Predicting Counselor Effectiveness: A Multiple Regression Approach

Buena Flor H. Mendoza
Western Michigan University

Follow this and additional works at: http://scholarworks.wmich.edu/dissertations
Part of the Counseling Commons, and the Student Counseling and Personnel Services Commons

Recommended Citation
http://scholarworks.wmich.edu/dissertations/3028

This Dissertation-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Dissertations by an authorized administrator of ScholarWorks at WMU. For more information, please contact maira.bundza@wmich.edu.
PREDICTING COUNSELOR EFFECTIVENESS:
A MULTIPLE REGRESSION APPROACH

by

Buena Flor H. Mendoza

A Dissertation
Submitted to the
Faculty of the School of Graduate Studies in partial fulfillment
of the
Degree of Doctor of Education

Western Michigan University
Kalamazoo, Michigan
November, 1968
ACKNOWLEDGEMENTS

It is a special pleasure to express my sincerest gratitude to Dr. Robert L. Betz, my major adviser and chairman of my doctoral committee, for his valuable guidance in the preparation and writing of this dissertation.

I would like also to express my deep appreciation to the members of my doctoral committee, Drs. Sid Dykstra, Paul B. Misner, Lewis Walker and William Coats, for their inspirational encouragement and support.

To Miss Barbara Metcalfe a special word of appreciation is expressed for reading the first draft and helping in the typing of this manuscript.

To Mrs. Nina Ruskjer a special word of acknowledgement is also due for editing the final form of this manuscript.

To Miss Marianne Galbreath thanks is expressed for all the clerical assistance she gave me.

A special word of gratitude is due to Mr. and Mrs. John G. VanDyke for their genuine kindness which was a source of comfort and meant more than words can convey.

No expression of gratitude would be complete without reference to the continuing love, understanding and support I have received from my parents, Mr. and Mrs. Marcelo T. Mendoza, in the Philippines.

Buena Flor H. Mendoza
MENDOZA, Buena Flor H., 1930-
PREDICTING COUNSELOR EFFECTIVENESS:
A MULTIPLE REGRESSION APPROACH.

Western Michigan University, Ed.D., 1968
Education, guidance and counseling
Education, teacher training

University Microfilms, Inc., Ann Arbor, Michigan
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>ACKNOWLEDGEMENTS</th>
<th>................................................................. iii</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>........................................................................ vi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>........................................................................ vii</td>
</tr>
</tbody>
</table>

## CHAPTER

<table>
<thead>
<tr>
<th>I</th>
<th>THE PROBLEM ................................................................. 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>History of the problem .................................................. 4</td>
</tr>
<tr>
<td></td>
<td>Statement of the problem ............................................. 5</td>
</tr>
<tr>
<td></td>
<td>Importance of the study .............................................. 6</td>
</tr>
<tr>
<td></td>
<td>Limitations of the study ............................................ 7</td>
</tr>
<tr>
<td></td>
<td>Assumption ................................................................ 8</td>
</tr>
<tr>
<td></td>
<td>Definition of terms ................................................... 8</td>
</tr>
<tr>
<td></td>
<td>Hypotheses ................................................................ 9</td>
</tr>
</tbody>
</table>

| II    | REVIEW OF LITERATURE AND RELATED STUDIES ............ 11 |

<table>
<thead>
<tr>
<th>III</th>
<th>DESIGN AND METHODOLOGY ........................................ 31</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The sample ............................................................ 31</td>
</tr>
<tr>
<td></td>
<td>Procedure ................................................................ 32</td>
</tr>
<tr>
<td></td>
<td>Instrumentation ....................................................... 36</td>
</tr>
<tr>
<td></td>
<td>The null hypotheses ................................................ 38</td>
</tr>
</tbody>
</table>
IV RESULTS AND ANALYSIS OF DATA ......................... 39

Normative analysis of mean data ...................... 39
Simple correlational results ......................... 43
Partial correlation results ......................... 47
Multiple correlation analysis ...................... 49

V SUMMARY, CONCLUSIONS, DISCUSSIONS AND RECOMMENDATIONS ........................................ 59

Summary ............................................. 59
Conclusions ........................................ 60
Discussion ......................................... 63
Recommendations ................................... 67

LIST OF REFERENCES .............................................................. 70
**LIST OF TABLES**

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Means, Standard Deviations and Critical Ratios for Normative and Sample Groups, Male and Female Counselor Candidates</td>
</tr>
<tr>
<td>4.2</td>
<td>Pearson Product Moment Correlations Between the Criterion and Predictor Variables and Between Predictors (Female Sub-Group)</td>
</tr>
<tr>
<td>4.3</td>
<td>Pearson Product Moment Correlations Between the Criterion and Predictor Variables and Between Predictors (Male Sub-Group)</td>
</tr>
<tr>
<td>4.4</td>
<td>Partial Correlations Between the Criterion and Predictor Variables</td>
</tr>
<tr>
<td>4.5</td>
<td>Multiple Correlation Coefficients Between the Criterion and 14 Predictor Variables</td>
</tr>
<tr>
<td>4.6</td>
<td>Pearson Product Moment Correlations Between the Criterion and Five Predictor Variables</td>
</tr>
<tr>
<td>4.7</td>
<td>Multiple Correlation Coefficients Between the Criterion and Five Predictor Variables</td>
</tr>
<tr>
<td>4.8</td>
<td>F-Test Results Between Multiple R's From 23, 18, 14, Five and One Predictor Variables</td>
</tr>
<tr>
<td>FIGURE</td>
<td>PAGE</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>4.1</td>
<td>A Graphical Presentation of Personality Profiles of Male and Female Counselor Candidates</td>
</tr>
</tbody>
</table>
CHAPTER I

THE PROBLEM

One of the important current problems in counselor education is the selection of promising counselor candidates. Recent developments relative to an increased demand for professional counselors in educational institutions, in industry, and in other non-educational settings, have resulted in increased enrollments and have strained the resources of many counselor education departments. The strain is particularly severe in the area of counseling practicum, which represents one of the most expensive and time-consuming activities of graduate instruction. The tutorial nature of the practicum places distinct limitations on the number of students who can be accommodated and taught.

The lack of adequate training facilities, coupled with the challenge of selecting students who are intellectually able, professionally motivated, emotionally and socially mature (APA, 1954; APGA, 1958; 1964), and who are able to sustain intimate interpersonal relationships (Hill, 1961; Hill and Green, 1960), demands careful selection of counselor candidates.

The identification and development of criteria for initial admission of counselor candidates to counselor education programs remain very difficult problems. Most counseling theorists agree that the personality of the counselor is one of the most crucial variables in determining the effectiveness of counseling behavior (Allen, 1964; Ford and Urban, 1963). Nevertheless, the selection of candidates in
counseling seems to be based almost exclusively on academic credentials of applicants (APA, 1954; APGA, 1964). Grade point averages are used because little agreement on theoretical grounds exists in terms of the personal qualities which are characteristic of successful counselors. In addition, reliable instruments for measuring such qualities are not necessarily available, even if such an agreement was obtained.

Efforts to identify desirable personal traits of counselors have progressed from the simple listing of personal traits to the use of scientific measures of personality. Typical research designs involve the examination of standard personality tests for items which differentiate "good" from "poor" counselors (Cottle, 1953; Cottle and Lewis, 1954; Campbell, 1962; Stefflre, Kings and Leafgren, 1962; Demos and Zuwaylif, 1966). Efforts are further directed toward synthesizing the results in order to discover a personality syndrome universally characteristic of successful counselors. These efforts to date, however, have failed to develop a specific "blue print" of personal qualities of successful counselors.

The study of personality characteristics per se is only one aspect of the study of counseling effectiveness. A person is not a successful counselor by virtue of some combination of traits. The pattern of his personal characteristics necessarily must bear some relationship to the demands, characteristics, activities and goals of counseling (Sprinthall, Whitely, and Mosher, 1965). Therefore, the relationship of personality variables to success in the counselor's performance of his role has received considerable notice. From an analysis of this role, it was argued that striving to succeed in
counseling, to relate well to the counselee, and to feel secure in the face of highly affective stimuli are normal purposeful activities for a counselor. It was hypothesized that had he a personality structure which tended to produce the aforementioned behaviors, the counselor would suffer less strain in fulfilling his role. He would be more effective, and thus more successful, than those whose personal needs are incongruent with their expected roles as counselors.

Investigations of this nature have led to the conclusion that men and women of a variety of personality types can function effectively in counseling. There seems to be no single personality type, no single profile of personality traits, which is uniquely suited to counseling (Tyler, 1961). Evidence further indicates that the personality, attitudes, motivation, and beliefs of the counselor are critical in establishing effective relationships (Abeles, 1958; Menninger, 1958; Fiedler, 1950a; 1950b; 1951; McGowan, 1954). A major focal point of agreement among authorities regarding the personality variables which are essential for counseling effectiveness is that open-mindedness, tolerance for ambiguity, general mental health, and interests related to liking people and working with them, are concepts of prime importance. All may have a predictive relationship on whether or not the aspiring counselor can display counselor behavior leading to success in counseling (Allen, 1967; Rogers, 1951; 1957; 1958; 1961; Tyler, 1961; Wrenn, 1962; Katz, 1963; Fenichel, 1945).

In view of this knowledge, perhaps an immediate approach to the problem of selection is to assess these personality variables and relate them to perceived effectiveness of counselor behavior. It is
recognized that assessment of personality will be a difficult task, and effective counselor behavior will be difficult to ascertain; however, present instrumentation permits, in a measure, assessment and investigation of these qualifications with predictive hypotheses to be generated with a degree of certainty greater than chance.

History of the Problem

The problem of selection and prediction of promising counselor candidates, although a professionally recognized problem, has received limited attention historically. Recently, however, professional organizations and universities have initiated studies designed to generate evidence regarding the problem. Among these is Western Michigan University.

Academic advisers in the Guidance and Personnel Services Unit of the School of Education at Western Michigan University, cognizant of the importance of the counselor personality in counseling, use a battery of psychological tests as screening criteria, in conjunction with other selection procedures and techniques. The battery consists of four standardized objective tests, which produces a personality and interest profile of each student drawn from a theoretical understanding of the demands of counseling. The tests used are the Minnesota Multiphasic Personality Inventory (MMPI), Strong Vocational Interest Blank (SVIB), Rokeach Dogmatism Scale (RDS) and the Berkeley Public Opinion Questionnaire (Berkeley POQ).

Four assumptions underlie the use of these selection criteria:

(1) Counseling is far too complex to be related to any one type of
counselor personality. (2) Counseling is based on personal and cooperative interaction between the counselor and the counselee, and it is not likely that any counselor would be able to interact in the same way with all types of counselees. (3) The tremendous variation of client problems suggests the need for similarly wide variations in counselors who are going to work with them. (4) Counseling is primarily creative, and as such may be effectively conducted by widely differing but creative individuals.

Mendoza (1967) subjected the screening battery to research scrutiny. Tentative norms were established and findings supported the assumption that the screening instruments would adequately measure among counselor candidates the characteristics of open-mindedness, tolerance for ambiguity, general mental health and interest. The study also supported the hypothesis that a generic counselor personality exists.

This knowledge of personal qualities of counselor candidates opened the avenue toward predictive research, which this study proposed to undertake. A follow-up of counselor candidates' behavior in relation to their scores in the test battery was the major task of the investigation. The screening battery was further scrutinized with the goal of achieving a more concrete basis for decision-making by the counselor education unit.

Statement of the Problem

It was the purpose of the study to investigate, through the use of peer group ranking and psychological test results, effective-
ness of counselor candidates' counseling behavior as ranked by super­visors.

Specifically, the research attempted to determine whether effec­tiveness in counseling, designated in the study by high level of per­formance in counseling practicum as ranked by faculty supervisors, can be predicted with a knowledge of the extent to which an individual possesses the personal qualities and attributes of open-mindedness, tolerance for ambiguity, general mental health, and personal-social vocational interest.

