minister norm.

Group 2 (n = 44) consisted of those with SII Female Minister (SA) standard scores of 28-39. For this study and according to the Strong definition, they are considered in the midrange and are no more similar to the minister norm than the average person in the general population sample.
Group 3, the congruent group (n = 161) consisted of those who scored a 40 standard score or above on the Female Minister scale (SA). Persons scoring in this range are defined as moderately similar, similar, and very similar to the Female Minister norm by the Strong. For counseling purposes, scores in this range are considered possible career matches for the individual being tested.

These three groups were compared on thirteen scales of the MMPI, three validity scales (L, F, K), and the ten clinical scales: 1 (Hs), 2 (D), 3 (Hy), 4 (Pd), 5 (MF), 6 (Pa), 7 (Pt), 8 (Sc), 9 (Ma), and 10 (Si).

Permission was obtained to use data from a church-sponsored career development service in the midwest. The data has been collected since 1977 by the agency staff and entered in the data bank. The typical counseling format includes pre-program autobiographical materials, psychological and vocational testing, and face-to-face counseling over a two or three day period. Clients are usually seen by both a M.A. level counselor and a psychologist. Clients are administered a test battery either before they arrive or shortly after their arrival at the career development center. An extensive autobiography is completed before arriving at the center, and often the Strong Interest Inventory is sent out ahead of time. The MMPI has typically been given following the first intake interview. Tests are administered and scored by the administrative staff, and demographic and test data recorded by the counselors following the completion of the client's program.
Analysis

The hypothesis was that there would be significant differences in the T-score means for the congruent, incongruent, and midrange minister groups on the clinical and validity scales of the MMPI. The hypothesis was tested using a one-way multivariate analysis of variance (MANOVA). The MANOVA was significant and followed by univariate analysis for each MMPI scale to test for a main effect by group.

Congruence was set as the independent variable and psychological adjustment, as the dependent variable. The dependent variable, psychological adjustment, was measured by the three validity scales and ten clinical scales on the MMPI. The MMPI scale scores are converted into K-corrected T scores. A score of 50 is an approximate norm, although each scale is somewhat different in range and norms. On most scales, the higher the MMPI scale, the more pathological the score. Scale scores of 70 on the MMPI are considered clinically significant and in the potentially pathological range. As individual scale scores rise above 50, the individual is endorsing more items in the distressed or symptomatic direction. Therefore, significant differences in mean scores among the groups of women clergy represent differences in levels of psychological adjustment and distress.
CHAPTER 4

RESULTS

The participants were 227 ordained clergy women working in ministry at the time of testing. The sample came from a wide geographic area. The states most highly represented in the data were Ohio, Illinois, Indiana, Iowa, Kentucky, Michigan, Wisconsin, Kansas, Missouri, Pennsylvania, and West Virginia. The denominations represented in order of size were Presbyterian (29%), American Baptist (21%), United Methodist (9%), Evangelical Lutheran Church in America (9%), United Church of Christ (7%), Episcopal (5%), Disciples of Christ (3%), Church of the Bretheran (2%), and Other (15%).

The participants ranged in age from 26 to 68 years old. Less than 3% of the sample came from countries other than the United States. Participants were primarily Caucasian, with 3% listing themselves as belonging to other ethnic or racial groups.

The participants’ scores on the Strong Interest Inventory scales were consistent with the clergy norms (see Appendix A). The highest occupational theme scores for the clergy women were Social (M = 58.0) and Artistic (M = 57.2). They have the same Holland Theme code (SA) as the original minister norming group. The other
code scores, which fell far below the Social and Artistic ones, were as follows: Investigative (M=48.6), Conventional (M=44.6), Enterprising (M=44.5), and Realistic (M=44.0). The clergy women also scored in the predicted ranges for the female and male Minister scale: Female Minister scale, M=45.5, Male Minister scale, M=47.4. The women scored in the range with other professionals on the Academic Comfort scale (M=53.4). The participants Introversion-Extroversion scale score put them in the extroverted range (M=44.7). The women clergy appear to be interested in helping others and participating in group activities rather than working alone. While they are interested in academic pursuits, they are not drawn to math and science. They are likely to dislike routine maintenance and value creative self-expression. Power and status are unlikely to attract them, although they might enjoy teaching or leading groups. For these women as a group, the work of ministry is likely to be a compatible fit.

**Primary Analysis**

The hypothesis that significant differences would exit between groups on the MMPI scales was tested using multivariate analysis of variance for unequal N’s. The multivariate statistic used Wilk’s criterion using Rao’s approximate F-test (Clyde, 1969). This procedure includes a univariate analysis of each scale. Significant univariate F-tests were examined using a post-hoc Tukey-HSD procedure.

The multivariate test was found to be significant (E = 2.34, p < .01). In the univariate analysis for each scale, the test for the main effect of groups was significant for 9 of the 13 MMPI scales: the F scale, K scale, Hs scale, D scale, Hy scale, MF
scale, Pt scale, Sc scale, and the Si scale. The T-score means, standard deviations, and univariate tests of significance for the 13 MMPI scales by congruent, midrange, and incongruent groups are shown in Table 1.

As noted, Tukey’s HSD procedure was used in the secondary analyses. All combinations of groups were analyzed for each significant scale to identify specific group differences. The results of these analyses are also shown in Table 1. On the MMPI F scale and the Psychasthenia scale Group 1 (incongruent) differed significantly from Group 2 (midrange) and Group 3 (congruent). On the K scale there were significant main effects found in the univariate analysis. However, when using the more conservative Tukey test in the one-way analyses, none of the groups were significantly different from each other at the p < .05 level.

