A Correlational Study of Factors Utilized in Counselor Candidate Selection at Western Michigan University

Mary Lou Garrison
Western Michigan University

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A CORRELATIONAL STUDY OF FACTORS UTILIZED
IN COUNSELOR CANDIDATE SELECTION AT
WESTERN MICHIGAN UNIVERSITY

by

Mary Lou Garrison

A Project Report
Submitted to the
Faculty of the School of Graduate
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of the
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CHAPTER I

THE PROBLEM AND ITS BACKGROUND

In presenting the problem and its background, the following topics are considered: (1) background of the problem; (2) purpose of the study; (3) statement of the problem; (4) definition of terms; (5) rationale for the study; (6) limitations of the study; and (7) summary of the remaining chapters.

Background of the Problem

Less than half the schools surveyed which offer graduate courses of study in the areas of counseling report satisfaction with their screening and selection procedures for candidacy (Gustad, Black, Clendenen, Roeber, Swanson, Bixler, & Kinzer, 1954; Patterson, 1962; Wellman, 1955; Keppers, 1961). The most frequent selection criterion for entrance into graduate counseling programs is the undergraduate grade point average (Gustad, et. al., 1954). Some authorities on counselor selection and education seriously question the validity of this criterion in predicting success in counseling. Many counselor educators contend that the undergraduate grade point average alone is not directly related to potential skills in counseling, eliminating many probable candidates who possess the potential for developing counseling skills and becoming effective counselors.
Purpose of the Study

A more effective method of developing valid criteria for counselor candidate selection requires consideration of factors which are more closely related to potential counseling skills. Western Michigan University is among the institutions which are currently examining this problem. The Guidance and Personnel Services Unit is utilizing a trial selection program based on several subjective and objective factors which includes data from peer ratings, the Rokeach Dogmatism Scale (RDS), the Berkeley Public Opinion Questionnaire (BPOQ), the Strong Vocational Interest Blank (SVIB)--Areas I and V, and the grade received in the introductory course in counselor training. The Minnesota Multiphasic Personality Inventory (MMPI) is also included in this experimental program; however, the MMPI is not under consideration in this study because of complexity in interpreting the instrument. An examination of the MMPI, as it relates to selection and admissions criteria, will be completed under a separate study.

Statement of the Problem

Assuming from the literature that the peer rating technique is both reliable and valid, the problem is to judge by correlation the reliability and validity of the remaining instruments being utilized in the trial selection program (with the exception of the MMPI) using a derivation of the peer rating as a criterion index.

Definition of Terms

For purposes of clarification, the factors being utilized in selection of counselor candidates are defined below.
**Interest**

Interest, as it opposes aversion, is a particular acceptant reaction such as liking a certain event, activity, or, in this case, an occupation or academic subject area (Strong, 1962).

**Tolerance for ambiguity**

Tolerance for ambiguity is the capacity to endure the state of obscure or indistinct stimuli from without oneself (Frenkel-Brunswik, 1949).

**Dogmatism or closed-mindedness**

Possessing a viewpoint or system of beliefs based on insufficient premises so as to be resistant to changes in belief systems is to be dogmatic or closed-minded. To have flexibility in systems of belief is to be open-minded (Rokeach, 1960).

**Academic grade**

The course academic grade is the classification of a student by an instructor into one of four positions of different value on a four-point scale: A=4, B=3, C=2, E=0.

**Peer rating**

The peer rating consists of classmates rating each other on counseling effectiveness. It is used as the criterion index with which other factors are correlated in order to determine their validity as selection factors.
Rationale for the Study

Several studies justify investigation in the area of counselor candidate selection. In surveying schools which train college personnel workers, Wellman (1955) reports that only four of the forty schools in his survey are satisfied with their selection procedures. In reporting a survey, Keppers (1961) notes that of the 181 colleges and universities responding, less than half the schools are satisfied with their selection programs.

That grade point average (GPA) is the most frequent requirement cited for acceptance into graduate schools is supported by Gustad, et. al. (1954). They also observe that less than half the 21 universities responding to their questionnaire report that research is in progress regarding evaluation of existing and plausible selection procedures although there exists a general dissatisfaction with present procedures of selection.

The attempt to make selection at Western Michigan University hinges on a psychological-theoretical base predicated on the idea that counselors must possess certain characteristics to be effective in their profession. The characteristics chosen are: (1) interest, (2) tolerance for ambiguity, (3) open-mindedness, and (4) general mental health. It is the above theoretical position which is operationalized, in part, in the study.

Limitations of the Study

There are no data which support the representation of the sample here used to the total population of counselor candidates for Master's
degrees. There are also no data supporting non-representation of the population. These factors, together, affect the generalizations which may be drawn from the findings of the study. The resulting conclusions are generalized only to the population of counselor candidates at Western Michigan University.

Instruments measuring personality traits are promising but not yet excellent. The adequacy of validity and reliability of personality measures is still questionable. Perfection of measure is an ideal which we can only approach in research, however close.

Academic grades may eventually prove inadequate as a measure of success in the area under consideration here. Essentially, the correlations between personality measures and academic grades are reduced to a correlation of continuous data with dichotomous data since there are two most commonly assigned positions for academic grades--A and B. The academic grade, therefore, may not be an effective measure of desirable counselor candidates' characteristics since both position assignments indicate successful course completion.