Furthermore, the study attempted to determine whether these personality qualities were perceived by peers in each other, and whether those most endowed with these attributes would stand out, not only as the choice by the faculty supervisor for high ranking in level of per­formance, but also as the best choice for a counselor by peers.

Importance of the Study

The study is important for the following reasons:

1. Validation of the instruments used in selection of counselor candidates will be determined.

2. Findings of the study may be useful for future research cor­relating other selection procedures to effectiveness of counseling be­havior.

3. The results of the study may have important theoretical and practical implications for counselor selection and retention.

4. In addition to the foregoing, the study may have relevance as follows:
a. For the counselor educator, the results can be of importance in guiding the learning and training experiences of the students.

b. For the counselor candidates, a knowledge of the personality characteristics having predictive relationship to counseling effectiveness may develop an awareness for the necessity of identifying and developing traits consistent with counseling success.

c. For the administrator, a knowledge of the predictive and evaluative potentials of the screening battery and peer group ranking in forecasting effectiveness in counseling may provide improved guidelines for program development.

Limitations of the Study

Analysis and discussion of the study were limited to the responses on the clinical and ego strength scales of the MMPI, Occupational Group V Area of the SVIB, RDS, and the Berkeley POQ, of 71 graduate students in the counselor education program at Western Michigan University who were admitted into the program from the Spring Session of 1964 to the Winter Semester of 1967. The responses were analyzed as they related to supervisors' ranking. Peer group ranking and battery test responses were analyzed as they related to effectiveness of counseling performance in counseling practicum as judged and ranked by professors. The total number of subjects included 23 female and 48 male counselor candidates.

The study included all students who have complete records on all
the variables used. Inasmuch as the sample was not randomly chosen, the freedom to generalize the results to all counselor candidates must be done with caution. It was not known whether or not the sample was representative; however, there is no reason to believe that it was not.

Another limitation of the study was inherent in the instrumentation. Hence, inferences drawn were valid only as the research instruments are valid and reliable.

A major limitation involved the use of supervisor's rankings as indices of counseling effectiveness. Since ranking involves subjective judgment, agreement among supervisors is a critical variable in any prediction of global counseling effectiveness.

Assumption

The assumption underlying the study was: There is a generic counselor personality which is operationally necessary to effectiveness of counseling relationships. This personality type specifically calls for the traits of open-mindedness, tolerance for ambiguity, emotional balance, and a wide range of interest specifically related to general liking for people and working with them.

Definition of Terms

For the purpose of the study, the following definitions were accepted:

Personality refers to the integrated organized behavior of the individual which characterizes him as a unique person (Cattell, 1950). It is also used to mean the pattern of organization of personality
characteristic and modes of behavior which makes an individual resemble all other persons, some other persons, and no other person (Clay, 1959).

**Interest** refers to a particular disposition towards liking or disliking an event or activity. Objective interests are acceptant reactions and objective aversions are rejection reactions (Strong, 1943).

**Ambiguity** refers to the quality of the stimulus characteristics of the therapist and the therapeutic task which permits clients to vary their perception and responses to the therapist as a function of their personality structure (Bordin, 1955).

**Open-closed-mindedness** refers to the basic characteristic that defines the extent to which a person can receive, evaluate and act on relevant information unencumbered by irrelevant factors in the situation arising from the person or from the outside (Rokeach, 1960). To extend Rokeach's definition, the open person is one in whom there is a relatively high degree of self-communication. The closed person is one in whom there is a great amount of isolation among various levels and varieties of experience. Thus, the placement of an individual on a continuum from psychological openness to psychological closedness is determined by the degree of self-awareness he has—the awareness of his own feelings, yearnings, impulses and imaginings.

**Hypotheses**

The study investigated two major hypotheses:

The effectiveness of counseling performance in an introductory practicum in counseling is significantly related to the degree of open-
mindedness, tolerance for ambiguity, general mental health and vocational interest in the personal-social field which is operant in the counselor candidate's personality.

Open-mindedness, tolerance for ambiguity, general mental health and personal-social interest have additive effects to peer groups' perception of effectiveness of the counselor candidate's behavior.
CHAPTER II

REVIEW OF LITERATURE AND RELATED STUDIES

Most theorists agree that the personality of the counselor is one of the most crucial variables in determining the effectiveness of his counseling behavior. In discussing characteristics of counselors, the question most often asked is: What generally should be the characteristics of a counselor? The most pragmatic approach would be to find out what evidence indicates that there are or are not certain characteristics which seem to produce positive results in the development and growth of the client.

Much has been written about desirable personality characteristics of the counselor. Earlier summation of the evidence and research on the question of who the counselors are and what they should be is found in Jones (1951). What are these desirable personality characteristics?

Rogers (1942) has stated that the counselor should be sensitive to human relationships; have an objective and emotionally detached attitude—in short, a capacity for empathy that is not overdone; have a respect for the individual and an ability and willingness to accept the individual as he is; understand himself and his emotional limitations and shortcomings; and know human behavior.

A study in which counselors themselves listed the traits necessary for counseling was reported by Hamrim and Paulson (1950). Traits listed were: understanding, sympathetic attitude, friendliness, sense of humor, stability, patience, objectivity, sincerity, tact, fairness,
tolerance, broad-mindedness, social intelligence and poise.

Weitz (1957) pointed out three traits which he considers essential for counseling effectiveness: **security**, a sense of self-acceptance; **sensitivity**, the capacity for generalizing one's feelings of self-acceptance to the acceptance of other people; and **objectivity**, the capacity to distinguish between objective and symbolic behavior and yet understand the intimate relationship between the two.

Recently, a new dimension in studying the counselor's personality was added when specific aspects of human behavior—the psychological aspects of the human being of the counselor—was given emphasis. Emphasis is placed on the counselor's ability to look at and to understand and accept himself, as well as the self of the other person. The counselor himself is a technique (Williamson, 1962). His philosophy of human development shows through his behavior. His efforts of relating effectively with clients must come from his own acceptance of himself, as he is, and his behavior must be such that it can be identified as the carrying on of the intellectual life he lives.

The Committee on Professional Preparation and Standard of the American Personnel and Guidance Association (APGA, 1958; 1964) described the basic qualities of the effective counselor as being: a belief in each individual, a commitment to individual values, alertness to the world, open-mindedness, understanding of self and professional commitment.

The New York Counselors' Association and the New York State Association of Deans and Guidance Personnel (1963) described the essential personal competencies of the counselor: knowledge of self, an
understanding and acceptance of individual differences, the capacity to relate and work with others, skill in communicating with others, ability to recognize a need for continual personal and professional development.

The above studies and reports are thoughts and ideas as to who the counselor should be, and they are important in that they will play a major role in the development of counselors of tomorrow. How the counselor is perceived today as he relates with the client in the counseling process is of immediate concern, not only for the counselor himself but for the training institutions concerned with training counselors efficiently and effectively.

Increasing accumulation of evidence indicates the influence of counselor personality and attitudes on the counseling process. Tyler (1961) contended, however, that there is no single personality type, no single profile of personality trait and values, which is uniquely well suited to counseling. Rather, she reported that counselors with dissimilar personalities may approach the same client in different ways with equally favorable results. Most clinical and counseling psychologists accept the fact that effective counseling is related to something more than the objective techniques the therapist employs. Counseling is thought of as a dynamic process built on a relationship existing between the counselor and the counselee. Menninger (1958) commented on the importance of the relationship in psychotherapy:

In psychotherapy the relationships between the two parties come very close to being the goals themselves. They are by no means incidental, they are not even in the strict sense of the word a vehicle for the transaction. The rela-

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
tionships are the most tangible elements of the trans-
action. Good relationship is built upon effective commu-
nication (p.22).

The studies by Fiedler (1950a; 1950b; 1951; 1953) and McGowan
(1954) are representative of those which have stressed the importance
of the counseling relationship, no matter what the therapist's partic-
ular orientation. These studies showed that ability to communicate
with the client is of great importance in the establishment of a
successful relationship.

Two major focal points of agreement concerning ability to
communicate effectively stand out in research literature: (1) open-
mindedness and (2) tolerance for ambiguity and uncertainty.

Open-Mindedness

The importance of psychological openness as a principle of per-
sonality organization has been fully realized by workers in creativity
(Barron, 1963; Brunner, 1962; Getzels and Jackson, 1962; Rogers, 1961).
It is maintained that psychological openness is an essential precon-
dition to the understanding of the thoughts and feelings of other per-
sons (Tyler, 1961; Rogers, 1951; Fenichel, 1945; Knight, 1953). It
is strongly suggested that psychological openness makes an important
positive contribution to a counselor's understanding of his client. A
counselor's own feelings are important sources of information in the
process of unraveling the emotional communications of others (Bakan,

Tyler (1961) indicates "...one particular personality character-
istic generally considered more of a handicap than any other in coun-
suling is rigidity. ..." (p. 247). Rogers (1958) consistently em-
phaisized the necessity for the counselor to be:

...open to experiences. ...to be able to be perceived as
trustworthy, dependable and consistent; ...to be able to
communicate unambiguously; ...to be strong enough as a
person to be separate from the other and at the same time
secure enough to permit the separateness and enter fully
into the world of feelings and personal meanings and see
things as others do; ...to ultimately be able to meet
the individual as a person who is in the process of be-
coming. ...(pp. 51-55).

Wrenn (1962) pointed out that the most important element in the

counseling process is the counselor and that he needs to be socially
sensitive and flexible. Similarly, Jourard (1964) posits a dyadic
effect in counseling. The effort to which clients are able to risk
self-recognition seems to be related to the willingness of the coun-
selor to take the same risk.

Allport (1960) suggested that the most appropriate model for
representing human behavior is the open-system which explicitly acknow-
ledges the importance of the forces external to the person. In dealing
further with open-mindedness, Kaplan and Singer (1963) equated the
closed-minded person with the fanatic, who according to Fromm's (1962)
thinking is the empty, dead, depressed person who, to compensate for
depressed and inner deadness, chooses an ideal and submits to it in an
absolute way. The closed-minded person was likewise equated with the
dogmatic individual who reflects himself in varying types of closed-
mindedness and rigidity.

Recognizing the importance of open-mindedness in the personality
of the counselor, the American Personnel and Guidance Association (APGA,
1964) defined the quality of open-mindedness as basic to the personality
attributes of the counselor.

The counselor has respect for a wide range of interest, attitudes and beliefs. He is willing to question the old and investigate the new. He is receptive to new ideas, achievements and research findings (p. 537).

Five experimental studies illustrate how a dogmatic personality operates in different situations.

Open-mindedness as it related to the counseling relationship was investigated by Cahoon (1962). Other personality variables investigated were experiencing level and the counselor's stated attitudes and orientation to counseling. The Rokeach Dogmatism Scale (RDS), the Experiencing Level Scale (ELS), and the Therapist Orientation Questionnaire (TOQ) were used to measure the above variables. Counselees (two for each counselor) rated 26 counselors on the basis of the interviewer's emphatic understanding, level of regard, congruence, and unconditionality of regard. Data was obtained during the fifth week of the interview. Cahoon found that the counselor's experiencing level and his degree of open-mindedness were significantly related to the counseling relationship (p. \( \leq .05 \)). That is, the higher the rated experiencing level, the lower the dogmatism, and the better the relationship.

Steffire, King and Leafgren (1962) studied 40 participants in an NDEA Guidance Institute who judged each other as potential counselors. The nine "most chosen" participants were compared on a number of variables with the nine "least chosen" The "most chosen" participants had a higher academic performance, somewhat more appropriate Strong Vocational Interest Blank (SVIB) scores and less dogmatism as indicated
by the *Rokeach Dogmatism Scale* (RDS), than the "least chosen" participants.