On the Hypochondriasis and Masculinity-Femininity scales, Group 2 (midrange) differed significantly from Group 3 (congruent). On the Depression and Social Introversion scales, Group 1 (incongruent) and Group 2 (midrange) differed significantly from Group 3 (congruent). On the Hysteria and Schizophrenia scales Group 1 (incongruent) differed significantly from Group 3 (congruent).

To account for the problems of unequal sample sizes in the three groups, several factors were considered. First, the conservative Tukey test was chosen to
Table 1

T-Score Means, Standard Deviations, and Univariate F Tests for the MMPI Scales

(Analysis 1)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Group 1 (n = 22)</th>
<th>Group 2 (n = 44)</th>
<th>Group 3 (n = 161)</th>
<th>Univariate F(2,224)</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lie</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>48.3</td>
<td>49.9</td>
<td>48.6</td>
<td>.65</td>
<td>.525</td>
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<tr>
<td>SD</td>
<td>6.2</td>
<td>7.6</td>
<td>6.9</td>
<td></td>
<td></td>
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<tr>
<td>Frequency/Confusion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>56.3a</td>
<td>52.6b</td>
<td>51.6b</td>
<td>6.24</td>
<td>.002</td>
</tr>
<tr>
<td>SD</td>
<td>7.9</td>
<td>6.6</td>
<td>5.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K-Correction</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>56.3</td>
<td>57.5</td>
<td>59.9</td>
<td>3.60</td>
<td>.029</td>
</tr>
<tr>
<td>SD</td>
<td>7.7</td>
<td>7.6</td>
<td>7.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale</td>
<td>Group 1 (n = 22)</td>
<td>Group 2 (n = 44)</td>
<td>Group 3 (n = 161)</td>
<td>Univariate</td>
<td>Significance</td>
</tr>
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<td>---------------------</td>
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</tr>
<tr>
<td></td>
<td>Incongruent</td>
<td>Mid-range</td>
<td>congruent</td>
<td>F(2,224)</td>
<td>of F</td>
</tr>
<tr>
<td>Hypochondriasis</td>
<td>M 54.4&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>53.9&lt;sup&gt;*&lt;/sup&gt;</td>
<td>50.7&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4.54</td>
<td>.012</td>
</tr>
<tr>
<td></td>
<td>SD 10.7</td>
<td>8.00</td>
<td>7.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>M 62.0&lt;sup&gt;*&lt;/sup&gt;</td>
<td>56.8&lt;sup&gt;*&lt;/sup&gt;</td>
<td>51.5&lt;sup&gt;b&lt;/sup&gt;</td>
<td>13.37</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>SD 12.00</td>
<td>13.8</td>
<td>8.4</td>
<td></td>
<td></td>
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<tr>
<td>Conversion Hysteria</td>
<td>M 62.7&lt;sup&gt;*&lt;/sup&gt;</td>
<td>59.2&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>58.3&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.00</td>
<td>.052</td>
</tr>
<tr>
<td></td>
<td>SD 11.9</td>
<td>7.1</td>
<td>7.4</td>
<td></td>
<td></td>
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<tr>
<td>Scale</td>
<td>Group 1</td>
<td>Group 2</td>
<td>Group 3</td>
<td>Univariate</td>
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<td>MMPI = Minnesota Multiphasic Personality Inventory.</td>
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</table>
| Letters designate groups which are significantly different at the 0.050 level using Tukey-HSD procedure.
guard against possible Type I error. The fact that significant differences were found in the data using a very conservative statistical test adds weight to the findings (T. E. Nygren, personal communication, 1995). Also, on the MMPI scales the sample is assumed to follow a normal distribution and according to Keppel (1991), the F test is relatively uninfluenced by "even substantial deviations from normality" (p. 283). In dealing with different sample sizes, heterogeneity of variance can begin to be a problem when the ratio of the largest to the smallest variance \( F_{\text{max}} \) is large (Keppel, 1991). The ratio difference which should be used varies according to researchers. Some suggest a 5-1 ratio while others suggest variance that differs more than a ratio of 3-1 is problematic (Nygren, 1995).

In this data, the group variances differed by more than 3-1 on only two of the scales. On the Pt scale for Group 1 (n=22), variance = 193.21 and for Group 3 (n = 161), variance = 53.14 (Ratio = 3.64-1). On the Sc scale, similar differences in variance between the largest and smallest groups were found. Group 1 variance = 182.08 and for Group 3, variance = 60.51 (Ratio = 3.01-1). In both cases, the variance found in the smallest group is larger than the largest group, as would be expected. On all of the other MMPI scales the group differences in variance is less than 3-1.

**Additional Analyses**

**Analysis 2**

To protect against possible misinterpretation and Type I error due to unequal sample size, an analysis also was done using two other groupings of the data. In the
second analysis, Group 1 (incongruent) remained the same. Group 2 (midrange) included all persons whose scores fell in the midrange or the moderately similar category on the Female Minister scale (scale score 27-44). Group 3 (congruent) consisted of those with scores in the similar and very similar range on the Female Minister scale (scale scores of 45 and above). This grouping resulted in the following numbers in each group. Group 1 (incongruent) n = 22; Group 2 (Midrange and moderately similar) n = 84; Group 3 (congruent) n = 121. The same analyses as described above were carried out on this second grouping of the data.