Summary of Remaining Chapters

In Chapter II a review of related research is presented. Chapter III deals with procedure which includes sampling, instrumentation, methodology, and findings. Summary and conclusions, discussion, and recommendations are dealt with in Chapter IV.
CHAPTER II

REVIEW OF SELECTED RELATED RESEARCH

Several studies are closely related to this investigation. They provide substantial support for the validity of peer group ratings in the evaluation of counselor candidates.

Arbuckle (1956) determines the features of counselor candidates who are selected or rejected by their peers as people to whom they would go for counseling. Seventy counselor candidates are asked to perform the following operations at the Boston University School of Education. (The class is informal; students participate in role playing, react to tape recordings, and discuss personal counseling problems. The class meets once a week, and many members have former contact with each other.)

(1) "If you felt that it was absolutely necessary to have counseling, list in rank order of preference the three people within this class to whom you would be most likely to go."

(2) "... least likely to go."

(3) "List three characteristics, traits, or attitudes that you would most like to find in a counselor."

(4) "... least like to find in a counselor (p. 94)."

Near the end of the semester, each student takes three inventories: the Minnesota Multiphasic Personality Inventory (MMPI), the Heston Personality Inventory (HPI), and the Kuder Preference Record Form BM (KPR).

Test scores on each subject's first selection and first rejection are compared with his own scores on each of the instruments and

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counted as either above or below his scores on individual test scales. The Chi square is applied to each scale to determine whether or not the differences between observed and theoretical frequencies are attributable to chance. Students who receive the greatest number of selections and rejections are tallied to determine the degree to which scores fall within the average deviation on the significant scales of the instruments.

On the HPI, there are no significant differences on the scales of Analytical Thinking, Sociability, and Personal Relations. Selected counselors score significantly higher on the Confidence scale, and rejected counselors score significantly lower on the Home Satisfaction scale ($p>0.02$, $p>0.01$, respectively). Forty-three per cent of the first selections are divided among six candidates, and forty-three per cent of the first rejections are divided among six candidates. Those highly selected are within the average deviation of scales for Confidence and Home Satisfaction—only two of those highly rejected fall within this range. None of those highly rejected fall within the average deviation on the Home Satisfaction scale.

Regarding the MMPI, those selected as counselors score significantly lower on Hypochondriasis, Depression, Paranoia, Hysteria, Schizophrenia, Social Introvert-Extrovert (IE), and Psychasthenia ($p>0.01$). Rejected candidates score significantly higher on Hypochondriasis, Paranoia, Hysteria, Schizophrenia, Psychopathic Deviate, and Hypomania ($p>0.01$). Those six highly selected students score within the average deviation on Hypochondriasis, Depression, Hysteria, and Social IE. Four of those highly rejected score within the average deviation.
deviation on Paranoia, Psychasthenia, and Schizophrenia; three on Hypomania; two on Hysteria, Psychopathic Deviate, and Social IE; and one on Depression and Hypochondriasis.

In regard to the KPR, there are significant differences in scores on Social Service (p>.01), Persuasive (p>.02), Literary (p>.02), and Scientific (p>.05) between candidates and those whom they select as counselors. Selected counselors have higher interests on these scales although none are significantly different. Those highly selected are within the average deviation on Social Service, Persuasive, and Literary scales.

Thirty-four per cent of the total vote tally for desirable traits is devoted to tolerance, warmth, interest, patience, and sincerity--the remaining portion is divided among nineteen other traits. Sixty-nine per cent of the total vote tally for undesirable traits is devoted to lack of understanding, disinterest, aggressiveness, probing, moralizing, insincerity, bias, authoritarianism, and superior manner--thirty-one per cent falls among fifteen additional traits.

Arbuckle theorizes that if one displays more confidence and less depression, schizophrenia, hysteria, paranoia, and a greater interest in working with people, he may show more warmth, patience, and sincerity; also, that lack of home satisfaction could lead to lack of understanding, disinterest, aggressiveness, and insincerity--traits which might be related to paranoia, schizophrenia, and hysteria.

His study displays several weaknesses which seriously limit the degree to which the findings may be considered valid. The hypotheses are casually mentioned rather than specifically defined leading the
reader to believe that either the investigator does not know exactly how he is investigating or that he is investigating anything and everything. Arbuckle (1956) loosely states the hypothesis, "... an attempt to determine the unique features, if any, of counselor trainees who had been either selected or rejected by their fellows as individuals whom they would like to have as counselors (p. 93)." This unorthodox method leaves the investigator to use or discard whichever data and findings he pleases, and it can seriously limit validity of findings and accurate reporting of research.

Arbuckle makes no attempt to define terms in the study or to relate the procedure to the hypothesis. He offers no rationale regarding the choice of instruments and no explanation of which factors the instruments proprot to measure. Chi square is the only traditional statistic used in reporting differences. Other differences are reported in terms of percentages offering only a very superficial overview of the differences. The remaining findings, reported in tally form counting as few as one, two, three, and four cases appearing different on scales of the instruments, are at the most highly inconclusive. The investigator is wisely cautious in his conclusions.

Stefflre, King, & Leafgren (1962) use peer ratings as a criterion for the identification of differences they observe between candidates chosen as effective counselors by their peers and those rejected as ineffective by their peers.