The *Rokeach Dogmatism Scale* (RDS) was used by Fillenbaum and Jackson (1961) to study the relationship between dogmatism and the problem-solving behavior of 40 subjects. The behavior of the high and low dogmatic persons as classified by the RDS was observed in a laboratory situation which required the subjects to cope with new conceptual systems contradictory to those of everyday life. Generally consistent differences were found between high dogmatic and low dogmatic subjects. Low dogmatic subjects showed considerably less difficulty in integrating and synthesizing beliefs at variance with the assumptions of everyday life into new systems, and were able to cope with the problems more adequately and solve them rapidly.

Dogmatism in relation to certain concepts of alienation, as employed by Fromm (1960), was investigated by Kaplan and Singer (1963). They related dogmatism to sensory alienation. The *Rokeach Dogmatism Scale* (RDS) was used to identify high dogmatic and low dogmatic subjects, 13 from each group. Sensory discrimination tasks were performed on the subjects (pp. 488-489). The low dogmatic subjects proved superior to high dogmatic individuals to a degree which made the difference observable, rather than attributable to chance. High dogmatic individuals exhibited significantly lower sensory acuity when compared with individuals who are relatively free of dogmatism. These investigators concluded that estrangement or alienation is markedly associated with rigidity, be this association casual, concurrent or resultant.
Allen's (1967) study attempted to anticipate the effectiveness of counselor trainees as a function of psychological openness. It was hypothesized that psychological openness is a high order concept which is applicable to the problem of predicting the effectiveness of counselor trainees. The Rorschach Index of Repressive Style (RIRS) by Levine and Spivack (1964) and the Group Supervision Rating Scale (GSRS) developed by the author were used as measures of psychological openness. The "effectiveness of counseling behavior" of each trainee was estimated by means of supervision ratings of general competence, the Responsiveness to Feeling Scale (RFS) and the Response to Client Affect Scale (RCAS). Supervisor's ratings were on a seven-point scale from extremely effective to negatively effective (Sprinthall, 1961).

Items of the RFS had reference to various counselor interview behaviors. These items were weighed in terms of the subtleness of the client's communication of feeling to which the counselor responded. The RCAS was applied to the responses of trainees made to a sound motion picture on an actual counseling interview. The film was interrupted in 28 places and the subjects were asked to write down the responses they would make to the client were they the counselor.

The subjects were 26 graduate students (six men and 20 women) in counseling enrolled in the introductory practicum in guidance at the Harvard Graduate School of Education. These subjects were ranked in terms of undergraduate and graduate grade point averages, performance on either the Graduate Record Examination (GRE) or the
Miller Analogies Test (MAT), number of psychology courses taken, and the ratings given them by the admissions committee.

A direct relationship was found between the freedom with which the subjects responded to the RIRS and the degree of overall competence attributed to them by the supervisors (p. < .05). The RIRS was found to be associated with the RCAS (p. < .01).

A direct relationship was found between the degree to which subjects acknowledged their own feelings vis-a-vis their experience in counseling (GSRS) and supervisor's ratings of their competence as counselors (p. < .01).

No reliable relationship was found between the GSRS and the extent to which the subjects tended to respond to a client in a filmed interview in terms of feeling rather than of content (RCAS).

In contrast to the measures of psychological openness, none of the refined estimates of academic aptitude predicted the standing of the subjects on the certain scales at levels beyond chance likelihood.

On the basis of the above studies, it would seem appropriate to infer that closed-mindedness and open-mindedness are not phenomena which appear in only one area of the individual's living and not in others; on the contrary, they are pervasive phenomena. Closed-mindedness pervades not only physical experiences but objectifiable stimulations as well. Openness to experience makes it possible for a person to objectify sensory impressions, and this apparently runs parallel to openness to ideas, willingness to examine them critically and careful analysis of thought.
Tolerance for Ambiguity

Ability to tolerate ambiguity is hypothesized to be significant to any therapeutic relationship since it serves several major functions: (1) Ambiguous stimuli elicit from people those responses which are most heavily laden with the unique aspects of their life history, thus making it possible for the therapist to understand more fully and more deeply the mainspring of the client's action. (2) By being ambiguous, the therapist provides a background against which the client's irrational feelings will be more sharply etched and therefore more readily brought to awareness. (3) Ambiguity helps to insure effectiveness in communications (Bordin, 1955).

Non-directive leads result in a higher degree of ambiguity than directive leads, a reason why non-directiveness means in part "...not defining or imposing one's values on the client and avoiding directive leads in the counseling relationship" (Williamson, 1962, p. 109). Directive leads seem to demand the client to talk about a very specific topic in restricted terms, as contrasted with a non-directive lead which is a more general invitation to communicate (Rogers, 1958).

Intolerance of ambiguity is also often logically linked with closed-mindedness. According to Frenkel-Brunswik (1949), it is interrelated with emotional ambivalence and rigidity. Brams (1957) indicates "...counselors without tolerance for ambiguity would not be effective in counseling as would those with ambiguity tolerance" (p.26). Bordin (1955) emphasized the importance of ambiguity tolerance on the part of the counselor because the ambiguous character of the
counseling relationship could be threatening. Fenichel (1941) specified that intensity of the transference in a counseling relationship will be a function of the duration and degree of the ambiguous aspects of the relationship.

Three recent studies related to tolerance of ambiguity and counselor behavior were reviewed.

Reiwald (1964) studied the relationship between counselor tolerance for ambiguity and his behavior in the counseling interview. He investigated whether or not counselors differentiated on a test continuum of tolerance-intolerance of ambiguity would demonstrate concomitant variation of behavior in the counseling interview. Two objective tests of ambiguity tolerance, the Figure Recognition (FR) and the Verbal Reasoning (VR) tests, were used as independent variables. Dependent variables involved four aspects of counselor behavior which were transcribed into a typescript and read by two judges who counted counselor responses to clients on a first taped interview. The subjects were 23 beginning counselors enrolled in a counseling practicum at Wayne State University. The study revealed that counselors intolerant of ambiguity behaved in controlling ways. They used responses which initiated, interrupted or changed the client's topic of conversation. They focused on cognitive material and were highly expressive of value judgment. The findings were significantly related to the original conception of intolerant behavior by Frenkel-Brunswik, (1949).

Jones (1961) found some correlates of the authoritarian personality in quasi-therapeutic situations. Sixty undergraduate students in psychology were given the California F Scale (F Scale).
Before they were given the Gough Adjective Test (GAT), these students observed therapeutic interviews through a one way vision screen. Jones found that the high F group consistently demonstrated rejecting attitudes toward patients as evidenced by descriptive terminology and overt expression of attitude on the GAT. An analysis of communication to the patients revealed a tendency on the part of the authoritarian to structure the role of the therapist into a directive advice-giving role. The authoritarian assumed directive judgment roles as therapists and would display less warmth and empathy than the non-authoritarian.

In an experimental study comparing effectiveness in counseling situations with various personality and interest measurements, Brams' (1957) findings supported the theoretical assumption that a significant relationship exists between tolerance for ambiguity and effectiveness of communication in a counseling relationship. His subjects, 27 graduate students (22 males and five females), were drawn from two semesters of a counseling practicum course at the University of Missouri. The Berkeley Public Opinion Questionnaire (Berkeley POQ) was used to measure tolerance for ambiguity. Tolerance for ambiguity and effectiveness of communication were found to be significantly correlated ($p < .05$).

General Mental Health and Interest

Several writers (Cox, 1945; Jones, 1951; Wrenn, 1962; Patterson, 1967) have suggested lists of characteristics of the ideal counselor, but Cottle (1957) has pointed out that most of these characteristics were drawn from studies concerned with subjective judgments, with
little attempt made to secure objectivity in the listing of personality characteristics of counselors.

There is common agreement, however, among all these writers that personal adjustment and interest are among the characteristics that are ideally desired. Attempts to objectify these characteristics have been made through the use of standardized objective instruments of acceptable validity and reliability. Typical designs of these researches involved the examination of results of the Minnesota Multiphasic Personality Inventory (MMPI), Guilford Zimmerman Temperament Scale (GZTS), Kuder Preference Record, Personal and Vocational, (KPR), Edwards Personnel Preference Schedule (EPPS) and the Strong Vocational Interest Blank (SVIB).

Specific efforts to relate the MMPI profile patterns to personality characteristics were made by Black (1956), Drake (1958), Guthrie (1952), Hathaway and Meehl (1955), and Mello and Guthrie (1958). Investigations relating the MMPI profile to counselor behavior are found in the studies of Daane (1955), Lifton (1958), Luker (1963), and Erickson (1964).

Studies dealing specifically with the use of standardized inventories as an objective approach to the identification of counselor characteristics were reviewed and are summarized briefly.

Hamrim and Paulso (1950) reported a doctoral study by Brown (1946) at Northwestern University. Brown's investigation involved 42 counselors, 19 males and 23 females, to whom he administered the Strong Vocational Interest Blank (SVIB). Both groups showed a high interest in occupations dealing with people as individuals and as
members of groups. A secondary pattern of interest in business was also revealed.

Kriedt (1949) administered the Strong Vocational Interest Blank (SVIB) to 1048 male psychologists selected from the 1948 American Psychologist Association Directory, 115 of whom were classified as guidance psychologists. He found a rank order correlation of .77 between profiles for all 1948 psychologists against guidance psychologists on the SVIB. Guidance psychologists were found to deviate in the social service direction. Guidance psychologists seem to have a stronger preference than others (industrial, clinical, experimental) for interviewing, service to others, personnel work and writing.

The Miller Analogies Test (MAT), Minnesota Multiphasic Personality Inventory (MMPI), Strong Vocational Interest Blank (SVIB), Guilford Zimmerman Temperament Scale (GZTS), and the Allport-Vernon-Lindzey Study of Values (AVLSV) were used by Wrenn (1950) to ascertain some personality characteristics of 30 graduate level counselor trainees. His study reported the following: (1) median score on the MAT in the middle seventies; (2) a highest rating on the theoretical and religious scales on the AVLSV, with lowest scores in the aesthetic scale for men and the economic scale for women; (3) median scores above 75th percentile for men and 90th percentile for women on the GZTS scales for restraint, emotional stability, friendliness, objectivity and personal relations, with the median score on the other scales ranging from the 30th to the 70th percentile; and (4) an infrequency of elevation for the hysteria
depression, and social intelligence scales of the MMPI which was strikingly observable.

Cottle and Lewis (1954) attempted to collect objective evidences in the form of a profile of men's scores and also arrays of items which differentiate counselors on standardized tests in the same way that different kinds of psychologists have been differentiated on the interest inventories. Using the Minnesota Multiphasic Personality Inventory (MMPI) and the Guilford Zimmerman Temperament Scale (GZTS) with counselors, they explored the problem of securing a pool of items characteristic of counselors by contrasting the answers of the male counselors in college counseling bureaus with those of male college students. The college counselor sample numbered 65; the college male student sample included all of the male college students who had relatively normal scores on the two tests as counselees in the University of Kansas Guidance Bureau.

Their findings showed statistically significant lower score differences in favor of counselors on the hysteria, psychasthenia, schizophrenia and hypomania scales before the validity score (K correction) was added. The K correction gave the counselors lower lie score, a high validity score, a lower hypomania score and a more extroverted social intelligence score. Statistically significant differences exist on the GZTS for scales on restraint, sociability, emotional stability, friendliness, personal relations and masculinity, with the counselors recording higher mean scores.

Arbuckle (1956) in the study of trainees who had either been chosen or rejected by their fellows as potential counselors found
significant differences on the Minnesota Multiphasic Personality Inventory (MMPI), the Heston Personality Adjustment Inventory (HPAI) and the Kuder Preference Record-Vocational (KPR-V). Those who were accepted, when compared with those who were rejected, tended to show more normal scores on several scales of the MMPI, and a high degree of interest in such areas as social service, persuasive, literary and scientific fields.