To assess for between-group differences, a one-way multivariate analysis of variance (MANOVA) was performed. The multivariate test was found to be significant (F = 2.33, p < .01). In the univariate analysis for each scale, the test for the main effect of groups was significant for 9 of the 13 MMPI scales: The F, K, Hs, D, Hy, Pa, Pt, Sc, and Si. (In this analysis, the group effect for the Pa scales was significant, but not the MF scale. In the earlier grouping, the effect by group was significant for the MF scale, but not the Pa scale.) The T-score means, standard deviations, and univariate tests of significance for the 13 MMPI scales by congruent, midrange, and incongruent groups are shown in Table 2. One of the group variances (Pt) differs more than the preferred 3:1 ratio. The results of these analyses are also indicated in Table 2.

Insert Table 2 about here
Table 2
T-Score Means, Standard Deviations, and Univariate F Tests for the MMPI Scales
(Analysis 2)

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<th>Significance of F</th>
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MMPI = Minnesota Multiphasic Personality Inventory.
Letters designate groups which are significantly different at the 0.050 level using Tukey-HSD procedure.
To investigate the significant group differences, a Tukey HSD procedure was again employed. All combinations of groups were analyzed for each significant scale to identify specific group differences.

In spite of a main effect for group which was found to be significant in the univariate analysis for the MMPI K scale and the Hy scale, when using the more conservative Tukey test for the one-way analyses, no two groups were significantly different at the p > .05 level for these two scales, K and Hs. The following scales did not show significant group differences in the one-way analyses. On the MMPI F and Pt scales Group 1 (incongruent) differed significantly from Group 2 (midrange) and Group 3 (congruent). On the D scale, each of the three groups differed significantly from each other. On the Hy and the Sc scales, Group 1 (incongruent) differed significantly from Group 3 (congruent). On the Pa scale, Group 1 (incongruent) differed significantly from Group 2 (midrange). On the Si scale, Group 1 (incongruent) and Group 2 (midrange) differed significantly from Group 3 (congruent).

**Analysis 3**

In an effort to minimize the differences in sample size even further, a third grouping of the data was done. In this analysis, the female ministers were divided into two groups designated as congruent and incongruent. This split was based on the clinical use of the Strong Interest Inventory occupational scale scores. Group 1, the incongruent group, consisted of female ministers whose scores were 39 and below (n = 66). These scores are described by the Strong as midrange, moderately dissimilar,
dissimilar, or very dissimilar. People with occupational scale scores in these ranges would generally not be encouraged to consider the occupation of ministry because they are indicating by their answers on the inventory that their interest pattern is not significantly similar to other female ministers. Group 2, the congruent group (n = 161) consisted of those participants with occupational scale scores on the female Minister of 40 or above. Those occupations for which scale scores are above 40 are generally interpreted as occupations the person should consider as being potentially satisfying. Therefore, female ministers with scores in this range were classified as congruent (described by the Strong as being moderately similar, similar, and very similar to other female ministers).

To test for between-group differences, a one-way multivariate analysis of variance (MANOVA) was performed once again. The multivariate test was found to be significant (F = 3.45, p < .01). In the univariate analysis for each scale, the test for the main effect of groups was significant for 8 of the 13 MMPI scales: The F, K, Hs, D, MF, Pt, Sc, and Si. The T-score means, standard deviations, and univariate tests of significance for the 13 MMPI scales by congruent and incongruent groups are shown in Table 3. Homogeneity of variance for the two groups (Group 1: n = 66 and Group 2: n = 161) was checked. None of the group variances on any of the 13
MMPI scales differed beyond the 3-1 ratio. The Tukey procedure was not used because there were only two comparison groups.

Insert Table 3 about here
Table 3
T-Score Means, Standard Deviations, and Univariate F Tests for the MMPI Scales (Analysis 3)

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<th>Scale</th>
<th>Group 1 (n = 66)</th>
<th>Group 2 (n = 161)</th>
<th>Univariate F(1,225)</th>
<th>Significance of F</th>
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MMPI = Minnesota Multiphasic Personality Inventory.
CHAPTER 5

DISCUSSION

The relationship between occupational congruence and psychological adjustment was investigated in a group of 227 Protestant clergy women working in the United States. The Strong Interest Inventory Female Minister Scale was used as a measure of occupational congruence. The 13 most commonly used scales from the Minnesota Multiphasic Personality Inventory were used as a measure of psychological adjustment. It was hypothesized that there would be significant differences in the mean scores on the MMPI scales for the congruent vs. the incongruent women ministers. The study found that there were significant differences in the MMPI mean scores for congruent vs. incongruent ministers on at least 8 of the 13 scales. The study also found that the congruent ministers appeared to report less psychological discomfort and fewer symptoms of psychological distress than did the incongruent ministers.

Overview of Group Differences on MMPI Scales

In the following overview the results of the three analyses will be discussed together in light of the group differences on the MMPI scales. In most cases, the
results were similar regardless of the analysis used. Where the results differ based on the type of analysis, this will be noted. Additional discussion of these differences is discussed in the next section of the text.

