COGNITIVE STRUCTURES AS PREDICTORS
OF COUNSELOR VERBAL
EFFECTIVENESS

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1971

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
DOCTOR OF EDUCATION
May, 1977
COGNITIVE STRUCTURES AS PREDICTORS
OF COUNSELOR VERBAL
EFFECTIVENESS

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ACKNOWLEDGMENTS

This paper was made possible through the continued efforts of many people. Special thanks must first go to the members of my advisory committee: Dr. W. P. Ewens, chairman; Dr. Judith E. Dobson; Dr. Bill F. Elsom; and Dr. F. Gene Acuff. Without the continued guidance and support of these people, especially that of Dr. Ewens, this thesis would not have reached its fruition.

Special recognition must go to Dr. Dobson for her invaluable assistance in providing the opportunity to collect the data for this research project. Her time and support of this project was greatly appreciated.

Special appreciation must go to wife, Ginny, and to my children, Bryan and Christine, for their understanding and encouragement through times of achievement and times of disappointment. My wife's patience and unending support are beyond description.
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CHAPTER I

THE NATURE OF THE PROBLEM

Introduction

Whether we call him/her a therapist or a counselor, the personality of the "helping professional" is basically more important than his/her techniques (Truax & Mitchell, 1971). Tyler (1969) also reports that again and again the results of research studies comparing counseling methods, techniques or theories end with the conclusion that the differences between counselors are greater than any of these differences in procedure. Tyler concludes by stating that: "Successful counseling outcomes seem to depend as much on what a counselor is as on what he says or does" (p. 196).

A number of studies in the field of counseling support the idea that effective counseling seems to depend as much on what a counselor is as on his/her techniques (Brams, 1961; Combs & Soper, 1963; and Donnan, et. al., 1969). Allen (1967) adds further support to the idea that the counselor is a critical variable in the outcome of counseling as he states: "There is almost unanimous agreement on the part of virtually every theorist in counseling that the personality of the counselor is one of the most crucial variables in determining the effectiveness of his counseling behaviors" (p. 35).

One might readily conclude that if successful counseling outcomes are dependent as much on what a counselor is as on what he/she does,
then there should be certain measurable variables in a counselor's personality that can distinguish the effective counselor from his/her ineffective counterpart. In support of this statement, numerous studies have determined that various personality traits of the counselor do contribute to his/her effectiveness. Many of these studies are discussed in Chapter II. However, a short synopsis will show that Freedman, et. al. (1967) found a strong, predictable relationship between the scales of both the California Psychological Inventory and the Guilford-Zimmerman Temperament Survey and facilitative counselor verbal response behaviors (i.e. understanding, supportive, probing, evaluative, interpretive, and information giving); Demos and Zuwaylif (1966) found that five scales of the Edwards Personal Preference Schedule significantly discriminated the most effective counselors from the least effective counselors; and Wittmer and Lister (1971) demonstrated a relationship between the Sixteen Personality Factor Questionnaire and the supervisory ratings of counselor effectiveness.

Yet three major reviews of literature on counselor characteristics point out that the findings in those studies are inconclusive, nonpredictive, and of little practical value (Patterson, 1967; Polmantier, 1966; and Whiteley, 1969). In addition, Rosen (1967) found no significant relationship between counselor competence and personality characteristics as measured by the Allport-Vernon-Lindzey Study of Values inventory, the Strong Vocational Interest Blank, the Edwards Personal Preference Schedule and the Dogmatism Scale.

Even though there is little agreement among researchers as to these personal qualities or characteristics of successful counselors (Blocher, 1963), most would still contend that there are certain kinds of counselor
personality traits which are likely to facilitate counseling and those which are not (Freedman, et. al., 1967; Goldberg, 1974; Truax & Mitchell, 1971; and Weitz, 1957).