The sample consists of 40 subjects, 29 of whom work in public schools and 36 of whom are men. All are participants in a year-long NDEA Guidance and Counseling Institute. No claim is made regarding
representativeness; however, the investigators state no reasons for which the group is greatly different from counselors in secondary schools throughout the country who have limited experience. Each participant is given a list of the other participants' names and a pyramid diagram of a normal distribution containing 39 blocks for their names. The distribution of the pyramid is $1, 3, 5, 7, 7, 7, 5, 3, 1$ (p. 336). The participants were then directed to:

"... fill in the squares with the numbers in the list to indicate the extent to which you would be apt to go to the various members of the Institute for counseling if you were a student in a school where they were working as counselors. The number of the person you would be most apt to consult should be placed in the square at the extreme right. The numbers of the three people you would be next most apt to consult should be placed in the three squares in the next column ... Continue placing numbers remembering that the farther to the left you place the number the less apt you would be to consult him for counseling (p. 336)."

There is a great degree of agreement between the participants' opinions about each other: $r = .96$ by the Kuder Richardson formula (p. 336). "Chosen" is equated with effective and "rejected" with ineffective. Each participant is also asked to rate the other members as he thinks the group rates each member.

The investigators examine four groups of characteristics: (1) academic, (2) interest and value, (3) personality, and (4) self concept. It is hypothesized that: (1) the two groups (effective and ineffective or chosen and rejected, respectively) do not differ in academic aptitude or performance; (2) the chosen have more appropriate interests and values; (3) the chosen have personality traits more appropriate in counseling; and (4) the chosen perceive themselves more accurately and are more accepting of themselves.
Of the seven instruments being utilized to determine academic aptitude and performance, five of the $t$ tests which are applied to the means of chosen and rejected counselors prove significant differences at the .05 level of confidence, four of which are significant at the .01 level. The differences are in the direction of chosen counselors.

The Educational Interest Inventory and the Vocational Values Inventory are not proven to be adequate in discriminating between the two groups. On the Strong Vocational Interest Blank (SVIB), the two groups, V--Social Service and Welfare and IX--Sales and Business Contact are investigated. Four significant mean differences are found in the Social Service-Welfare group between the groups. Chosen counselors exhibit greater interest as measured by group V. The nonoccupational scale, Interest Maturity, shows a significant difference between the groups—the chosen counselors indicating higher interest maturity.

Chosen counselors prove to be less dogmatic than rejected counselors as measured by the Rokeach Dogmatism Scale ($p > .05$). A $t$ test applied to chosen and rejected means on the Taylor Manifest Anxiety Scale fails to show a significant difference. Four scales of the Edwards Personal Preference Schedule yield significant differences at the .05 level. Those chosen obtain higher scores on Deference and Order—lower scores on Abasement and Aggression. The difference on Order is in the opposite of predicted direction. Each subject writes of two critical incidents—one each regarding the counselor he is most apt to go to and least apt to go to—which contributes to
his selection of their positions. These data are not usable since most participants write general appraisals rather than critical incidents.

In regard to self concept, the Bills Index of Adjustment and Values does not discriminate between chosen and rejected counselors. On the second aforementioned rating, each member includes himself so that a discrepancy score can be calculated between his rating of himself and the rating he thinks his peers would give him. Since those least chosen overestimate their average rating and those most chosen underestimate their average rating by the group, this difference is significant. The difference, however, is suspect of being an artifact of the method utilized.

The most significant finding is that counselors are in remarkable agreement with each other regarding which peers are good counselors and which are poor ones. The critical incident technique fails to reveal what goes into such opinions. Group opinion yields highly reliable data, \( r = .97 \), suggesting that group opinion is widely known. A member not only knows who would be a good counselor; he knows the opinions of the others on the matter. Differences in the academic area could be a result of admission criteria or the equation of good counselor with good student. Possibly, students "catch" opinions from their instructors on the basis of minimal cues rather than forming their own. Findings do not support use of the rather untried instruments suggesting that in the future research instruments in more frequent use, such as the SVIB, are adequate in doing what universities are asking them to do. Instruments tapping anxiety and dogmatism should get further use in selecting procedures. The peer rating method seems to
be a good one; however, the nature of the difference between chosen and rejected counselors remains largely unknown.

The major limitation of this study lies in the exclusiveness of the sample. Institute members, particularly during year-long operations, have a great deal of contact with one another as well as with Institute staff members. Not only could opinions be "caught" from the staff--they could be easily "caught" from other members of the Institute because of the high degree of exposure of members to each other. This factor is somewhat peculiar to Institutes. Also, admission requirements for Institutes are stringent causing the sample to be even more atypical of counselor candidates in general. Admission requirements may also serve to unify the sample, however, it is questionable what purpose this unification serves. If admission requirements do unify the sample, the results of the study apply only to Institute trainees. It is evident that graduate counseling programs consist of students taking one course, students attending half-time, as well as students attending full-time; it is also evident that an Institute training program is quite different in this respect.

The critical incident method is a poor gamble on the part of the investigators possibly because of implementation. With better administration, the method could turn out to be a fruitful portion of the investigation. The stuff which goes into a peer rating must become known if evaluations of the peer rating are to continue to be fruitful--especially if they become a portion of selection procedures.