Selection of Counselor Candidates

The selection of the right candidate for counselor preparation is of critical importance in view of the expensive and lengthy preparation period, as well as the impact of the preparation itself upon the candidate. More important is the ultimate effect the candidate will have upon his future clients. There have been many opinions expressed regarding selection issues; however, there has been a paucity of research to substantiate or refute these opinions.

A review of suggestions regarding selection criteria made by the American Personnel and Guidance Association and a division of Counselor Educators and Supervisors revealed rather nebulous guidelines. The American Personnel and Guidance Association Committee on Professional Preparation and Standards (APGA, 1964, p. 484) states that "...criteria should include personal qualifications for counseling as well as the ability to master academic requirements and acquire professional skills." The American Counselor Educators and Supervisors Committee on Professional Standards (1964) suggests that counselor education candidates be assessed in terms of academic and
research skills and potential for developing effective client relationships.

Surveys of factors influencing counselor candidate selection suggest that, aside from the traditional academic aptitude examinations, selection is generally based on ill-defined "personal qualification" criteria. Santavicca (1959) reported 94 per cent of colleges surveyed which had supervised practica has some selection criteria—college undergraduate record, work experience and social interest, scholastic aptitude, teaching experience and personal adjustment. Hill (1961) found that school counselors came mainly from the teaching ranks. School administrators became the initial candidate selectors, and the process used was more closely related to social desirability than to professional competence.

An empirical approach to counselor selection and retention was attempted by Blocher (1963). He developed a regression approach to predict success in counseling in terms of the counselor's global ratings of predicted future performance as a school counselor. His subjects were 30 enrollees in the 1961-1962 academic year NDEA Counseling and Guidance Institute at the University of Minnesota. The criterion was quantified by having four members of the counselor education staff rank 30 counselors on this criterion. The NDEA Comprehensive Examination (CE), Kuder Preference Record-Personal (KPR-P), High School Counselor Score (HSCS), and grades at the end of a fall quarter compiled by averaging standard scores computed from total points earned in tests on written assignments in the academic courses of Instruments and Techniques of Measurement, School Counseling

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Procedures, and Foundations of Career Development. He found that academic grades and the CE results were not highly related to the predicted ratings of the candidates by their counselor education faculty and peers.

McGreevy (1966) performed a factor analysis on data commonly used to select counselor candidates, together with three types of evaluative criteria. Data was gathered from 86 enrollees of three NDEA Institutes held at Arizona State University. Fourteen factors were extracted which were interpreted under four sets of factors—personality factor, family factor, academic adjustment and counseling factors. The results supported the use of the Miller Analogies Test (MAT) for identifying academically able students. The faculty ratings of candidates made at the conclusion of the institute were not found to be highly related to any other selection or evaluation data. The findings suggested that more research is necessary to determine the characteristics and qualities that counselor educators agree counselor candidates ought to possess before and after the candidates' formal preparation.

Another study using NDEA Institute subjects in evaluating effective counseling was conducted by Combs and Soper (1963). The criterion for good and bad counselor was supplied by the staff ranking the student counselors in the order in which they would hire them as counselors. The perceptual organization of the student counselors was used as the independent variable. The findings revealed that the perceptual organization of those rated as effective counselors was significantly different from that of those rated less effective.
The more effective counselors tended to perceive from an internal frame rather than from an external frame of reference; they perceived in terms of people rather than things; they perceived people as able rather than unable, dependable rather than undependable, friendly rather than unfriendly; they perceived themselves as enough rather than not enough, revealing rather than inhibiting; they perceived their purposes as freeing rather than holding and controlling, altruistic rather than narcissistic and in larger rather than smaller meanings.

Abeles (1958) in a study of characteristics of counselor trainees found that the differences between student counselors rated by supervisors as more or less promising were in values and interests rather than in ability and general adjustment.

Summary

To summarize, it is evident that the personality of the counselor is accepted as a prime factor for establishing a meaningful and successful therapeutic relationship. A review of experimental studies; however, leads to the conclusion that attempts to evaluate personality characteristics of the counselor are sporadic and unrelated. The above studies gave profiles of various kinds and levels which vary considerably. The reviews support the observation made earlier in Chapter One that it is difficult to present a specific "blue print" of the right type of qualifications ideal for a counselor. Construction of a "blue print" of a counselor personality seems difficult if not
impossible to attain; however, generic guidelines are feasible within the scope of our present knowledge and research evidence. The development of generic guidelines, based on personality characteristics of counselors which are unanimously agreed upon by authorities as basic to establishing effective counseling relationships, can provide bases for developing criteria for selection and retention of counselor candidates.

It was the intent of the present study to investigate the relationship between the personality attributes which are generic in the counselor personality and the effectiveness of counseling performance. The goal was to discover more of the attributes which are characteristic of the successful counselor for use as criterion measures of counseling effectiveness and success.
CHAPTER III
DESIGN AND METHODOLOGY

The designs and methods used in the study are described under four headings: (1) The Sample; (2) Procedures; (3) Instrumentation; and (4) The Null Hypotheses.

The Sample

The sample used in the study consisted of 71 students enrolled in Counseling and Personnel Services courses at Western Michigan University between the Spring Session of 1964 and the Winter Semester of 1966. These students had completed the screening battery for admission into the program, as well as the introductory course in Counseling and Personnel Services (School Services 680, "The Personnel Worker and His Role") and the introductory practicum course in counseling (School Services 683, "Theory and Laboratory Practicum in Counseling"). These students were also part of an original population of 171 counselor candidates whose test scores in the screening battery were used in a previous study (Mendoza, 1967) for developing tentative University norms.

All 71 had been exposed to and had participated in group sensitivity experiences in both courses. Based upon the group experience in School Services 680, peer group rankings were established. Students were ranked by peers according to "who would be their choice as a potentially effective counselor." In the School Services 683 course,
aside from formal didactic instructions, each student also had been involved in an average of eight hours a week of intensive counseling in the school laboratory, and in schools, and were afforded the benefit of careful and intensive counseling supervision by the University faculty members. Each counselor candidate was ranked by his faculty supervisor according to counseling competency, with the ranking serving as a measure of the effectiveness of his level of performance.

Two sub-groups constituted the population sample: 48 male and 23 female counselor candidates.

Procedure

Complete data for 71 counselor candidates were acquired from the test resources and files of the Guidance and Personnel Services Unit. The data included peer group ranking (PGR), supervisory ranking (SR) and scores on the Rokeach Dogmatism Scale (RDS), Berkeley Public Opinion Questionnaire (Berkeley POQ), Strong Vocational Interest Blank (SVIB) Occupational Group V, and the scores on the Minnesota Multiphasic Personality Inventory (MMPI) clinical and ego strength (ES) scales.

The supervisory ranking in the introductory practicum course was designated to be the criterion variable. The peer group ranking and the scores obtained from the RDS, Berkeley POQ, MMPI and SVIB were designated as the independent or predictor variables. It was inferred that the effectiveness of the counselor candidates' counseling performance, as perceived in the ranking of the faculty, would be related to the peers' ranking of similar behavior; and also, that said
effectiveness would be related to the personality attributes of open-mindedness, tolerance for ambiguity, general mental health and personal-social interest of the candidate.

It was recognized that the use of the supervisory ranking as an index of effectiveness has a limitation—the pooling of rankings from three different instructors and treating them as if they were all the same. Ratings, rankings and marks are by no means a constant value when obtained from different sources. Much of this is because of the variations in ideas about evaluation from instructor to instructor. These variations when collectively correlated with other measures may affect the apparent amount of correlation results.

It was assumed in the study, then, that the faculty members in question reflect similar viewpoints as to the elements for developing effective counseling relationships. This assumption was supported by research literature which suggests that therapists of different orientations tend to be more similar than different in their therapeutic behavior (Fiedler, 1950a; 1950b; Strupp, 1955a; 1955b; 1958; 1960; Truax and Curkhuff, 1965). Research information also suggests that different supervisors agree more than they disagree with each other in sorting for effectiveness of counseling relationship of counselors (Whitely, Mosher, and Donaghy, 1967; Scott, 1965; Embree, 1954).

Although research findings supported the assumption stated above, a step was taken to determine the extent of agreement in the supervisors' ranking used as the index of counseling effectiveness. The three University faculty members in question were asked to rank, according to potentials for counseling effectiveness, the content of
counseling tapes of six students who participated in a practicum during the Winter Semester of 1967 under another instructor. The Spearman Rho was computed to ascertain the relationship of rankings made. Rank order correlations of .76, .60 and .72 were obtained, respectively. The mean rank correlation was recorded at .69 which yields a critical ratio of 2.137. This critical ratio is statistically significant at the .05 level.

The sample was grouped into two sub-groups, 48 males and 23 females. Computations on selected data were made for each sub-group.

The investigation proceeded within basically two phases. The first phase of statistical treatment involved the computations of the mean scores and standard deviations for each sub-group. The mean data were used to define the average performances of the subjects in each test scale and test sub-scales. The variability of scores was defined by the size of the standard deviations obtained.

A normative analysis of the mean data was made. Mean scores computed for each sub-group were compared for significant differences. The same mean data were compared with the tentative norms developed for the counselor candidates at Western Michigan University (Mendoza, 1967). The normative study was aimed at determining the feasibility of a total group computation of scores and the representativeness of the sample group under study.

Testing of the statistical significance of mean differences involved the calculation of the critical ratios at the .05 and .01 levels of confidence. In the study, the .05 level of confidence was accepted.
The second phase of statistical treatment involved the major tasks purported in the study—predictive analyses: simple, partial and multiple.

The first task in correlational analysis was a simple correlation study between the criterion variable and the predictor variables. The aims were to discover how the criterion variable relates to each predictor variable and how the predictor variables in turn intercorrelate with each other.

The Pearson Product Moment Method was used in the simple correlational phase of the study. Correlation results must be statistically significant to be of true value for establishing relationships and for predictive purposes. The significance of the $r$'s obtained were tested against their probable errors (Guilford, 1933; 1956) and by computing the $t$ values of each obtained $r$ and comparing them with the $t$'s to be expected by chance on the .05 level of confidence (Garrett, 1949).

After determining the predictive potential of each independent variable, a partial correlation test was computed for the predictor scores and the peer group ranking. The purpose of the test was to find out the predictive potential of each variable in forecasting effectiveness of counseling performance, while other variables were held constant.

The final and main task was a multiple correlation approach in predicting counseling effectiveness. The predictor variables were pooled and manipulated in various combinations in a multiple regression equation designed to produce the result(s) with the highest
predictive value(s). The results of the simple correlational study provided the bases for the multiple correlation study.

Multiple R's were derived from combinations of variables starting with 23 predictor variables, the number of which was decreased successively to 18, 14 and five, respectively. For the 23 and 18 variable problems, only the total pool of the R's was calculated. For the 14 predictor variable problem, the manipulation of variables into various combinations resulted in 20 multiple R's. The final multiple correlation problem which used five predictor variables, combined the MMPI clinical scales into a single score, the ego strength (ES) score, and was used to represent the general mental health variable in the study. The combinations of the five variables produced 16 multiple R's of differing values.

All the multiple R's were tested for significance at the .05 level of confidence.

The Western Michigan University's computer center was employed to compute the statistical data.

The findings were summarized in Tables 4.1 to 4.8 in Chapter IV. In the same chapter, the data reported were discussed.

Instrumentation

For the purpose of this investigation, psychological openness and dogmatism were operationally defined as the score achieved by the subject on the RDS (Rokeach, 1960, pp. 70-100). Previous research has established the usefulness of this device by finding satisfactory correlations between scores achieved on the scale and personality.
variables serving as criterion measures. It may be considered the best existing objective measure of open-closed-mindedness. A host of studies supported the reliability and validity of the instrument (Rokeach, 1960, pp. 101-108; 171-274).