However, this paradox between research findings which support personality characteristics as predictors of effective counselors and those findings which do not support them as significant predictors together with the lack of general agreement as to which personality characteristics are the best predictors of effective counselors gives little credence to the use of personality measures as screening devices for counselor candidates. This discrepancy might explain why selection of counselor candidates is generally based upon his/her academic credentials.

But a caution must also be stated in conjunction with the exclusive use of scholastic and academic measures for counselor candidate selection. Wittmer and Lister (1971) found correlations between counselor candidates' GRE scores and their composite counselor effectiveness rating scores to be non-significant. In addition, Joslin (1965) investigated the relationship between counselor candidates' knowledge of counseling/guidance and their competence in conducting counseling interviews and found no significant relationship. These studies seem to support Bergin's (1967) contention that academic and intellectual abilities should not be the only basis for selection of counselor candidates. This all seems to point to the conclusion that "...personality traits which are associated with facilitating counselor behavior warrant additional research attention" (Donnan, et. al., 1969, p. 482).
Statement of the Problem

Even with all the research that has been done, there is still the perplexing problem of predicting counselor verbal effectiveness. Since not enough is known on the basis of current research concerning those characteristics of effective counselors, it becomes necessary to further investigate those variables thought to be related to it.

Variables to be Investigated

Much emphasis has been placed on the counselor's ability to perceive the thoughts and feelings of the client, despite the confused manner in which they may be presented. He should be sensitive to the clues which the client presents and be able to help the client to clarify his thoughts and feelings (Lewis, 1970, p. 110).

In line with this ability to accurately perceive others, or what Lewis calls perceptual sensitivity, several researchers have demonstrated that a person's degree of accurate person perception is related to his/her level of a certain personality characteristic called cognitive structure (Bieri, et. al., 1966; Crockett, 1965; Harvey, et. al., 1961; and Irwin, et. al., 1967). More specifically, these researchers suggest that the three types of cognitive structures which seem to be most related to accurate person perception are cognitive complexity, cognitive differentiation, and cognitive integration.

In a recent study, Goldberg (1974) investigated the relationship of one of these cognitive structure variables (i.e. cognitive integration) to counselor verbal effectiveness and found significance. Unfortunately, other than Goldberg's study, little if anything has been done to investigate the relationship of these cognitive structure variables to counselor verbal effectiveness.
Purpose of the Study

The purpose of this study is: (1) to determine if there is a relationship between cognitive complexity and counselor verbal effectiveness; (2) to determine if there is a relationship between cognitive differentiation and counselor verbal effectiveness; (3) to determine if there is a relationship between cognitive integration and counselor verbal effectiveness; and (4) to determine if there is a relationship between all three cognitive structures and counselor verbal effectiveness.

Significance of the Study

If several selected counselor characteristics could be identified which correlate positively and highly with effective counselor behavior, then several important advantages might be gained:

1. Counselor educators would have a more valid means of selecting their counselor candidates.

2. Counselor educators would be provided additional information concerning the ways the effective counselor candidate differs from the ineffective counselor candidate.

3. From the information available in (2), counselor educators would be better equipped to educate and evaluate counselor candidates.

4. Counseling agencies, public or private, would have a more valid means of selecting new counselors.

5. Clients of counseling agencies would be better served through more effective counselors.

The need for further investigation in the area of counselor verbal effectiveness is further emphasized by Freedman, et. al. (1967), when he encourages researchers to answer the question: "...is there any 'ideal' combination of counselor characteristics that would predispose effective counselor behavior?" (p. 29).
CHAPTER II

REVIEW OF THE LITERATURE

Introduction

It is the purpose of this chapter to provide a selected review of the literature. A brief overview of the research in the area of counselor characteristics will be presented, followed by a more detailed look at literature related to the correlation of counselor characteristics and effectiveness. The rationale and research supporting the choice of the specific predictor variables to be studied by this investigator will be the third major area of review. Finally, a summary of the literature and conclusions of the author will close the chapter.