The 13 scales of the MMPI measure various psychological states and symptoms. As noted, the congruent ministers differed from the incongruent ministers on 8 of the 13 scales. These differences will be discussed scale by scale. There were no significant differences on the Lie scales, indicating that the ministers did not differ in their tendency to be unrealistically positive in their approach to the inventory. People who are psychologically sophisticated, college educated and of higher socioeconomic status, usually do not have elevated scores on this scale. The participants in this study would fit the above profile, as all have at least a college degree and many have taken psychology courses. Because some of the Lie scale questions deal with questions of morality, (for example, answering false to the following: "I get angry sometimes," "At times I feel like swearing," and "I do not always tell the truth"), people who are especially religious such as clergy sometimes scored higher than the norm on the Lie scale. The women clergy in the current sample scored in the average range (Mean scores 48-49), indicating they have a realistic approach to moral behavior rather than a perfectionistic or moralistic approach. People scoring in the average range tend to be open about admitting minor faults and normal human foibles. As such it is expected that this group of clergy women tends to be realistic and accepting of small flaws in themselves and others.
The F (Infrequency) scale on the MMPI indicates the number of unusual or atypical items endorsed by the person. Fewer than 10% of the population would be expected to endorse these items. Examples include answering true to the item, "It would be better if almost all laws were thrown away," or answering false to the item, "I like to visit places where I have never been before." Elevated scores often are an indication of unconventional thinking or specific difficulties such as a job loss or grief. Pathology is associated with increases in this scale. As the score increases, the person is reporting more unusual characteristics. The scale does not differentiate well between those who are pathological and those who are "faking bad." The interpreter must consider the F scale in light of other scales to determine if the person is accurately reflecting pathology or making a "cry for help" by exaggerating symptoms.

In this study, there were significant differences on the F scale between groups of congruent and incongruent ministers ($F = 6.24$, $p < .002$). Incongruent ministers endorsed more unusual items than did the congruent ministers. The incongruent groups had mean scores averaging in the 54-56 range, while the congruent groups scores averaged between 51-52. Even though these scores are in the normal range, there is the indication that the incongruent ministers are experiencing slightly more unusual thinking than the congruent group which could indicate slightly more distress or moodiness in their lives at the time of testing.

The K-correction scale is a validity scale designed to determine if test takers are inflating their positive or non-pathological answers on the inventory. It is in some ways similar to the Lie scale as described above, but it is more subtle and does not
contain the obvious items found on the Lie scale. For college educated individuals, scores are typically in the 55-70 range on the K scale. High scores would be considered 65 and above for this population. Moderate scorers are described as having good ego strength and coping skills. Defensiveness and guardedness can also be indicated by moderate and high scores on the K scale. Again, as with the F scale described above, the interpretation of the K must be made in combination with the other validity indicators (L and F) as well as the clinical scale elevations found on the rest of the MMPI profile. Differences are also found based on the purposes of the testing (for legal and employment purposes people often score higher than in clinical situations). This study found significant group differences when using the univariate tests of significance ($F = 3.6, p < .029$). The congruent groups had higher average scores on K than did the incongruent groups. Mean scores for the incongruent groups were 56-57, while the congruent groups were in the 59-60 range. In light of the overall profiles being normal and the participants being college educated and employed, the higher K scores would be more likely to indicate ego strength and a tendency to minimize current difficulties. The slightly lower K scores for the incongruent group could reflect a more open attitude toward current difficulties, although an equally good case could be made that the congruent group may in fact be facing fewer difficulties. Given that the scores are well within normal ranges for all groups and not significantly different in the one-way tests, caution should be used in interpreting the results on this scale. When the more stringent Tukey tests were done
in the one-way comparisons, the differences between groups were not found to be statistically significant.

An overall impression from the three validity scales of the MMPI is that the clergy women participants are taking the test in a valid manner. All scales for all groups were within normal ranges for the three validity scales (L, F, K). These clergy women, while publicly professing an active Christian faith by virtue of their work in the profession of ministry, do not appear to be judgmental or moralistic. They are able to acknowledge minor and typical human faults and appear to be psychologically sophisticated, open, and resourceful. There are indications from the investigation that those who are incongruent are slightly more likely to indicate some unusual thinking which could be an indication of differences in current level of psychological discomfort. This interpretation is supported by results of the clinical scales as described below.

The first clinical scale on the MMPI is the Hypochondriasis (Hs) scale. It is useful as an indicator of physical complaints and worry about one’s health. At higher levels it can indicate that the person focuses on illness and disease in a self-centered or manipulative way. Persons with documented organic problems score in the moderate range. Those scoring low on the Hypochondriasis scale are not endorsing any items which indicate the presence of physical complaints. The women clergy as a group were generally free of physical complaints based on their scores on the Hs scale. Significant differences were found between congruent and incongruent groups, \( F = 4.54, p < .012 \) however. The congruent ministers indicated fewer physical
complaints than did the incongruent ministers. Their mean scores were 50-51 on the Hypochondriasis scale, while the incongruent ministers averaged 54. (Two of the three analyses found that these group differences were significant. The one way comparisons in analysis found similar absolute mean differences but these differences failed to reach significance in that analysis.)

Scale 2 on the MMPI is the Depression (D) scale which includes items indicating the person has subjective feelings of depression, brooding, apathy, and physical problems. Scale 2 has been described as "the single best predictor of a person's level of satisfaction, sense of security, and degree of comfort" (Groth-Marnett, 1990, p. 201). High scores indicate the person is experiencing a variety of symptoms consistent with a diagnosis of depression, including feeling down, unhappy, pessimistic, tired, self-critical, and withdrawn. Low scores are indicative of the opposite, an absence of depressed feelings, optimism, and active, outgoing behavior. This scale is often used to show progress in therapy with depressed persons. Depression scale scores have been found to decrease with successful treatment (Bergin, 1971). In this study, significant differences were found between the congruent and incongruent ministers ($F = 13.5, p < .001$). The incongruent ministers had significantly higher Depression scores on the MMPI than did the congruent ministers. The incongruent ministers groups had Depression mean scores in the 58-62 range while congruent ministers groups had distinctly lower Depression mean scores in the 50-52 range. These significant group differences demonstrate that the incongruent ministers were reporting more depressive feelings and symptoms than
are the congruent ministers. Being incongruent with one’s occupation appears to be associated with higher numbers of depressive thoughts, behaviors, and/or feelings.