The tolerant personality was defined by the score achieved on the Berkeley POQ. This scale has been widely investigated by Adorno, et al. (1950), and since its publication in 1950, it has been used in many investigations (Chreistie and Cook, 1958). Rushlau (1957), in a study of the tolerance for ambiguity as a general behavior type, found the questionnaire an adequate measure of ambiguity tolerance.

The scores obtained on the ego strength scale and the clinical scales of the MMPI defined the personal adjustment and general mental health level of the group. The MMPI is the most widely researched of personality inventories. Its validity as a personality test measure in discriminating groups has been established (Ellis, 1956; Calvin and McConnel, 1958). Mendoza (1967) developed tentative University norms on the MMPI clinical scales for counselor candidates at Western Michigan University.

The SVIB scores on the Occupational Group V pattern defined the area of interest of the group in the personal-social field. Strong and his associates (1943; 1962) have validated the SVIB for men and women on various specific occupations and occupational groups. There is little question that this interest inventory is one of the best now in use, not only for counseling and selection purposes but also for the broader field of research.
The ranking received by the counselor candidates as they were ranked as counselor of choice in School Services 680 by their peers constituted the peer group ranking data.

The supervisory ranking each counselor candidate received in the introductory counseling practicum class, School Services 683, was designated as the criterion of counselor effectiveness.

The Null Hypotheses

The following specific sub-hypotheses are null reformulations derived from the major hypotheses stated in Chapter One on page 10.

\( H_1 \) There is no significant difference between male and female counselor candidates in open-mindedness, tolerance for ambiguity, general mental health and vocational interest in the personal-social field.

\( H_2 \) Peers do not perceive female counselor candidates any differently than they do male counselor candidates in their ranking of both as counselors of choice.

\( H_3 \) Supervisors do not perceive female counselor candidates any differently from their male counterparts in their ranking of both as more effective counselors.

\( H_4 \) Personality variables of open-mindedness, tolerance for ambiguity, general mental health and vocational interest in the personal-social field are not related to manifested effectiveness of counseling performance as ranked by faculty supervisors.

\( H_5 \) No significant relationship exists between peer group ranking and supervisor's rating of counselor competency or effectiveness.

\( H_6 \) Personality variables of open-mindedness, tolerance for ambiguity, general mental health and personal-social interest are not significantly intercorrelated.

\( H_7 \) There is no significant relationship between a combination of the variables of open-mindedness, tolerance for ambiguity, general mental health and personal-social interest and counseling effectiveness.
CHAPTER IV

RESULTS AND ANALYSIS OF DATA

Findings on the study are presented and analyzed under four headings: (1) Normative Analysis of Data; (2) The Simple Correlation Results; (3) Partial Correlation Results; and (4) Multiple Correlation Analysis.

Normative Analysis of Mean Data

Hypothesis one stated that male counselor candidates do not differ from female counselor candidates in open-mindedness, tolerance for ambiguity, general mental health and interest in the personal-social sphere. Hypotheses two and three maintained that peers and supervisors do not perceive female counselor candidates any differently from their male counterparts. Data relevant to these assertions are shown in Table 4.1 wherein the mean scores and standard deviations, together with the critical ratio results between paired mean scores of the male and female sub-groups, were summarized. The observable differences in mean scores in all test scales and test sub-scales, together with the peer group ranking (PGR) and the supervisory ranking (SR) data were found to be significant. Critical ratios statistically significant at the .05 level of confidence in all variables were observed.

It is interesting to note that the male counselor candidates, who were found to be significantly more dogmatic and less tolerant of
TABLE 4.1
MEANS, STANDARD DEVIATIONS AND CRITICAL RATIOS
FOR NORMATIVE AND SAMPLE GROUPS, MALE AND
FEMALE COUNSELOR CANDIDATES

<table>
<thead>
<tr>
<th></th>
<th>MALE</th>
<th>FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normative(106)</td>
<td>Sample(48)</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>SR</td>
<td>6.67</td>
<td>4.31</td>
</tr>
<tr>
<td>PGR</td>
<td>5.19</td>
<td>3.69</td>
</tr>
<tr>
<td>POQ</td>
<td>-71.29</td>
<td>42.00</td>
</tr>
<tr>
<td>Hs</td>
<td>12.11</td>
<td>2.98</td>
</tr>
<tr>
<td>D</td>
<td>16.40</td>
<td>3.95</td>
</tr>
<tr>
<td>Pd</td>
<td>22.19</td>
<td>3.20</td>
</tr>
<tr>
<td>Hf</td>
<td>27.19</td>
<td>6.87</td>
</tr>
<tr>
<td>Pa</td>
<td>10.04</td>
<td>2.41</td>
</tr>
<tr>
<td>Pt</td>
<td>25.80</td>
<td>5.11</td>
</tr>
<tr>
<td>Sc</td>
<td>25.80</td>
<td>5.11</td>
</tr>
<tr>
<td>Ma</td>
<td>19.94</td>
<td>3.77</td>
</tr>
<tr>
<td>Si</td>
<td>18.30</td>
<td>9.05</td>
</tr>
<tr>
<td>SVIB</td>
<td>53.62</td>
<td>7.74</td>
</tr>
</tbody>
</table>

**Significant at the .01 level
*Significant at the .05 level

ambiguity when compared with their female counterparts, were nevertheless
ranked significantly higher by the ranking faculty supervisor and peers,
and thus perceived as being more competent and effective.

The female counselors were found to be not only significantly
more open-minded and tolerant of ambiguity than the male counselors,
but also to have significantly higher inventoried personal-social interest.

On the Minnesota Multiphasic Personality Inventory (MMPI), the
female counselor candidates recorded high scores on all scales except on
the paranoia and hypomania scales. The scores are statistically significant

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
compared with those obtained by the male counselor candidates. These findings supported Mendoza's (1967) report which found differences between the male and female counselor candidates' personality profiles on the MMPI scales. The profiles obtained suggested that the female counselors have the tendency, significantly higher than the male counselor candidates, to be hysterical, depressed and to develop neurotic patterns of social dependency. On the other hand, the male counselors showed a significant tendency to be more active and motivated, and to develop deeper hostile and aggressive behavior.

How representative the present sample is of the normative sample of Western Michigan University counselor candidates (Mendoza, 1967) was also investigated. An examination of Table 4.1 shows clearly some observable mean differences between the two mean data for each sex group. A comparative study, however, revealed no significant differences except in the Rokeach Dogmatism Scale (RDS) and the Berkeley Public Opinion Questionnaire (Berkeley POQ) scales, where differences at the .05 levels were computed.

Such a result indicated that in aspects of general mental health and personal-social interests, there is no reason to believe that the sample group is not representative of the normative sample. The sample group, however, constituted 71 subjects who are more tolerant of ambiguous stimuli and who are more open-minded compared with the rest.

On the basis of the above findings, hypotheses one, two, and three are rejected. Male counselor candidates differ significantly from female counselor candidates in personality attributes of open-mindedness, tolerance for ambiguity, general mental health and personal-
Graphical Presentation of the Personality Profiles of Male and Female Counselor Candidates

Figure 4.1

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
social interest.

Figure 4.1 is a graphical presentation of the personality profiles of each sub-group. The profiles show the extent to which the male counselor personality differs from that of the female counselor personality.

Simple Correlational Results

It was asserted in hypothesis four that personality variables of open-mindedness, tolerance for ambiguity, general mental health and personal-social vocational interest are not related to supervisors' rated effectiveness of counseling performance. Hypothesis five posits a question as to the relationship between the PGR and the SR. Table 4.2 and Table 4.3 show the data relative to these questions. Table 4.2 summarizes the Pearson $r$'s between the criterion and the predictor variables and the $r$'s among the predictors for the female sub-group. Table 4.3 summarizes the same for the male sub-group.

Correlation between the criterion and the predictor variables. The PGR variable correlated positively and significantly with the criterion. A relationship of .72 was recorded for the female sub-group and .63 for the males. These values are positive and both tests of significance, the $\text{PE}_r$ and the $t$ tests, revealed significant relationships. The $\text{PE}_r \times 4$ results were .267 for the female and .236 for the male, respectively. The computed $r$'s are significantly higher than four times their probable errors; therefore, the correlation between the PGR and the criterion is highly reliable. The computed $t$ values, which were 5.00 for the females and 5.51 for the males, are both sta-
tistically significant. The above findings provided the basis for rejecting hypothesis five.

The correlational results between the PGR and the criterion showed that 49 per cent of the total variance in the criterion are attributable to, or dependent upon, the PGR for the female sub-group. Likewise, for the male sub-group, the percentage accounted for in the total variance is 40 per cent.

Positive but insignificant relationships were computed between the criterion and the measures of open-mindedness and tolerance for ambiguity. Almost zero and insignificant positive and negative correlations were calculated for the rest of the predictor variables.

The results gave evidence to support the assertion made in hypothesis four.

It is concluded from these correlation results between the criterion and the predictor variables that only the PGR, of the variables examined, has the real potential for predicting counselor effectiveness.

The intercorrelation among predictor variables. The intercorrelational study of predictor variables would reveal how independently each measuring instrument measured the personality variables being studied. Tables 4.2 and 4.3 provide data showing the intercorrelations that are present among the measuring instruments.

Inspection of the data in each table revealed negative and positive, but insignificant, relationships between personal-social interests and all other variables for both sub-groups. Open-mindedness and tolerance for ambiguity correlated insignificantly in both positive
### TABLE 4.2

PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN THE CRITERION AND PREDICTOR VARIABLES AND BETWEEN PREDICTORS (FEMALE SUB-GROUP)

N=23

<table>
<thead>
<tr>
<th>Variables</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>X6</th>
<th>X7</th>
<th>X8</th>
<th>X9</th>
<th>X10</th>
<th>X11</th>
<th>X12</th>
<th>X13</th>
<th>X14</th>
<th>X15</th>
<th>X1</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RDS</td>
<td>.64</td>
<td>-.03</td>
<td>-.02</td>
<td>-.16</td>
<td>-.38</td>
<td>.23</td>
<td>-.23</td>
<td>-.07</td>
<td>-.13</td>
<td>.18</td>
<td>-.03</td>
<td>.16</td>
<td>.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POQ</td>
<td>-.07</td>
<td>-.25</td>
<td>-.21</td>
<td>-.18</td>
<td>.36</td>
<td>-.28</td>
<td>-.28</td>
<td>-.19</td>
<td>.17</td>
<td>-.14</td>
<td>.41</td>
<td>-.09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hs</td>
<td>.63</td>
<td>.58</td>
<td>.24</td>
<td>-.11</td>
<td>.44</td>
<td>.73</td>
<td>.73</td>
<td>.10</td>
<td>.45</td>
<td>.08</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>.21</td>
<td>.12</td>
<td>-.32</td>
<td>.13</td>
<td>.85</td>
<td>.69</td>
<td>-.17</td>
<td>.83</td>
<td>-.13</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hy</td>
<td>.33</td>
<td>.14</td>
<td>.61</td>
<td>.27</td>
<td>.32</td>
<td>.15</td>
<td>-.13</td>
<td>.19</td>
<td>-.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ph</td>
<td>.36</td>
<td>-.13</td>
<td>.19</td>
<td>.08</td>
<td>.06</td>
<td>.04</td>
<td>.03</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mf</td>
<td>.02</td>
<td>.32</td>
<td>-.29</td>
<td>.16</td>
<td>.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pa</td>
<td>.16</td>
<td>.18</td>
<td>.29</td>
<td>.07</td>
<td>-.01</td>
<td>.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pt</td>
<td>.84</td>
<td>-.17</td>
<td>.65</td>
<td>.02</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sc</td>
<td>.02</td>
<td>.48</td>
<td>.26</td>
<td>.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ma</td>
<td>-.38</td>
<td>.02</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Si</td>
<td>-.33</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SVIB</td>
<td>.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR</td>
<td>.72</td>
<td>.11</td>
<td>-.09</td>
<td>.06</td>
<td>.07</td>
<td>.06</td>
<td>-.16</td>
<td>-.25</td>
<td>.20</td>
<td>.00</td>
<td>.08</td>
<td>.02</td>
<td>.01</td>
<td>.14</td>
<td></td>
</tr>
</tbody>
</table>