Counselor Characteristics

Counseling involves the interaction of two personalities through the medium of speech and other symbolic behavior. It is reasonable to suppose, therefore, that the structure of each of these personalities will have a marked influence on the interaction...if it is true that the counselor's personality influences the direction, course, and outcome of the counseling interaction, it might be profitable to speculate about the kinds of counselor personality traits which are likely to facilitate counseling and those which are not (Weitz, 1957, p. 276).

A number of studies in the field of counseling have had as their objective the identification of the personality characteristics of the successful counselor and counselor candidate. The authors of these studies seem to agree with Weitz's statement that it would be profitable
to find that unique personality trait or pattern of traits which would identify the potentially effective counselor.

Several studies, however, have concentrated upon counselor characteristics without regard for the relative effectiveness or ineffectiveness of the counselors being investigated. In one such study, Brans (1961) administered the following instruments to twenty-seven counselor candidates during the first half of their counseling practicum course at the University of Missouri: the MMPI, the Taylor Manifest Anxiety Scale, the Index of Adjustment and Values and the Berkeley Public Opinion Questionnaire. While there were other findings of importance from Brans' investigation, the most important finding to consider at this point is that the results from the personality tests given to the counselor candidate group indicated the following characteristics: (1) they seem to exert themselves to make good impressions on others; (2) they are somewhat defensive in their behavior; (3) they are sensitive in their dealings with others; and (4) they seem relatively outgoing in their interpersonal relationships.

In a survey of the literature on personal characteristics of counselors, Cottle (1953) reports descriptions of characteristics of counselors found in the National Vocational Guidance Association publication on Counselor Preparation. He states that this publication reports:

...in general, characteristics of counselors include a deep interest in people, patience with them, sensitiveness to the attitudes and reactions of others, emotional stability and objectivity, a capacity for being trusted by others, and a respect for facts (p. 446).

Patterson (1962) reported an extensive study involving the testing of candidates in rehabilitation counseling in nineteen institutions. He administered several tests (i.e. Miller Analogies Test, the Edwards
Personal Preference Schedule, the Minnesota Multiphasic Personality Inventory, and the Strong Vocational Interest Blank) to from 143 to 190 counselor candidates. On the Miller Analogies, the candidates scored at the 80th percentile on the norms for education students at master's degree-granting institutions, but only at the 15th percentile on the norms for psychology students. On the Edwards Personal Preference Schedule, the greatest deviations from the norm as compared to college students were for the women, Intraception (74th percentile) and Abasement (24th percentile). For the men, Intraception was again high (79th percentile) as was Deference (72nd percentile) and Nuturance (70th percentile). The MMPI profiles tended to be similar to college students in general. However, the MF (Masculinity-Femininity) and the Ma (Hypomania) scores were elevated. The Si (Social Introversion) score was low. High scores for the men on the SVIB formed an occupational pattern similar to Clinical Psychologist, Guidance Counselor and Social Worker. For females, the best match was Social Worker.

Polmantier (1966) concluded from his survey of the literature on the personality of the counselor that, "It is impossible to cull from the literature specific prescriptions as to the personality of the counselor" (p. 97). However, Polmantier did sum up his observations regarding the personal characteristics of counselors into ten statements. The following condensed statements represent Polmantier's more important observations:

1. The counselor seems to be an intelligent person, possessing verbal and quantitative abilities sufficient to think, reason and solve problems with logic and perception.

2. The counselor seems to have interests that reveal a desire to work with people and is scientific enough to consider and utilize the science of individual and social behavior.
3. The counselor appears to manifest an acceptance of self.
4. The counselor seems to have a tolerance for ambiguity.
5. The counselor seems to be flexible enough to witness, understand and deal psychologically with all kinds of human behavior without forcing others to conform to his/her values.
6. The counselor appears able and willing to work with persons of different cultural, ethnic, and religious backgrounds.