Scale 3 is the Hysteria scale which includes items involving specific physical symptoms such as sleep difficulties, stomach and digestion problems, headaches, backaches, and heart and chest pains. Also included in the scale are items indicating the person denies any emotional or psychological concerns. High scorers may express psychological stress through outlets in physical problems. People with higher education, intelligence, and socioeconomic status tend to score higher on this scale. Women also tend to score higher than men on this scale. In this investigation, the female ministers’ scores ranged from an average of 58-63. Significant differences were found between the groups in two out of the three analyses, with incongruent ministers scoring somewhat higher (Means averaging approximately 63) than the congruent groups (Means averaging approximately 58). The incongruent ministers tend to be endorsing more items on the Hysteria scale. Consistent with the direction of the incongruent group scores on Scale 1 (the Hypochondriasis scale), the incongruents on Scale 3 report more physical complaints.

Scale 4, the Psychopathic Deviate Scale (Pd), measures a general level of social adjustment, especially the person’s relationship to family, school, and authority. Those who are high scorers tend to push the limits of rules and social norms. They do not accept the status quo and at lower elevations can be crusaders and social activists while at higher levels they can be antisocial and manipulative. Low scorers are typically overcontrolled and conventional and may be well-balanced, but with
tendencies to be passive rather than assertive or aggressive. In this study, the groups did not differ significantly on the Pd scale. The women ministers had average mean scores of between 60-63. The incongruent groups absolute mean scores were slightly higher than the congruent groups but these were not found to be statistically significant. The overall moderately high means on this scale could indicate that as a group, women who enter ministry are assertive and energetic. Duckworth and Anderson (1986) reported that moderate elevations (60-70) are associated with college students who are enterprising, venturesome, and social. Those in the helping professions with a concern for social problems, typically score in the range. Many of these women were among the first women ordained in their denominations, and would be expected to be willing to challenge the status quo.

The Masculinity-Femininity scale (Scale 5) includes questions which measure the degree to which the person endorses traditionally masculine or feminine roles and interests. A high score for females indicates an identification with stereotypic masculine hobbies and occupations and two of the three analyses found significant group differences on the MF scale. In Analysis 1 the midrange group mean of 46.7 was significantly different from the congruent group mean of 41.2 ($F = 4.6, p < .011$). In Analysis 3, the congruent group mean was also 41.2 and the incongruent group mean was 45.8 ($F = 8.2, p < .005$). The interpretation of these differences would suggest that the congruent female clergy were slightly more drawn to traditionally stereotyped feminine interests and roles than are the less congruent ministers. The is consistent with the Celeste, Walsh & Raote (1995) findings that
congruent male ministers were more strongly attracted to traditional female stereotypic interests and occupations than were the incongruent ministers. For both males and females there may be a basic interest profile that is consistent with the feminine scored items on the MMPI scale and is consistent with the Minister Occupational Scale score on the Strong Interest Inventory (for example, interests in reading, music, and writing would be scored in the positive direction on the SII Minister Scale). Men and women with more traditionally masculine interests may experience less comfort in the ministry than those with more feminine interests.

Scale 6 is the Paranoia scale on the MMPI. It measures sensitivity and the tendency to personalize situations and distrust others. Feelings of persecution, interpersonal rigidity, and overt psychotic content are represented in the items on this scale. Mild elevations are often found for clergy, indicating tender-heartedness and emotional sensitivity. In this study the ministers’ groups mean scores were in the 58-63 range. Only in Analysis 2 were any significant differences found between the groups. The incongruent group mean was 62.6 and the midrange group mean was 58.1 ($F = 3.0, p < .051$). The congruent group mean was 59.6 and was not significantly different from the other two groups. The fact that all groups’ mean scores approached 60 is consistent with the picture of ministers as interpersonally sensitive and alert to other people’s feelings and motives.

Scale 7, Psychasthenia (Pt), measures fears and anxieties the person is experiencing. Items include those endorsed by many obsessive-compulsive individuals as well as those experiencing anxiety disorders and situational stress. Feelings of
worry and self-doubt are part of the scale and together with Scale 2, Depression, can assess the individual's level of distress. With elevations on both scales, the person is likely to be experiencing sufficient discomfort to seek help (Groth-Marnett, 1990). In the study, incongruent ministers were consistently higher on Scale 7 and Scale 2 than the congruent ministers. The incongruent groups scored between 57.7-61.6 compared to the congruent groups whose scores ranged between 53.7-54.3. The group differences were significantly different from each other in two of the three analyses. The incongruent ministers were indicating greater levels of distress, worry, rumination, and anxiety than the congruent ministers. All group scores are within normal ranges, but the incongruent group scores were over 60 in Analyses 1 and 2 representing one standard deviation above the test norm of 50.

Scale 8, the Schizophrenia (Sc) Scale covers a wide variety of items which tap unusual thought processes and social alienation. Other items deal with apathy, difficulties concentrating, fears, and bizarre sensory experiences. Persons with higher levels of education and socioeconomic level score lower on this scale, and adolescents tend to score higher. Lower scores are consistent with people who are friendly, trusting, and cheerful. Overly compliant and unimaginative people also score low on this scale and creative people score higher. Significant differences on this scale were found between the incongruent and congruent groups of ministers (p < .05). Incongruent ministers scored higher than did the congruent ministers with means ranging from 57-60 and 54-55 respectively. Moderate scores may indicate that the person is aloof, interested in philosophy or religion, and reserved or innovative.
Incongruent ministers endorsed items in this direction to a significantly greater degree than did the congruent ministers.