Mean  6.39  -26.91  -63.74  13.48  18.48  23.70  23.00  37.39  8.87  26.35  26.00  9.19  20.35  55.17  7.22
### TABLE 4.3

**PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN THE CRITERION AND PREDICTOR VARIABLES AND BETWEEN PREDICTORS (MALE SUB-GROUP)**  
**N = 48**

<table>
<thead>
<tr>
<th>Variables</th>
<th>$x_2$</th>
<th>$x_3$</th>
<th>$x_4$</th>
<th>$x_5$</th>
<th>$x_6$</th>
<th>$x_7$</th>
<th>$x_8$</th>
<th>$x_9$</th>
<th>$x_{10}$</th>
<th>$x_{11}$</th>
<th>$x_{12}$</th>
<th>$x_{13}$</th>
<th>$x_{14}$</th>
<th>$x_{15}$</th>
<th>$x_1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGR $x_2$</td>
<td>-</td>
<td>.18</td>
<td>-.03</td>
<td>-.09</td>
<td>-.18</td>
<td>.04</td>
<td>-.01</td>
<td>-.11</td>
<td>.01</td>
<td>-.09</td>
<td>.20</td>
<td>-.04</td>
<td>-.17</td>
<td>.11</td>
<td>.63</td>
</tr>
<tr>
<td>RDS $x_3$</td>
<td>.64</td>
<td>-.26</td>
<td>.05</td>
<td>-.08</td>
<td>.01</td>
<td>-.15</td>
<td>-.08</td>
<td>-.17</td>
<td>-.16</td>
<td>.03</td>
<td>.14</td>
<td>.01</td>
<td>.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POQ $x_4$</td>
<td>-.06</td>
<td>.01</td>
<td>-.09</td>
<td>-.10</td>
<td>-.16</td>
<td>-.24</td>
<td>-.20</td>
<td>-.22</td>
<td>-.24</td>
<td>.46</td>
<td>.21</td>
<td>.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hs $x_5$</td>
<td>.20</td>
<td>.41</td>
<td>.45</td>
<td>.07</td>
<td>.12</td>
<td>.40</td>
<td>.56</td>
<td>.26</td>
<td>-.13</td>
<td>.26</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D $x_6$</td>
<td>.22</td>
<td>.28</td>
<td>.23</td>
<td>.12</td>
<td>.45</td>
<td>.08</td>
<td>-.23</td>
<td>.01</td>
<td>-.19</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hy $x_7$</td>
<td>.27</td>
<td>.05</td>
<td>.26</td>
<td>.32</td>
<td>.32</td>
<td>.03</td>
<td>-.16</td>
<td>-.02</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pd $x_8$</td>
<td>.11</td>
<td>.53</td>
<td>.40</td>
<td>.60</td>
<td>-.02</td>
<td>-.28</td>
<td>.11</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mf $x_9$</td>
<td>.09</td>
<td>.36</td>
<td>.17</td>
<td>-.02</td>
<td>.08</td>
<td>.04</td>
<td>-.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pa $x_{10}$</td>
<td>.28</td>
<td>.19</td>
<td>-.07</td>
<td>-.14</td>
<td>-.04</td>
<td>-.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pt $x_{11}$</td>
<td>.35</td>
<td>-.08</td>
<td>.10</td>
<td>-.02</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sc $x_{12}$</td>
<td>-.01</td>
<td>-.20</td>
<td>.05</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ma $x_{13}$</td>
<td>-.23</td>
<td>.27</td>
<td>-.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Si $x_{14}$</td>
<td>.35</td>
<td>.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SVIB $x_{15}$</td>
<td>-.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| SR $x_1$ | .63  | .18  | .10  | .02  | -.02 | -.03 | .04  | -.04 | -.08  | .04    | .17    | -.27   | .16    | -.07   |


| SD   | 3.69 | 19.73 | 30.70 | 2.78  | 3.22  | 3.32  | 3.63  | 4.69  | 2.24   | 2.98   | 2.55   | 2.56   | 6.79   | 8.74   | 4.31  |
and negative directions with the MMPI clinical scale scores. The RDS and Berkeley POQ are the only variables that are positively and significantly correlated. The r's obtained—.64 for both sub-groups—are significant at the .05 level.

The MMPI intercorrelations revealed that personality traits measuring general mental health operate in various combinations of the clinical scales. The data showed that there are rather consistent groupings of behavioral features among counselor candidates. Personality traits relative to general mental health occur in clusters which overlap and interrelate in many ways.

The intercorrelational findings on the RDS and the Berkeley POQ and on the MMPI scales supported the results reported by Mendoza (1967) where similar outcomes were obtained.

Partial Correlation Results

The results of the simple correlational study seemed to suggest that only the PGR, of the items examined, is a predictor variable of significant value for predicting counseling effectiveness. The value of utilizing the other independent variables, however, should not be underestimated. To determine whether or not a relationship between each predictor variable and the criterion really exists, before the multiple correlation study was undertaken, a partial correlation study was made between the criterion and each predictor variable while the other variables were held constant. The partial correlation study was aimed at ascertaining the potential values of each predictor variable. Results of the statistical treatment are reported in Table 4.4.
TABLE 4.4

PARTIAL CORRELATIONS BETWEEN THE CRITERION AND PREDICTOR VARIABLES

<table>
<thead>
<tr>
<th>Variables</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGR</td>
<td>.69</td>
<td>.93</td>
</tr>
<tr>
<td>RDS</td>
<td>.16</td>
<td>.25</td>
</tr>
<tr>
<td>POQ</td>
<td>.28</td>
<td>.12</td>
</tr>
<tr>
<td>Hs</td>
<td>.24</td>
<td>.40</td>
</tr>
<tr>
<td>D</td>
<td>.00</td>
<td>.40</td>
</tr>
<tr>
<td>Hy</td>
<td>.23</td>
<td>.17</td>
</tr>
<tr>
<td>Pd</td>
<td>.50</td>
<td>.29</td>
</tr>
<tr>
<td>Mf</td>
<td>.20</td>
<td>.45</td>
</tr>
<tr>
<td>Pa</td>
<td>.19</td>
<td>.32</td>
</tr>
<tr>
<td>Pt</td>
<td>.20</td>
<td>.54</td>
</tr>
<tr>
<td>Sc</td>
<td>.17</td>
<td>.59</td>
</tr>
<tr>
<td>Ma</td>
<td>.17</td>
<td>.38</td>
</tr>
<tr>
<td>Si</td>
<td>.41</td>
<td>.38</td>
</tr>
<tr>
<td>SVIB</td>
<td>.14</td>
<td>.63</td>
</tr>
</tbody>
</table>

A careful study of the above table revealed further the strength of the PGR's potential for forecasting effectiveness of counseling, for both sub-groups. Among the female counselor candidates the masculinity-femininity, psychasthenia and schizophrenia scales of the MMPI and the Occupational Interest Group V area of the SVIB showed potentials for predicting purposes. For the male sub-group, scores on the psychopathic deviate and social intelligence scales showed substantial significance. Thus for the female counselor candidates, drive and high motivation and sustained interest in the personal-social field can be predictive of counseling effectiveness.

The RDS and the Berkeley POQ variables showed positive but insignificant relationships with the SR data.

Thus a partial correlation study had contributed information about the potential values of each variable for predicting counseling
effectiveness as each could be useful in the multiple correlation study.

Multiple Correlation Analysis

It would seem at first that any test that correlates insignificantly or zero with a criterion would have no value in predicting that criterion. It is true that alone it has no value whatsoever for doing this, but if the test is combined with other tests with which it has some correlational relationship (Guilford, 1956), then it does have value. Hence, using this rationale, all predictor variables were combined with the PGR data in a multiple correlation equation to produce the highest possible relationship that could predict effectiveness of counseling performance.

Hypothesis seven maintained that a combination of the variables of open-mindedness, tolerance for ambiguity, general mental health and personal-social interest will not produce a relationship significant to predict counseling effectiveness. It could be inferred from this assertion that whatever additive effect a combination of the pooled personality variables may have to the relationship that was observed between the PGR and the criterion would be nil. Data relevant to these statements were summarized and reported in Tables 4.5, 4.7, and 4.8 on pages 51, 56, and 57, respectively. Multiple correlation coefficients predicting counselor effectiveness were obtained for both sub-groups on various combinations of pooled independent variables.

Total multiple R's of .97 for the males and 1.00 for the females were computed from the pool of all predictor variables. These multiple

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
R's represent the maximum correlation between the criterion and the weighted combination of 23 independent variables. They are very high and almost perfect correlation values.

Relative to very high values of R, Guilford (1956) pointed out that the multiple R capitalizes upon any chance deviations that favor high multiple correlation. The multiple R is therefore an inflated value. It is a biased estimate of the multiple correlation in the population. For this reason, it is desirable to find some means of estimating a parameter R which gives a more realistic picture of the general situation. Guilford (1956) provides a formula for shrinkage to correct and calculate the unbiased estimate of the multiple R. This formula was used to correct the biased estimates of the multiple R's generated by the 23 predictor variable scores.

Multiple R's of 1.00 for the females and .89 for the males were calculated. It will be noticed that the corrected value for the female sub-group did not change. To this effect, McNemar (Coats, 1966) points out that if the number of variables n is equal to the number of observations N, then the R will be equal to unity regardless of the nature of the variables. He pointed out further that when n is large relative to N, the real significance of the obtained R is questionable. He suggested that in order to improve the ratio between N and n, the number of predictor variables should be reduced or the number of cases increased. In this study, the n was reduced by first eliminating the validity scores of the MMPI, then the uncorrected scale scores, and finally by pooling all the clinical scale scores into one single score, the ego strength (ES) score.
### TABLE 4.5

MULTIPLE CORRELATION COEFFICIENTS BETWEEN THE CRITERION AND 14 PREDICTOR VARIABLE SCORES

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Male (N=48)</th>
<th>Female (N=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R</td>
<td>R^2</td>
</tr>
<tr>
<td>A</td>
<td>.76**</td>
<td>.5776</td>
</tr>
<tr>
<td>B</td>
<td>.75**</td>
<td>.5625</td>
</tr>
<tr>
<td>C</td>
<td>.75**</td>
<td>.5625</td>
</tr>
<tr>
<td>D</td>
<td>.65**</td>
<td>.4225</td>
</tr>
<tr>
<td>E</td>
<td>.65**</td>
<td>.4225</td>
</tr>
<tr>
<td>F</td>
<td>.65**</td>
<td>.4225</td>
</tr>
<tr>
<td>G</td>
<td>.65**</td>
<td>.4225</td>
</tr>
<tr>
<td>H</td>
<td>.64**</td>
<td>.4096</td>
</tr>
<tr>
<td>I</td>
<td>.65**</td>
<td>.4225</td>
</tr>
<tr>
<td>J</td>
<td>.64**</td>
<td>.4096</td>
</tr>
<tr>
<td>K</td>
<td>.64**</td>
<td>.4096</td>
</tr>
<tr>
<td>L</td>
<td>.49</td>
<td>.2401</td>
</tr>
<tr>
<td>M</td>
<td>.20</td>
<td>.0400</td>
</tr>
<tr>
<td>N</td>
<td>.43</td>
<td>.1849</td>
</tr>
<tr>
<td>O</td>
<td>.19</td>
<td>.0361</td>
</tr>
<tr>
<td>P</td>
<td>.18</td>
<td>.0121</td>
</tr>
<tr>
<td>Q</td>
<td>.21</td>
<td>.0441</td>
</tr>
<tr>
<td>R</td>
<td>.19</td>
<td>.0361</td>
</tr>
<tr>
<td>S</td>
<td>.20</td>
<td>.0400</td>
</tr>
<tr>
<td>T</td>
<td>.43</td>
<td>.1849</td>
</tr>
</tbody>
</table>

** Significant at the .01 level  
* Significant at the .05 level

**NOTE:** Coded number of predictor variables

- 2 PGR
- 3 RDS
- 4 Berkeley POQ
- 5 MMPI
- 6 SVIB

The multiple R's generated after eliminating the validity scores on the MMPI (n = 18) were .80 (.79 corrected for shrinkage) and .97 (.97 also corrected for shrinkage) for male and female sub-groups, respectively. With the shrunk values, still almost the same as the biased
estimates, real significance could not yet be attributed to them. Attention was given to the size of the n relative to N for the female sub-group.