McDougall & Reitan (1961) report a peer rating technique in use with a group of NDEA semester-long Institute enrollees. The group is
made up of twenty-five teachers and counselors who are relatively untrained in counseling.

Each member is asked to rate the other members on four characteristics: (1) contribution to class, (2) academic understanding, (3) self insight, and (4) counseling potential. Contribution to class is described as the degree to which contributions add to learnings of members. Academic understanding is defined as the ability to comprehend, apply, and evaluate ideas relative to guidance and counseling. Self insight regards degree of agreement between self concept and rater's view of the same person. Counseling potential is described as the degree of capability in conducting the counseling interview.

Each enrollee is asked to place each member into one of four quarters for each characteristic, placing an equal number in each of the four quarters and forcing a distribution of six per cell. The scores are weighted and assigned rank. Results of the initial examination of peer ratings in the four areas prove enrollees are not unduly influenced by the halo effect in rating their classmates. This is evidenced by shift and spread of the median on the four characteristics.

The greatest relationships are observed in the rank difference intercorrelations between contribution to class and academic understanding and between self insight and counseling potential; $r = .831$, $r = .862$, respectively. Others range from .390 to .585. The relationships between supervisor's rating of counseling competency and peer ratings of contribution, academic, and counseling potential are similar with a lower relationship to self insight. Self ratings of competency and peer ratings show less relation than do the supervisor
ratings with peer ratings. A high correlation coefficient appears between grade point average and peer rating of contribution to class. Correlations between grades and the other peer rating factors are lower. In the area of learning aptitude, the highest coefficient appears between the Miller Analogies Test and peer ratings of self insight and the lowest with contribution to class. The highest relationship between ratings and attitudes as measured by the Minnesota Teacher Attitude Inventory (MTAI) is between the MTAI and academic understanding—the lowest between the MTAI and self insight.

These relationships suggest further areas for study and are not especially conclusive considering the small size of the sample. A point for curious researchers lies in the finding that there is a discrepancy between self ratings and peer ratings in all four of the categories. The investigators feel the quarter-cell method of rating compares favorably with traditional methods of ranking. Although the authors strongly support this technique of peer rating, they make little attempt to support their results utilizing this technique.

No rationale is presented for the use of the peer rating technique in the quarter-cell method. The forced position rating may have drawbacks in that movement between cells is not necessarily equal in distance; true opinion may be fogged over—ratings being based somewhat on cell position rather than true opinion and position in comparison to other positions; and procedure with this statistical convenience (use of four cells) may be done at the expense of accuracy. A confusing and possibly inappropriate procedure of the study is the preliminary examination regarding the halo effect. The purpose of studying this
median shift/span is not clearly stated--nor is the outcome clearly stated. There is no reference to how the halo effect may be operating, challenging the reader's curiosity as to why the halo effect was investigated.

Dilley (1964) compares the ratings of off-campus, work-oriented supervisors to the ratings of on-campus peers and instructors of counselor trainees in a simulated work situation. The counselor is defined as a generalist, and the ratings are made in terms of general effectiveness of counselors in the full range of guidance activities.

The sample consists of sixty members of two NDEA Counseling and Guidance Institutes who are successful high school teachers. The majority of the subjects are graduate students majoring in Educational Psychology; half are finished with required courses for the Master's degree. They do not have exposure to tapes or counseling experiences of their own members, and they are not yet participating in a supervised counseling practicum. Two academic instructors rate the members by the Rank-Comparison Method; the ranks are then averaged and combined. The supervisors rate the members with whom they work as the three most effective and three least effective. Members of the second Institute name the three most effective and three least effective of their classmates. The rankings are arranged into two frequency distributions--one each for the most effective and least effective.

The null hypothesis states that the two groups have equal distribution. Using the Chi square method, this hypothesis is rejected at the .01 level of confidence for both the "most" and "least" effective frequency distributions. One trainee in the top twenty-five per cent
of the most effective group receives a least effective rating. There are no such comparable ratings in the least effective distribution. A Pearson $r$ of .65 is computed between the most effective distribution and pooled instructors' rankings. It is found by use of the Sign Test that supervisors and instructors agree on the relative position of the trainees in their rankings which rejects the null hypothesis at the .01 level of confidence. In regard to members of the second Institute, supervisors and instructors again agree on position of the members in their ratings--calculation by use of the Sign Test is significant at the .01 level. The same condition is observed between supervisors' and peer rankings. Over all, the general effectiveness of the members as counselors is agreed upon between instructors, between instructors and supervisors, between instructors and peers, between supervisors and peers. and between peers.

In contrast to the work of Steffire, et. al. (1962), the agreement between supervisors and peers is not explained in terms of perceived supervisors' evaluations--nor is the agreement between supervisors and instructors. Because supervisory ratings are done in the field in regard to general effectiveness of the members as counselors, it is felt that "ability to get along with others" may be the factor responsible for agreement between supervisors. The supervisors are not in contact with each other.

Again, the study is implemented within the limitations of an NDEA Institute. The portion of the sample within which the peer ratings are taken is extremely small, thirty-two, indicating that agreement between instructors/supervisors and peers and among peers may not be essentially
reliable. In addition, investigators could not generalize these peer judgments to a larger population. Furthermore, the question arises as to whether the sample is representative of candidates in graduate counseling programs. It is a curious factor in the study that only one of the Institutes is performing the peer ratings—the other does not, yet is not considered or described as a control group.