Scale 9, Hypomania, measures the individual's level of mental and psychic energy. Egotism, irritability, and expansiveness are also indicated by this scale. Women with mild to moderate elevations are described as frank, enthusiastic, idealistic, and courageous. The congruent ministers demonstrated slightly lower absolute mean scores on this scale (48-49 range compared to 55-56 range) but the differences were not found to be statistically significant.

Scale 10, Social Introversion (Si), measures an individual's comfort with groups of people and social encounters. Shyness, self-consciousness, social avoidance, and alienation from others are indicated by this scale. Higher scales indicate that the person would prefer to be with a few friends rather than a large group. Lack of social skills and tendencies to withdraw during stress would be typical of high scorers. Moderate scores indicate tendencies towards overcontrol and conventionality. Females with moderate scores are described as shy, self-conscious, and prone to worry (Groth-Marnat, 1990). Significant differences were found in this investigation between the congruent and incongruent female ministers with the incongruent groups higher on social introversion than the congruent ministers. These group differences were significant in all three analyses. The congruent ministers scores were in the 48-49 range, and the incongruent ministers scored in the 55-56 range.
Differences among the analyses

A number of MMPI scales were significantly different by group in several but not all of the analyses. In Analysis 1 (N = 227, Group 1 incongruents = 22; Group 2 midrange = 84; Group 3 congruents = 121) Univariate F tests of difference by group found significant differences on 9 of the 13 MMPI scales—F, K, Hypochondriasis, Depression, Hysteria, Masculinity-Femininity, Psychastheia, Schizophrenia, and Social Introversion. When the more conservative Tukey HSD tests were performed, however, the group comparisons were not found to be significant for the K scale or the Hypochondriasis. In Analysis 2 (Group 1 incongruents = 22; Group 2 midrange = 84; Group 3 congruents = 121) the following 9 out of 13 scales were significant for the group univariate F tests: F, K, Hypochondriasis, Depression, Hysteria, Paranoia, Psychasthenia, Schizophrenia, and Social Introversion. When the more conservative Tukey HSD comparisons were done, the differences on the K scale and Hypochondriasis again failed to reach significance. Unlike Analysis 1, the Paranoia scale did show significant differences by group and the Masculinity-Femininity group differences did not reach significance.

Turning to Analysis 3 (Group 1 incongruents = 66; Group 2 congruents = 161) for a further understanding of the scales that did not consistently show significant group differences above (K, Hs, MF, Pa), it was found that the K scale, Hypochondriasis scale, and Masculinity-Femininity scale all did reach significance. The Paranoia scale group differences failed to reach significance. The Hysteria scale,
which was found to show significant group differences in the first two analyses, also failed to reach significance in Analysis 3.

Summary

The hypothesis that there would be significant differences in the T-mean scores of the congruent and incongruent minister groups was sustained by this investigation. There were significant group differences in each of the analyses. On the following scales, significant group differences were found in every analysis done (The univariate tests of significance by group and the follow-up comparisons): F (Infrequency), D (Depression), Pt (Psychasthenia), Sc (Schizophrenia), and Si (Social Introversion). These findings appear robust over different analyses and across different operational definitions of congruence and incongruence (see Appendix E for a summary).

Consistent patterns emerge from the study indicating that the incongruent ministers are showing more distress and symptoms of discomfort than the congruent ministers. Depression scores are notable with significant differences found statistically and clinically with the incongruent ministers averaging 7-11 points higher than the congruent ministers. Other significant differences on Psychasthenia, Schizophrenia, and Social Introversion scales add the impression that the incongruent women ministers may be more prone to worry and to feel alienated than the congruent clergy.

One possible interpretation of the findings is that the incongruent ministers are less comfortable because they are in a profession which is incongruent for them. For example, clinical experience indicates that introverts find ministry more stressful than do extraverts. The incongruent ministers could be introverted by temperament and
find the people demands of ministry draining, leading to feelings of depression and anxiety.

Another possibility is that as a group, the incongruent ministers tend to be more reserved and depressive and, therefore, do not appear on vocational testing to be similar to ministers, who as a group are extraverted and optimistic. If incongruent ministers tend to be somewhat reserved and pessimistic, and do not see themselves as being like others in their profession, ministry could be especially stressful for this group. One would wonder if these factors affect their job performance.

The scales which are not elevated are also interesting. The incongruent ministers do not appear more angry or suspicious than the congruent ministers. Their energy level also is not different. As a group the women clergy appear to be assertive, sensitive, and open-minded. They are reasonably comfortable with themselves but are likely to be concerned about the impression that they make on others. Even though they are pursuing a profession which has not been traditional for women, they do not appear to be non-traditional in their interest patterns. Ministry does not require that they adopt more traditionally masculine interests and behaviors. The overall psychological health of these ministers appears good. The fact that the ministers who are occupationally incongruent with ministry show higher levels of discomfort as evidenced by their endorsement of more physical and psychological complaints is significant and warrants additional study.
Comparison to Related Studies