The elimination of the uncorrected scale scores from the pool of 18 variables reduced the number of n to 14. The total pool of 14 predictor scores yielded multiple R's of .76 (.70 corrected for shrinkage) and .90 (.82 corrected for shrinkage) for both sub-groups. The 14 variables then were combined in various ways which generated 20 multiple R's for each sub-group. The summary data are presented in Table 4.5. Coded letters were used to identify the data combined for multiple prediction.

An examination of the multiple correlation table revealed that the combination of variables which included the PGR data are the only ones found to be of significant values. The multiple R's ranged from .73 to .90 for the female counselor candidates, and from .64 to .76 for the male counselor candidate group. In comparing these results with the correlation between the PGR and the SR data, a minimal increase of .01 to .13 was recorded for the males. An increase up to .17 for the females was also observed.

These results disclosed that, from a pool of 14 independent variables, 41 to 58 per cent of the total variance in the criterion can be accounted for for the male counselor candidates. However, as stated earlier, 40 per cent of these values is attributable to the PGR data. For the female sub-group, 52 to 81 per cent of the total variance in the criterion was accounted for. One per cent to 28 per cent of these values is attributable to the pooled combinations of the personality...
variables.

The pooling of the MMPI clinical scale scores and the SVIB Occupational Group V variables together, as indicated by combination T, produced results which are substantial but not statistically significant. The pooling of all the objective test scores, combination L, likewise produced substantial but insignificant multiple R's. The L combination revealed the additive effects of the objective measures to the PGR variable in predicting counseling effectiveness. Combinations OPQ, which utilized mainly the RDS and the Berkeley POQ for prediction generated the smallest multiple R values.

The above findings ascertained the significance of the PGR in predicting counseling effectiveness. The limited potential of the personality variables for predicting effectiveness of counseling was also disclosed.

The final attempt to produce multiple R's of high significance was made by decreasing the number of the predictor variables to five. A single predictor score, the ES score on the MMPI, was used to substitute for the clinical scale scores, and to represent the general mental health variable in the study.

The ES is a 68 true-false item based on the MMPI reported in research literature (Barron, 1953; 1954; Wirt, 1955; Williams and Laurence, 1955; Tamkin, 1957; Tamkin and Klett, 1957; Ends and Page, 1957; Taft, 1957) as a reliable and highly valid measure of variables related to therapeutic outcomes. Its psychological correlates include the validity scales on the MMPI (F and K) and the hysteria, depression, hypochondria, psychopathic deviate, masculinity-femininity, paranoia,
and psychasthenia scales (Barron, 1953; 1954). It measures physical adequacy, social ease, independence of judgment, personal stability, absence of psychopathology, and secure sense of reality.

A correlational study was made for the five predictor variable problem before the predictor variables were pooled into several combinations which produced 16 multiple R's of differing values. Results obtained from the investigations are reported in Tables 4.6 and 4.7. Table 4.6 is the simple correlation table; Table 4.7 shows the obtained multiple R's.

A study of the mean findings disclosed the appropriateness of the use of the ES score as a measure of general mental health level. The correlations between the ES and the criterion were almost zero, for both sub-groups. The results substantiated the interpreted findings on the two sub-groups on the clinical scales of the MMPI. The mean differences observable between the two sub-groups in ego strength char-

### TABLE 4.6

**PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN THE CRITERION AND FIVE PREDICTOR VARIABLES (MALE N=48; FEMALE N=23)**

<table>
<thead>
<tr>
<th>Vari- M</th>
<th>PGR(X₂)</th>
<th>RDS(X₃)</th>
<th>POQ(X₄)</th>
<th>ES(X₅)</th>
<th>SVIB(X₆)</th>
<th>SR(X₁)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M</strong></td>
<td><strong>F</strong></td>
<td><strong>M</strong></td>
<td><strong>F</strong></td>
<td><strong>M</strong></td>
<td><strong>F</strong></td>
<td><strong>M</strong></td>
</tr>
<tr>
<td>X₂</td>
<td>-</td>
<td>-.18</td>
<td>-.13</td>
<td>-.03</td>
<td>-.01</td>
<td>.03</td>
</tr>
<tr>
<td>X₃</td>
<td>.65</td>
<td>.57</td>
<td>-.06</td>
<td>-.42</td>
<td>.02</td>
<td>.16</td>
</tr>
<tr>
<td>X₄</td>
<td>.00</td>
<td>-.20</td>
<td>-.21</td>
<td>.41</td>
<td>.10</td>
<td>-.10</td>
</tr>
<tr>
<td>X₅</td>
<td>.36</td>
<td>-.25</td>
<td>-.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
</tr>
<tr>
<td>X₆</td>
<td>.63</td>
<td>.72</td>
<td>.18</td>
<td>-.08</td>
<td>.10</td>
<td>-.10</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>5.19</td>
<td>6.39</td>
<td>-20.53</td>
<td>-26.13</td>
<td>-71.21</td>
<td>-63.74</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>3.69</td>
<td>3.24</td>
<td>19.73</td>
<td>20.80</td>
<td>39.31</td>
<td>53.58</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
acterized the female counselor candidates as having significant tendencies to be highly affected, dependent, mild and mannerly. The males, however, have the tendency to be alert, independent, reliable, resourceful, determined and responsible.

The pool of five predictor variables produced significant multiple R's from .63 to .67 for the males and from .77 to .82 for the females. All these results except one are significant at the .01 level. The observation reported in regard to the additive effects of the pooled personality variables to the relationship existing between the PGR and the SR in the 14 variable problem was substantiated. A minimum increase in the size of the multiple R's is observable for both subgroups.

The size of the multiple R for the female sub-group appears to be larger compared with the size of the multiple R for the male sub-group. It must be remembered, however, that the number of observations among the females is small, N = 23.

The significance of the increase in size of the multiple R's for both sub-groups was tested using Guilford's (1956) formula for testing significant differences between correlations. Results of the computations made were entered in Table 4.9 on page 57. The computed tests for significant differences were recorded at .99 for the male counselor candidates and 8.27 for the female counselor candidates. The result for the female sub-group is significant at the .01 level of confidence.

The above findings provided bases for the partial acceptance of hypothesis seven. The combination of the variables of tolerance
TABLE 4.7
MULTIPLE CORRELATION COEFFICIENTS BETWEEN THE CRITERION AND FIVE PREDICTOR VARIABLES

<table>
<thead>
<tr>
<th>Predictors</th>
<th>: Male (N=48)</th>
<th>Female (N=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R R²</td>
<td>R R²</td>
</tr>
<tr>
<td>A 2 3 4 5 6</td>
<td>.67** .4489</td>
<td>.82** .6624</td>
</tr>
<tr>
<td>B 3 4 5 6</td>
<td>.22 .0484</td>
<td>.18 .0324</td>
</tr>
<tr>
<td>C 2 4 5 6</td>
<td>.67** .4489</td>
<td>.81** .6561</td>
</tr>
<tr>
<td>D 2 4 5 6</td>
<td>.65** .4225</td>
<td>.78** .6084</td>
</tr>
<tr>
<td>E 2 4 6</td>
<td>.75** .4225</td>
<td>.80** .6400</td>
</tr>
<tr>
<td>F 2 3 4</td>
<td>.64** .4096</td>
<td>.77** .5929</td>
</tr>
<tr>
<td>G 3 5 6</td>
<td>.21 .0441</td>
<td>.14 .0196</td>
</tr>
<tr>
<td>H 4 5 6</td>
<td>.14 .0196</td>
<td>.18 .0324</td>
</tr>
<tr>
<td>I 2 5 6</td>
<td>.67** .4489</td>
<td>.78** .6084</td>
</tr>
<tr>
<td>J 2 3</td>
<td>.63** .3969</td>
<td>.77** .5929</td>
</tr>
<tr>
<td>K 2 4</td>
<td>.64** .4096</td>
<td>.78** .6084</td>
</tr>
<tr>
<td>L 2 5</td>
<td>.63** .3969</td>
<td>.77** .5929</td>
</tr>
<tr>
<td>M 2 6</td>
<td>.65** .4225</td>
<td>.66** .4356</td>
</tr>
<tr>
<td>N 3 5</td>
<td>.19 .0361</td>
<td>.09 .0081</td>
</tr>
<tr>
<td>O 3 6</td>
<td>.19 .0361</td>
<td>.11 .0121</td>
</tr>
<tr>
<td>P 3 4</td>
<td>.18 .0324</td>
<td>.10 .0100</td>
</tr>
</tbody>
</table>

** Significant at the .01 level
* Significant at the .05 level

NOTE: Coded number of predictors refer to

2 PGR
3 RDS
4 Berkeley POQ
5 ES
6 SVIB

for ambiguity, open-mindedness, general mental health and personal-social interest did not produce a significant relationship with the criterion. The additive effects of said variables to the PGR value are not significant for the male sub-group but are statistically significant for the female sub-group.

It was shown that the use of different numbers of variables
produced multiple correlation results of decreasing values. To find out whether or not differences in the values of the total multiple R's (generated by the pooled 23, 18, 14, and five predictor variables) were significant, F tests utilizing Guilford's (1956) formula for testing the statistical significance of two multiple R's were undertaken.

Table 4.8 below shows the results of the computations made.

**TABLE 4.8**

F-TEST RESULTS BETWEEN MULTIPLE R's OBTAINED FROM 23, 18, 14, FIVE AND ONE PREDICTOR VARIABLES (MALE N=48; FEMALE N=23)

<table>
<thead>
<tr>
<th>n</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>R₁</td>
<td>0.97</td>
</tr>
<tr>
<td>18</td>
<td>R₂</td>
<td>0.80</td>
</tr>
<tr>
<td>14</td>
<td>R₃</td>
<td>0.76</td>
</tr>
<tr>
<td>5</td>
<td>R₄</td>
<td>0.67</td>
</tr>
<tr>
<td>1</td>
<td>r₁,₂</td>
<td>0.63</td>
</tr>
</tbody>
</table>

F-RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>R₁-R₂</td>
<td>0.27</td>
<td>0.00</td>
</tr>
<tr>
<td>R₁-R₃</td>
<td>0.21</td>
<td>0.00</td>
</tr>
<tr>
<td>R₁-R₄</td>
<td>1.33</td>
<td>0.00</td>
</tr>
<tr>
<td>R₂-R₃</td>
<td>0.69</td>
<td>3.11</td>
</tr>
<tr>
<td>R₂-R₄</td>
<td>2.77</td>
<td>1.56</td>
</tr>
<tr>
<td>R₃-R₄</td>
<td>1.20</td>
<td>5.60*</td>
</tr>
<tr>
<td>R₄-r₁,₂</td>
<td>0.99</td>
<td>8.27**</td>
</tr>
</tbody>
</table>

**Significant at the .01 level
*Significant at the .05 level

The data in the above table indicated that the differences which were observable in the sizes of the multiple R's generated by the pooling of different numbers of independent variables are not statistically significant, with the exception of the difference obtained for the female sub-group on the 14 and five predictor variables.
A statistically significant difference was also indicated between the pooled five predictor variables and the single PGR predictor for the female sub-group.
CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

Summary

The purpose of the study was to predict counseling effectiveness based on the level of counselor candidates' performance in an introductory counseling practicum class through the use of a subjective measure of peer group ranking and objective measures of personality attributes assumed to be essential in establishing effective counseling relationships. The supervisors' ranking (SR) each counselor candidate received in the practicum class was designated as the criterion of counseling effectiveness. The scores obtained by each candidate from four standardized objective measuring instruments which constitute the screening tests for selection of counselor candidates at Western Michigan University, together with their peer group ranking (PGR) received in the initial course in counseling and personnel services were utilized as predictor variables.