Summary

The foregoing studies lack application to graduate counselor candidates in general. Since they all are implemented within the limitations of the NDEA Institutes, it is not possible to generalize the findings to the remaining programs in counselor training. The studies provide information regarding peer ratings; however, the peer ratings are not used in any specific manner regarding selection of candidates for counseling programs. The studies all support the reliability of peer ratings and their validity through correlational techniques with other instruments measuring characteristics of counselors.

In the present study, the peer rating is assumed from the literature to be reliable and valid and is used as the criterion with which additional selection instruments are correlated.
CHAPTER III

PROCEDURE

The procedure includes sampling method, instruments utilized, statistical methodology, and findings.

Sample

The preliminary sample consists of eighty-seven candidates for the Master of Arts degree in Guidance and Personnel Services at Western Michigan University. All candidates have been administered the departmental screening battery between fall 1964 and spring 1966, prior to candidates' first semester of graduate study in counselor education. Collation of these data result in the elimination of eleven candidates from this temporal group because of incomplete screening data.

The final sample for this study, therefore, consists of seventy-six graduate candidates enrolled in the Guidance and Personnel Services curriculum at Western Michigan University. This sample is assumed to be representative of first semester candidates in the graduate program since it is composed of all candidates on whom there exists complete screening data.

Instrumentation

Five instruments are utilized in measuring the selected characteristics of counselor candidates: the peer group criterion measure,
the Strong Vocational Interest Blank--Male Form (SVIB), the Berkeley Public Opinion Questionnaire (BPOQ), the Rokeach Dogmatism Scale (RDS), and the course academic grade.

**Development of peer group criterion measure**

All graduate candidates utilized in this study have completed School Services (SCH SVC) 680--*The Personnel Worker, His Role*--a graduate level introductory course which is required of all candidates for the Master of Arts degree in Guidance and Personnel Services at Western Michigan University.

The course is designed to expose perspective counselors to the: (1) theoretical and philosophical concepts of counseling; (2) techniques of selected, outstanding professional counselors; and (3) gaining of both self insight and sensitivity to others. Approximately one-half the class time is spent in formal meeting--the other half in sub-groups. Each SCH SVC 680 class is intuitively divided by the course instructor into two sub-groups of approximately eight candidates; a professional counselor trained in group counseling is subsequently assigned to a single sub-group as a group leader. The enrollees are allowed and encouraged to express themselves freely and to relate to each other openly and with sincerity. During the semester-long on-going group counseling process, candidates come to know each other well, personally and professionally, and counsel each other regarding personal problems.

At the completion of the course, each candidate is asked to rank-order members of his sub-group in answer to the question: "To whom
would you most likely go for individual personal counseling?" Since the previously presented literature strongly supports the reliability of peer group ratings, these data serve as the basis for the development of the criterion measure--peer group rating.

**Strong Vocational Interest Blank--Male Form**

Sections I and V--Professional Biological-Psychological Sciences and Social Services occupational groups, respectively--of the SVIB are utilized as a comparative measure of a candidate's vocational interests as they relate to practicing professional counselors. Standard scores for each total group scale, based on SVIB normative procedures, are employed as data for this study.

**Berkeley Public Opinion Questionnaire**

The BPOQ proports to measure an individual's tolerance of ambiguity. The total raw score, adjusted by a constant to eliminate negative data, is computed for each candidate in the sample.

**Rokeach Dogmatism Scale**

The RDS assesses individual resistance to change in beliefs. It is assumed that the more closed a person's belief system, as measured by the RDS, the more resistance he puts forth in forming new belief systems. Persons scoring high on this scale are assumed to have relatively "closed" belief systems, and persons scoring low to have relatively "open" systems. The candidate's raw score is adjusted by a constant to eliminate negative data and is utilized as a measure of dogmatism as it relates to this study.
Course academic grade

The academic grade for SCH SVC 680--The Personnel Worker, His Role--which the departmental instructor assigns at the termination of the course for report to the university registrar is utilized as a measure of academic achievement. (The University employs a four-point scale in which a letter grade of A=4, B=3, C=2, and E=0.)

Methodology

Here included are derivation of the criterion index, sample derivation of the index, preliminary treatment of the data, elimination of "sex" as a variable, rationale for the statistical analysis, and hypotheses.

Derivation of criterion index

An individual's peer group rating, subsequently referred to as the criterion index, is the result of the administration of a single item questionnaire to candidates at the completion of SCH SVC 680. Briefly, each candidate is asked to rank-order members of his sub-group in answer to the question: "To whom would you most likely go for individual personal counseling?" An individual's rank of person "X" as "1" would indicate the rater's first choice of the candidate to whom he would most likely go for counseling; a "2" rank assignment would indicate a rater's second choice, and so forth.

Rank assignments for each candidate are tabulated and totaled, yielding a numerical "sum of ranks" which is in turn divided by the number of candidates in that particular SCH SVC 680 sub-group. The
resulting data is referred to as the candidate's **Sub-Group Mean Score** (see Table 3.1).