Many of the results from this investigation were similar to the findings in a previous study of male clergy (Celeste, Walsh, & Raote, 1995). In both studies, significant differences were found between congruent and incongruent clergy on the F, Depression, Psychasthenia, and Social Introversion scales of the MMPI. While all groups' MMPI scores on these scales were within normal ranges in both investigations, the incongruent ministers consistently score higher than congruent ministers, indicating that they are endorsing more items indicative of distress. The scales of Depression, Psychasthenia, and Social Introversion are scales which are generally unipolar. That is, low scores indicate an absence of the factors measured and a high score indicates the presence of the factors. By endorsing items on the Depression scale, the person is indicating feelings and behaviors associated with depression. Not endorsing such items indicates an absence of these feelings. Psychasthenia items endorsed indicate feelings of anxiety or worry and non-endorsement indicates an absence of these feelings—the person does not feel worried or anxious. The Social Introversion scale also is such that the more items a person endorses, the more shyness and reserve he or she is reporting. The overall impression given by the findings on these three scales is that those ministers in the incongruent group are reporting more symptoms of depression, worry, and reserve than are the congruent group. While all groups appear psychologically healthy there is a significant difference between congruent and incongruent ministers. The congruent ministers appear to be more comfortable with fewer self-reported signs of emotional
distress. These findings hold true for men and women ministers on 4 of the 13 MMPI scales.

Many of the MMPI scales on which incongruent female ministers scored higher than the congruent ministers included physical complaints and symptoms (e.g., F, Hystera, Depression, Hypochondriasis). These findings are consistent with several earlier investigations. In their study of congruence and adjustment, Meir and Melamed (1986) found that in their sample of female Israeli teachers, those in congruent environments reported fewer bodily ailments than those in incongruent environments. Furham and Schaeffer (1984) also studied working adults and compared their congruence with present occupation and their psychophysical symptoms. They also found a negative relationship between psychophysical symptoms and congruence. Those in congruent occupational environments indicated fewer signs of psychopathology. Their investigation included working, primarily middle class, males (53) and females (29) in Britain. A negative correlation (r = -0.24) was found between the number of symptoms and congruence.

In the Furham and Schaeffer (1984) study, females were found to have more psychophysical symptoms than males in a Pearson correlation (r = 0.23) comparison. This is not consistent with the absolute mean scores for the men and women in the two clergy studies. The male clergy had higher scores on the Hypochondriasis and Hysteria scales than the female clergy (overall mean averages of 53.5 for males compared to 51.7 for females on Hs and 60.6 for males compared to 58.9 for females...
Sullender's (1993) study of male and female ministry candidates also reported higher Hs and Hy mean scores for men than women.

One interpretation is that men and women may be handling their stress differently. In the study on male clergy, no differences were found between the congruent and incongruent groups on the MMPI Hypochondriasis or Hysteria scales, whereas for women clergy, congruent ministers had lower elevations on these scales than did incongruent women. However, unlike the female clergy, the male clergy showed significant differences on the Hypomania scale. The incongruent ministers indicated that they had less energy than did the congruent ministers. The men may lose energy as a symptom of stress, rather than become ill.

**Limitations of the Study**

Several limitations are noted in the study. All measures were self-report inventories. Spokane (1985) raised questions about this method of data collection in congruence research. Also the measures used to operationalize congruence and psychological adjustment are not readily available to many researchers, especially with an adult non-clinical population. By using two lengthy instruments, the MMPI and the SII, the study is made less easily replicable in other samples of working adults. The fact that the data was collected at an earlier time period (1977-1989) is a potential limitation. Also, the Occupational Scale of the Strong Interest Inventory is more narrow than the broader Holland occupational theme scores which are commonly used as the basis for operationalizing congruence. As Camp and Chartrand (1992) and
White (1995) have demonstrated, the choice of congruence measure affects the outcome of congruence research.

Generalizability from the sample of clergy to the general population cannot be assumed. However, studies by other researchers using teachers and a mixed sample of working adults have found similar results (Meir & Melamed, 1986; Furham & Schaeffer, 1977). The fact that the participants came from a wide geographic area and represented diverse ages and denominations indicates good generalizability to United States male and female working clergy. The small representation of minority clergy is a limitation.

The fact that the incongruent group of ministers was small in comparison to the congruent group is a modest limitation. As Gottfredson and Holland (1990) noted, "Job incumbents must differ in their degree of congruence in order for one to test the congruence hypothesis. This need requires individual differences among workers who are employed in similar jobs" (p. 390). Within an occupation, it may be difficult to find large percentages of incongruent workers. In the present study the incongruent group was 9.7% (22/227) when incongruence was defined most narrowly (Minister Occupational Scale scores in the Dissimilar range). In the study of male clergy (Celeste, Walsh, & Raote, 1995) the incongruents were 7.8% (100/1276). When the incongruent group is defined as anyone who is not congruent, the percentages increase. (In Analysis 3, the incongruent group [anyone whose scores did not fall in the Similar range on the Minister scale] was 29% (66/227).) By this definition, the congruent group was 71% of the female minister participants.
This percentage of congruent individuals is less than that found by Betz and Taylor (1982) in their study of counseling psychology graduate students. In their investigation, 89% of the students in graduate school scored in the "similar" or "very similar" range on the psychologist occupational scale.

**Recommendations for Future Research**

Research in the area of vocational congruence and psychological adjustment appears to be promising. Replications of the current study with employed adults representing more diverse backgrounds and a broader range of occupations would contribute to generalizability of the findings.

Measurement of congruence and psychological adjustment continues to be a problem for researchers. Relying on unipolar psychological scales such as the Depression scale of the MMPI could make the results of congruence adjustment research more specific. Symptom checklists could provide a clearer measure of specific aspects of psychophysiological health which are associated with occupational incongruence.