The four tests which constituted the screening battery were the Rokeach Dogmatism Scale (RDS), Berkeley Public Opinion Questionnaire (Berkeley POQ), Minnesota Multiphasic Personality Inventory (MMPI) and the Occupational Group V area of the Strong Vocational Interest Blank (SVIB).

Several limitations were considered because they had important bearing on the findings which accrued from the investigation. It was recognized that the sample used was not randomly chosen and whether or
not it was truly representative of the student population selecting counselor education at Western Michigan University was not known. It was recognized further that the validity of the tests used has been empirically derived, and thus, the results were valid only as the tests used are valid instruments. In addition, the respondents were themselves a great source of variance. As a consequence, the tests may exhibit different proportions of reliable variation and even measure different constructs under different testing circumstances. The use of the criterion, which was a pool of the ranking done by three University faculty members, raised the question of the extent of agreement among supervisory ranking data.

The normative survey method of research was employed. Specifically, the techniques used were documentary frequency procedure and statistical analysis. The main tasks involved the estimation of the predictive values of the independent variables as each variable correlated with the criterion, and the predictive values of these variables pooled together in various combinations.

The study was conducted under two phases. Phase one dealt with the comparative analysis of normative data, and phase two dealt with correlational analyses—simple, partial, and multiple.

Phase one established support for the assumption of the study, determined the representativeness of the sampling used and provided the basis for the sub-group treatment of correlational data.

Phase two gave information pertinent to the predictive potentials of each test scale and test sub-scales, both in the simple and partial correlational treatment. Lastly, the predictive values of the test predictors
pooled together in different combinations in a multiple regression approach were ascertained.

Conclusions

The following conclusions have been reached within the limitations of the study:

1. The limited predictive potentials of the results of the objective measures of personality and the strong predictive potential of the subjective measure of peer group ranking were discovered, utilizing appropriate predictive analysis techniques.

2. The hypothesis of no significant relationship between counseling effectiveness and open-mindedness was accepted. Relationships obtained were positive but very low.

3. The hypothesis of no significant relationship between counseling effectiveness and tolerance for ambiguity was accepted. Positive but very low correlation was obtained for the male sub-group.

4. The hypothesis of no significant relationship between counseling effectiveness and personal-social interest was accepted. While low and positive result was established for the male counselor candidates, a negative result was obtained for the female counselor candidates.

5. The hypothesis that the effectiveness of counseling performance is not significantly related to general mental health was accepted. The MMPI correlation results ranged from very insignificant positive to insignificant negative values, with other scales regis-
tering zero to almost zero relationships.

6. The hypothesis that general mental health, open-mindedness, tolerance for ambiguity and personal-social interest are not inter-related was partially accepted. A further breakdown was necessary:

   a. Tolerance for ambiguity and open-mindedness were positively correlated. The relationship was statistically significant. An overlap of about 35 per cent was estimated to be present.

   b. Personal-social interest of male and female counselor candidates correlated positively with tolerance for ambiguity. Relationships, however, were insignificant.

   c. General mental health variables correlated insignificantly with variables of open-mindedness, tolerance for ambiguity and personal-social interest.

7. The hypothesis of no significant relationship between peer group ranking and effectiveness of counseling performance was rejected. The relationships obtained were positive and statistically significant. A further breakdown was necessary:

   a. Male counselor candidates were perceived to be more effective than their female counterparts by peers, in the same way that ranking faculty supervisors perceived said candidates as more effective.

8. The hypothesis that a combination of the personality variables of open-mindedness, tolerance for ambiguity, general mental health and personal-social interest will not produce significant relationships with the criterion of counseling effectiveness was partially accepted.
A further breakdown was necessary:

a. The multiple R's generated by the pooled personality predictor variables were not significant.

b. The additive effect of the combined personality variables to the PGR data of the male counselor candidates was not significant.

c. The additive effect of the combined personality variables to the PGR data of the female counselor candidates was statistically significant.

Discussion

The study was normative and predictive and limited to a certain extent, by the sampling techniques used; however, the findings are worthy of attention. Support was found for the assumption that a generic counselor personality exists. The instruments utilized for counselor selection adequately measured the attributes of tolerance for ambiguity, open-mindedness, general mental health and personal-social interest. Also, answers to the questions of how these dimensions of personality are related to effectiveness of counseling performance was ascertained.

As noted in the findings, the degree to which the above mentioned variables of personality operate among male and female counselor candidates is significantly different. It was discovered that female counselor candidates appear to be more open-minded, to be more tolerant of ambiguous stimuli and to have higher personal-social interest. In general, differences ascertained in the general mental health area
revealed optimistic and cheerful women, who have tendencies to be excitable and socially dependent with some interests in common with men; and men who are confident, emotionally mature and relaxed, and who have tendencies to be aggressive with some interests in common with women.

Although differences were found to exist between the two subgroups, in considering these differences, it is important to keep in mind that all scores obtained are within normal limits, that is + two standard deviation units from the mean scores. While the differences in scores are statistically significant, they are too small to be of clinical utility. Such differences which arose, however, appear to be psychologically meaningful.

A significant finding is the commonality of interest of counselor candidates regardless of sex. This observation seems to be logical in counseling, for in the counseling relationships, the counselor should be able to free himself from the limits of narrow and inappropriate masculine and feminine roles. The nature of the counseling task implies the counselor's need for a broader concept which includes behavior from both roles, in order that he may always have readily available behavior which is appropriate for any given situation. Thus, the counselor is "both a man and a woman" (Farson, 1958).

Results of the correlational study provided interesting data. The positive but insignificant relationships between the criterion of counseling effectiveness and open-mindedness and tolerance of ambiguity, as assessed by the RDS and the Berkeley POQ, did not lend support to the findings of other studies like Halkides (1958), Kagan, (1961),
Truax and Curkhuff (1965), Butler, Rice and Wagstaff (1962), Ellsworth (1963), Jourard (1964), and Allen (1966), where effectiveness of counselor trainees was found to be a function of psychological openness.

A major finding of the study was the demonstrated reasonably high positive correlation between the supervisor's ranking and the peer group's judgment of counselor competency, which were both subjective judgments based on counselor behavior (McDougall, 1961; Harshman, 1964; Embree, 1954; Stefflre, 1962; Dilley, 1964; Dann, 1965). This finding is noteworthy. It suggests that the use of peer rating techniques in appraising selected attributes of the counselor candidates seems to merit consideration in gaining insight into the effectiveness of his performance, as well as of his progress and achievement.

The intercorrelation results among predictor variables with the exception of the intercorrelations among the MMPI scales, were low and obviously insignificant. The value of having low and almost zero intercorrelations among tests in a battery was discussed by Guilford (1956). He stated "...Zero and almost zero intercorrelations among tests will be found when each test measures a unique factor...also often it will be found that each test tends to correlate low with the criterion..." (p. 408).

The low intercorrelation results, therefore, implied that the Occupational Group V area of the SVIB measures a unique personality factor. The low \( r \) results between the MMPI scales and the RDS and Berkeley POQ implied likewise that the MMPI scales measure unique attributes different from those measured by the RDS and the Berkeley POQ.
The substantial overlap of 35 per cent found to be present between the RDS and the Berkeley POQ measures indicated that these two instruments do not measure uniquely what they purport to measure. The MMPI scales which showed substantial overlap were the hypochondria scale with the hysteria, psychopathic deviate and schizophrenia scales and the psychopathic deviate scale with the paranoia and schizophrenia scales for the male sub-group. For the female sub-group, overlaps were recorded for the hypochondria scales with the depression, hysteria, paranoia, psychasthenia, psychopathic deviate and schizophrenia scales. These overlap on the MMPI would suggest that the personality attributes assessed by the above measures, especially the psychopathic deviate, hypochondria and depression scales, are complex and are not uniquely tapped by each measuring scale. Thus the RDS, Berkeley POQ, and most of the clinical scales of the MMPI, are not the pure measures of personality attributes they purport to be.

The low correlations found between the predictor variables and the criterion would seem to indicate that a practical criterion like training achievement, or job performance, or as in this study, the effectiveness of counseling, is usually a complex variable. It has a number of component variances, each component variance being a common factor. Relative to this phenomenon, Guilford (1956) says "...low intercorrelations of tests with a practical criterion can be tolerated, provided we can combine enough tests in a battery, and provided their intercorrelations are near zero" (p. 408). The findings of the study did not show the described trend of relationships. Substantially high and statistically significant multiple R's tenable at the .01 level,
except for one which was tenable at the .05 level, were obtained only by combining the personality variables with the PGR to predict the criterion of counseling effectiveness. When tested for significance, the additive effects of the personality variables to the PGR's predictive value were found to be not significant for the males but statistically significant for the females.

The results suggested that the PGR, although a subjective measure, is by far the most powerful variable for prediction of counseling effectiveness. The predictive values of the Occupational Group V area of the SVIB, the combined MMPI clinical scale scores and the RDS and Berkeley POQ scores, as evidenced by the significant finding revealed for the female counselor candidates seem to suggest that these variables merit further inquiry as they relate to female counselors' behavior in counseling.

The above findings should be subjected to further investigation. The results had not been as fruitful as desired, but there is reason to be optimistic about the possibility of discovering more information on the characteristics of counselor candidates and practitioners, for use as criterion measures of counseling skills, effectiveness and success.

Recommendations

On the basis of the completed study, the following recommendations are made:

1. A study of the use of norms established on each measuring instrument of the screening tests in discriminating between potentially
successful and unsuccessful counselor candidates is recommended before they are used as specific screening criteria.

2. The prediction of potential counselor effectiveness using a standardized personality instrument is at best most difficult. While it was held that the instruments measured the important characteristics assumed to be essential in counseling success, it was also demonstrated that these instruments are not significantly correlated with the criterion of counseling effectiveness. Thus the employment of the tests for screening purposes would be limited to the identification of candidates whose test scores deviate significantly from the acceptable normal ranges, that is \( \pm 2SD \) units from the mean score.

3. The psychometric properties of a test on a particular occasion are a function of the psychological processes in responding, and these processes, being determined in part by the conceptions and needs of the respondents, often entail mechanisms of self-deception and deliberate facades. In view of these phenomena, a study of the psychometric properties of each test is recommended.

   a. An item analysis of each measuring instrument to determine and establish each test item's potential discriminating power to derive a more sensitive predictive function for predicting counseling effectiveness is recommended.

4. Replication of the study using a more sophisticated sampling design to test and verify the obtained findings is strongly recommended.

5. The rating of counselor behavior obviously involved an inferential and evaluative process. Some formal control of rater reliability would seem necessary to reduce rater subjectivity. To this end,
the following are recommended:

a. The adoption of a counselor rating scale to focus the ranking on behaviors hypothesized as indices of effectiveness can reduce intuitive ratings and increase the possibility of replication studies.

b. The use of a peer rating judgment scale by classmates, focusing on similar personality dimensions as those contained in a counselor rating scale, can also reduce intuitive ratings among peers and increase the possibility of replication studies.

6. Extreme caution should be exercised in generalizing the results of the study to a population other than the one defined by the characteristics of the sample used.
LIST OF REFERENCES


_______________. "Ego Strength in Normal Man as Measured by an MMPI Scale." Paper Read at Western Psychological Association, 1953.


. "Recent Research with Personality Inventories." Journal of Counseling Psychology, 1953, 17, 45-49.