**TABLE 3.1**

SAMPLE DERIVATION OF PEER GROUP RATINGS--CRITERION INDICES

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Sum of ranks ( (\xi R) )</th>
<th>Sub-group size ( (n_j)^* )</th>
<th>Sub-group mean score ( \bar{X}_n = \xi R/(n_j-1)^* )</th>
<th>Adjusted sub-group peer group rating ( \bar{X}_i - \bar{X}_j / \xi \bar{X}_j^* )</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>26</td>
<td>10</td>
<td>2.89</td>
<td>.058</td>
</tr>
<tr>
<td>B</td>
<td>34</td>
<td>10</td>
<td>3.78</td>
<td>.076</td>
</tr>
<tr>
<td>C</td>
<td>37</td>
<td>10</td>
<td>4.11</td>
<td>.082</td>
</tr>
<tr>
<td>D</td>
<td>37</td>
<td>10</td>
<td>4.11</td>
<td>.082</td>
</tr>
<tr>
<td>E</td>
<td>46</td>
<td>10</td>
<td>5.11</td>
<td>.103</td>
</tr>
<tr>
<td>F</td>
<td>46</td>
<td>10</td>
<td>5.11</td>
<td>.103</td>
</tr>
<tr>
<td>G</td>
<td>49</td>
<td>10</td>
<td>5.44</td>
<td>.109</td>
</tr>
<tr>
<td>H</td>
<td>50</td>
<td>10</td>
<td>5.56</td>
<td>.112</td>
</tr>
<tr>
<td>I</td>
<td>57</td>
<td>10</td>
<td>6.33</td>
<td>.147</td>
</tr>
<tr>
<td>J</td>
<td>66</td>
<td>10</td>
<td>7.33</td>
<td>.155</td>
</tr>
</tbody>
</table>

\( \bar{X}_{ij} = 49.77 \)

*Where \( i = \text{candidate}, \ j = \text{sub-group} \)*

Since the actual size of each sub-group varies over time (that is, sub-group size ranges from five to seventeen--with an average size of eight--depending upon SCH SVC 680 enrollments for fall semester,
1964 to spring semester, 1966), an adjusted peer group rating is computed to provide a candidate's rating relative to the actual size of his particular sub-group. The computed rating is noted as the Adjusted Sub-Group Peer Group Rating and in subsequent discussion is referred to as a Criterion Index.

Although criterion indices for a particular candidate theoretically could vary depending on the membership of a sub-group, it seems logical that the composition of a particular sub-group is representative of all sub-groups. It is assumed, therefore, that a candidate's criterion index will be reliable if computed within any other sub-group.

Preliminary treatment of data: collection and collation

Screening battery data for all students admitted to the graduate program in Guidance and Personnel Services at Western Michigan University is available from departmental records. From this collection of information, test scores and related data applicable to the study are collated for each candidate and subsequently punched into data cards. Inspection of each student's summary card results in the elimination of eleven candidates from the final sample because of incomplete criterion and/or variable data.

Elimination of "sex" as a variable

The literature indicates that, in general, the characteristics of guidance and counseling personnel are essentially those qualities typically associated with female traits, namely: "gentle", "kind", "reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
"accepting", "warm", "understanding", et cetera. It seems appropriate, therefore, that a major preliminary assessment of data be aimed at statistical testing for significant differences by sex for the criterion index and variables under study. Such an assessment is vital to this study since—if statistical tests of the hypothesis \( \bar{X}_m = \bar{X}_f \) are not rejected—the statistical equivalency of this variable would allow collapsing the data into a total sample regardless of sex. The sample size \((N)\), therefore, becomes seventy-six rather than being two subgroup samples of forty-eight males and twenty-eight females. Treatment of data for this total sample and its subsequent statistical procedures then becomes (1) less complex and, most important, (2) more stable (that is, we would expect smaller variances against a larger \( N \)). "Student's t tests" are computed for mean score differences between male and female candidates on the criterion index and for each of the five variables. The two-tailed (non-directional) test of significance is applied to all comparisons \((p \geq .05; \text{df}=74)\). The evidence in Table 3.2 illustrates that all tests of significance fail to reject \( H_0: (\bar{X}_m = \bar{X}_f) \); all data are subsequently treated without consideration for differences between sex.

**Rationale for statistical analyses**

The Spearman Rank Correlation Coefficient (rho) is employed to measure the degree of association between the criterion and each of five experimental variables. This technique requires that pairs of variables under study be ranked in two ordered series.

Before each correlation, the ranking procedure for each pair of variables is ordered to provide a more meaningful test of each
**TABLE 3.2**