This investigation used only the Strong Occupational Scales to measure congruence. It would be helpful to include the Holland theme codes in future research of this type to determine if the incongruent ministers are also incongruent in their overall theme scores. One could investigate if those with both incongruent occupational scale scores and incongruent Holland theme scores were significantly different from those with only one of these incongruencies.
Longitudinal studies could contribute information about the process of the development of psychological distress in relation to the congruence. It would be helpful to begin with a group of workers as they move from pre-entrance into their first career positions. Such studies could investigate possible causal links between incongruence and psychological distress. It also would be helpful to follow-up with the clergy to see if the incongruents have exited ministry in greater numbers than the congruents.

Adding a job satisfaction measure to the research design would contribute to a better understanding of the relationship between congruence, psychological adjustment, and satisfaction. In the future, this type of research will be facilitated by the recent addition of a job satisfaction item to the newly revised (1994) Strong Interest Inventory.

**Implications for Counseling Practice**

The effect of stress on workers is of continual concern to employers and workers. APA has begun new initiatives to investigate occupational health issues (APA, 1994). Finding and remaining in a position which is congruent with an individual’s personality should lead to less stress and result in better physical and psychological health. Begin in an incongruent work environment is associated with slightly higher levels of discomfort according to this study and several other investigations (e.g., Fulham & Schaeffer, 1986; Meir and colleagues, 1988). Counselors can encourage career explorers to take more seriously their own personalities and preferences as they consider various career options. Specifically, the
extraverted vs. introverted demands of the occupation should be considered in light of the individual’s preferences.

Counselors can also legitimately inquire about psychological and physical symptoms experienced by career clients. Psychological adjustment may be affecting the individual’s responses to interest inventories. The counselees’ response to the current work environment could provide clues about their congruence with the occupation and potential sources of incongruence. As Betz has indicated, career and personal counseling cannot be separated (Betz, 1993).

At times people are unable to leave incongruent occupations because of practical considerations. For these clients, counselors can encourage stress management training and the addition of congruent avocational interests to compensate for the lack of congruence in the work environment.


Tierney, A. M. (1990). Congruence and personality on the new California Psychological Inventory. Unpublished master’s thesis. The Ohio State University, Columbus, OH.


White, K. B. (1993). *Vocational choice congruence and psychological adjustment in college students: An examination of Holland’s contentions*. Unpublished master’s thesis. The Ohio State University, Columbus, OH.


APPENDIX A

Strong Interest Data for Employed Clergy Women
<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>SD</th>
</tr>
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<tbody>
<tr>
<td>Realistic</td>
<td>44.0</td>
<td>8.9</td>
</tr>
<tr>
<td>Investigative</td>
<td>48.6</td>
<td>8.7</td>
</tr>
<tr>
<td>Artistic</td>
<td>57.2</td>
<td>6.8</td>
</tr>
<tr>
<td>Social</td>
<td>58.0</td>
<td>8.5</td>
</tr>
<tr>
<td>Enterprising</td>
<td>44.5</td>
<td>9.1</td>
</tr>
<tr>
<td>Conventional</td>
<td>44.6</td>
<td>10.1</td>
</tr>
<tr>
<td>Female Minister</td>
<td>45.5</td>
<td>11.4</td>
</tr>
<tr>
<td>Male Minister</td>
<td>47.4</td>
<td>10.2</td>
</tr>
<tr>
<td>Academic Comfort</td>
<td>53.4</td>
<td>11.2</td>
</tr>
<tr>
<td>Introversion-Extroversion</td>
<td>44.7</td>
<td>8.8</td>
</tr>
</tbody>
</table>
APPENDIX B

MMPI Scales by Group: Analysis 1
= Incongruent Group Means

= Congruent Group Means

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APPENDIX C

MMPI Scales by Group: Analysis 2
= Incongruent Group Means

= Congruent Group Means

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APPENDIX D

MMPI Scales by Group: Analysis 3
Incongruent Group Means

Congruent Group Means

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APPENDIX E

Comparisons by MMPI Scale for Three Analyses
<table>
<thead>
<tr>
<th>MMPI Scale</th>
<th>Analysis 1</th>
<th>Analysis 2</th>
<th>Analysis 3</th>
</tr>
</thead>
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<tr>
<td>L</td>
<td>I = M = C</td>
<td>I = M = C</td>
<td>I = C</td>
</tr>
<tr>
<td>F</td>
<td>I &gt; M + C</td>
<td>I &gt; M + C</td>
<td>I &gt; C</td>
</tr>
<tr>
<td>K</td>
<td>I = M = C</td>
<td>I = M = C</td>
<td>I &lt; C</td>
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<tr>
<td>Hs</td>
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<td>I = M = C</td>
<td>I &gt; C</td>
</tr>
<tr>
<td>D</td>
<td>I + M &gt; C</td>
<td>I &gt; M &gt; C</td>
<td>I &gt; C</td>
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<tr>
<td>Hy</td>
<td>I &gt; C</td>
<td>I &gt; C</td>
<td>I = C</td>
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<td>I = C</td>
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<td>I &gt; C</td>
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<td>I &gt; M + C</td>
<td>I &gt; C</td>
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<td>I &gt; C</td>
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<td>I = M = C</td>
<td>I = C</td>
</tr>
<tr>
<td>Si</td>
<td>I + M &gt; C</td>
<td>I + M &gt; C</td>
<td>I &gt; C</td>
</tr>
</tbody>
</table>

I = Incongruent Group
M = Midrange Group
C = Congruent Group

Note: Differences were found to be significant at p < 0.05 or less.
All pair-wise comparisons in Analyses 1 & 2 were Tukey HSD procedures.
Analysis 3 used Univariate F-Tests.