TESTS OF SIGNIFICANCE FOR DIFFERENCE BETWEEN SEX GROUP MEAN SCORES ($\bar{X}_m - \bar{X}_f$) BY VARIABLE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>$\bar{X}$</th>
<th>$S$</th>
<th>$t$</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Rating</td>
<td>Male</td>
<td>.1121</td>
<td>.0583</td>
<td>+1.21</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>.0959</td>
<td>.0656</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SVIB--I</td>
<td>Male</td>
<td>35.09</td>
<td>8.93</td>
<td>-1.79</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>38.81</td>
<td>8.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SVIB--V</td>
<td>Male</td>
<td>52.44</td>
<td>8.46</td>
<td>-1.81</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>55.91</td>
<td>7.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RDS</td>
<td>Male</td>
<td>139.84\textsuperscript{b}</td>
<td>24.67</td>
<td>+1.31</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>130.70\textsuperscript{b}</td>
<td>31.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BPOQ</td>
<td>Male</td>
<td>127.63\textsuperscript{c}</td>
<td>44.58</td>
<td>+0.51</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>121.27\textsuperscript{c}</td>
<td>56.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCH SVC 680</td>
<td>Male</td>
<td>3.35</td>
<td>0.61</td>
<td>+0.01</td>
<td>ns</td>
</tr>
<tr>
<td>Grade</td>
<td>Female</td>
<td>3.32</td>
<td>0.55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) $t_{.05} = 2.00$; $t_{.01} = 2.66$; (df=74)

(b) Represents (raw score + 120 constant) to eliminate negative data

(c) Represents (raw score + 200 constant) to eliminate negative data

hypothesis in such a manner as to yield a positive correlation which is required by the directional hypotheses. For example, in testing Hypothesis 1 ($H_1$) below, the lowest Peer Group Rating is assigned a rank of "1" when being compared to a high SVIB--I rank of "1". For convenience, each directional hypothesis is replicated:

$H_1$: low peer rating is significantly correlated with high SVIB--I.

$H_2$: low peer rating is significantly correlated with high SVIB--V.
H₃: low peer rating is significantly correlated with low RDS.

H₄: low peer rating is significantly correlated with high BPOQ.

H₅: low peer rating is significantly correlated with high SCH SVC 680 grade.

Ranks for a particular candidate are computed for each pair of criterion index and experimental variable. Tied scores are resolved by assigning the average of the ranks which would have been assigned providing no ties occur. The Spearman rho is applied to each set of comparisons (Downie & Heath, 1965).

As Kendall suggests, $t$ is applied to each computed $\rho$. For large groups ($N \geq 10$), $t$ is distributed as Student's $t$ with df=$(N-2)$. A one-tailed (directional) test with $p=.05$ is applied to all tests of association between the criterion index and experimental variables.

Findings

As evidenced in Table 3.3, the scores of candidates on Area I of the SVIB are not found to correlate positively or significantly with the criterion index. There proves to be, however, a positive correlation coefficient between the criterion index and Area V of the SVIB which is significant at the .01 level of confidence. Candidates' scores on the RDS are found to correlate positively and significantly with the criterion index ($p>.05$). No significant relationship is observed between the criterion index and candidates' scores on the BPOQ. A positive and significant relationship is observed between the criterion index and grades assigned candidates by the professor of the introductory course ($p>.01$).
### TABLE 3.3

RHO CORRELATIONS AND TESTS OF SIGNIFICANCE BETWEEN CRITERION INDEX AND EXPERIMENTAL VARIABLES

<table>
<thead>
<tr>
<th></th>
<th>SVIB--I</th>
<th>SVIB--V</th>
<th>RDS</th>
<th>BPOQ</th>
<th>680 GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>rs peer rating with</td>
<td>-0.14</td>
<td>+0.31</td>
<td>+0.20</td>
<td>-0.06</td>
<td>+0.42</td>
</tr>
<tr>
<td>t on correlation</td>
<td>-1.22*</td>
<td>+2.80</td>
<td>+1.76</td>
<td>-0.52*</td>
<td>+3.98</td>
</tr>
<tr>
<td>significance **</td>
<td>ns</td>
<td>.01</td>
<td>.05</td>
<td>ns</td>
<td>.01</td>
</tr>
</tbody>
</table>

* Not significant under directional hypotheses

** \( t_{.05} = 1.67; t_{.01} = 2.39; \) df=(N-2)
CHAPTER IV

SUMMARY AND CONCLUSIONS, DISCUSSION, RECOMMENDATIONS

The summary is a brief sketch of the design of this study including purpose, instruments being used, limitations, and treatment of data. The conclusions drawn are parallel to the hypotheses stated in Chapter III.

Summary and Conclusions

The purpose of the study is to explore the relationships between the factors being utilized in an experimental counselor candidate selection program at Western Michigan University. Analysis of data includes candidates' responses on Areas I and V of the Strong Vocational Interest Blank, the Rokeach Dogmatism Scale, the Berkeley Public Opinion Questionnaire, peer group ratings at the close of the introductory course, School Services 680--The Personnel Worker, His Role, and candidates' academic letter grades which the instructor assigns at the close of the introductory course. The peer rating is selected for use as a criterion index with which the remaining factors are correlated.

Three limitations in sampling are considered: (1) the sample is not randomly chosen--all candidates entering the graduate counseling program at Western Michigan University between fall 1964 and winter 1966 are considered, and whether or not this group is representative of students who select graduate counseling is not known; (2) eleven candidates are eliminated from the sample because of incomplete data;
and (3) the number of male and female subjects within the sample is not equal—nor is it initially assumed that the two groups can be combined statistically.

Data for males and females are first treated individually to determine whether or not there exist significant differences between their mean scores on any of the factors which are utilized. There are no significant differences found between sex group mean scores on any of the variables. The sex groups are combined to form a single sample, N=76. The Spearman Rank Correlation Coefficient statistical method is applied to the criterion index in combination with each of the variables. Kendall's $t$ is then applied to each computed rho. The .05 level of confidence is selected for determining significance of $t$.

The following conclusions are reached within the limitations of the study:

(1) The hypothesis that low peer rating significantly correlates with high SVIB--I is not accepted.

(2) The hypothesis that low peer rating significantly correlates with high SVIB--V is accepted ($p>.01$).

(3) The hypothesis that low peer rating significantly correlates with low RDS is accepted ($p>.05$).

(4) The hypothesis that low peer rating significantly correlates with high BPOQ is not accepted.

(5) The hypothesis that low peer rating significantly correlates with high School Services 680 is accepted ($p>.01$).

**Discussion**

Area I of the SVIB surveys interests of the medical and scientific professional occupations. These are independent types of vocations
which are considered high level professional. Possibly, candidates do not define their interests as scientific or professionally independent—rather social-psychological and social service. Because Area V of the SVIB surveys vocational interests more closely related to lower level professional and social service vocations, it is not surprising that measurement in this area is significant. The social service vocations are more closely linked with being cooperative and coordinating in nature and probably define more accurately the beginning counselors' images of their professional roles in school services.

Dogmatism and rigidity in thinking are behaviors which candidates face immediately in the graduate program whether they are observing counseling or participating in counseling as they do in this study. It is possible that dogmatic procedures are of initial exposure and are identified early by counselor candidates.

The criterion index is based upon the ability of peers to select out from their group those candidates to whom they would go for counseling, hence, those persons whom they observe as effective counselors. This observation involves two factors. First, it is logical to believe that each candidate bases his selection upon observable characteristics which are desirable to him—characteristics to which at least he is sensitive. He must perceive the characteristic upon which he bases his choice. Second, the characteristics to which a candidate is sensitive or which he desires in a counselor must be overtly manifested by that counselor in order to be observable by the peer who, in turn, chooses the candidate as an effective counselor. Tolerance for ambiguity is a characteristic which may not have manifestation overt enough that a beginning candidate can perceive it as an evident characteristic when
he is choosing the peer to whom he would go for counseling. In addition, the intolerance for ambiguity may be disguised by its manifestation in dogmatism, the latter a characteristic which candidates do separate out in rating peers.

These factors could account for the lack of relationship between the criterion index and tolerance for ambiguity. Furthermore, tolerance for ambiguity and development of sensitivity are skills which can be conceptualized and, hence, learned with additional training. These are traits which counselor candidates may not always develop.

Since all candidates are assigned grades by one experienced professional counselor educator involving his perceptions, sensitivity, and recognition of candidates' favorable qualities, it is reasonable to assume that he overtly communicates these factors to candidates who, in turn, respond to each other accordingly. It is not surprising, therefore, to observe the positive correlation between the criterion index and grades which are assigned. The validity of the relationship is questionable since the criterion index may in the future prove to be a dependent variable and the instructor's evaluation an independent variable. It is not believed that the peer judgments are "caught" from the instructor since there is very limited contact between instructor and candidates in terms of time. Many candidates are part-time students meeting with the instructor for an average of two and one half hours per week--in contrast to the aforementioned studies implemented during NDEA Institutes in which there are full-time students whose exposure to instructors is highly concentrated. The group leaders would be a more likely source of influence, yet not extremely likely since many different leaders are involved.
Although it is realized that a positive and significant correlation does not indicate a causative relationship, the findings of the study are suggestive of the proposition that the instruments found to correlate positively and significantly with the criterion index are effective in measuring the desirable counselor characteristics in counselor candidates at a level of probability greater than chance. The remaining instruments need further exploration to determine their utility in doing this job. A replication of the study may prove rejection of hypotheses one and three. At this point and within this study, they are merely not accepted and should not be globally rejected until further investigation is made. For Area I of the SVIB and the BPOQ, the following possibilities exist in regard to the findings: (1) the factors do not correlate positively and significantly with the criterion index although the literature supports the hypotheses that they do; (2) the instruments may not be valid within the structure of the criterion index; (3) the characteristics they measure may not, indeed, be relevant to effective counseling or do not prove to be relevant; (4) the characteristics may not contribute to effective counseling; and/or (5) the traits may not be evident in candidates at this early point in the Master's program—they may be characteristics which are learned by candidates in further movement through the counseling program.

About confidence level, Siegel (1956) holds that the Spearman Rank Correlation Coefficient (rho) is the second most powerful correlational technique. Collapsing the data also strengthens the statistical methodology—these two factors being sufficient justification for use of the .05 rather than the .01 level of confidence.
Recommendations

The findings suggest the need for replication of the study at a time when the number of screened candidates is great enough to permit random sampling. This would be the best test of reliability; however, the greatest need seems to lean more strongly in the direction of validation of the selection procedure. Replication of the study would be useful only for purposes of reliability. An effective means of validation would be the implementation of a follow-up study to observe whether the present findings hold up over a period of time, whether experienced counselors possess the characteristics observed here, and whether the characteristics relate to successful counselor performance.

The findings of the study give reasonable support for the inclusion of peer ratings in the selection of counselor candidates for the Master's degree in Guidance and Personnel Services at Western Michigan University. The investigator recommends the utilization of the peer rating technique in the selection of candidates for this program in graduate study.