Counselor Characteristics and Effectiveness

The research to this point has been descriptive and none of the investigators have attempted to investigate those characteristics thought to be associated with counselor effectiveness. In this section, however, a more detailed review of the literature regarding counselor effectiveness will be presented. This review will attempt to answer the question, are there characteristics by which the effective counselor can be distinguished from his/her ineffective counterpart?

Arbuckle (1956) investigated the characteristics of counselor candidates who were selected by their peers as those they would like to have as counselors, as compared to those that were rejected. Seventy counselor candidates were asked to select in order of preference, 1) the three people in their group they would most likely go to for counseling, 2) the three people they would least likely go to for counseling, 3) the three traits they would most like to find in counselors, and 4) the three traits they would least like to find in counselors. It was reported that the candidates most frequently chosen by their peers had a greater degree of confidence as measured by the Heston Personality Inventory, were more normal as measured by the MMPI, and scored highest in the areas of social service, persuasive, and literary on the Kuder Preference Record, Vocational Form. In addition, those traits listed to
be most desirable of a counselor included tolerance, warmth, and sincerity while those listed least desirable included lack of understanding, bias and superior manner.

In another study in which counselor candidate's effectiveness was judged by their peers, Stiffire, et. al. (1962) found significant results. Forty members of a one-semester NDEA Counseling and Guidance Institute completed a Q-sort to identify those nine most preferred candidates and the nine least preferred candidates and the nine least preferred candidates. These two groups, the "effective" and the "ineffective" counselor candidates, were then compared on the basis of several measures. There was a significant difference (p < .05) in academic aptitude and performance between these two groups of candidates as measured by their GPA and knowledge of guidance examination scores. The effective group differed from the ineffective group in their scores on the Social Welfare scales of the SVIB. Scores on the EPPS indicated significantly higher (p < .05) Deference and Order needs for the effective than for the ineffective group and significantly lower (p < .05) Abasement and Aggression needs.

Combs and Soper (1963) reported their investigation of twenty-nine counselor candidates in a year-long NDEA Counseling and Guidance Training Institute. Fourteen faculty members who taught and supervised the candidates, rank ordered them from best to worst. The faculty then used a seven-point scale to blind rate the counselor candidate's "ways of perceiving" as indicated by four human-relations incidents written by the candidates. Statistically significant (p < .05) correlations ranging from .40 to .65 were obtained from the ratings on twelve perceptual variable dimensions. The investigators conclude that good counse-
lors can be distinguished from poor ones on the basis of their characteristic ways of perceiving self, other people, the purpose of counseling and general orientation.

Donnan, et. al. (1969) studied the relationship between measured personality factors and counselor function as judged by counselees. The Sixteen Personality Factor Questionnaire was administered to twenty-two counselors who counseled with 880 college freshmen prospects. After three counseling sessions, each counselee was asked to rate his/her counselor on 1) unconditional positive regard, 2) empathic understanding, 3) congruence, and 4) trust, using the Relationship Inventory. Significant (p < .05) correlations were found between four of the personality factors and three out of the four relationship variables. These correlations are: (1) Factor A (warm, sociable) with unconditional positive regard; (2) Factor C (mature, calm) negatively with congruence; (3) Factor H (adventurous, socially bold) with trust; and (4) Factor I (tender-minded, sensitive) with congruence. The 16PF scores were effective in discriminating between counselors rated as high (upper 50%) and low (lower 50%) in each of the Relationship Inventory variables.

Demos and Zuwaylif (1966) reported, in a study of thirty secondary school counselors, that those counselors rated as most effective by their supervisors differed significantly (p < .05) in regard to their scores on five scales of the Edwards Personal Preference Schedule from those counselors rated least effective. The Allport-Vernon-Lindzey Study of Values and the Kuder Preference Record was also administered to the counselors but no significant relationships with the criterion measure were found.

Freedman, et. al. (1967) investigated certain personality charac-
teristics of thirty-seven counselor candidates enrolled at the University of Florida in relation to their counseling behavior as measured by the Porter Interview Analysis Scale. The data on the personality characteristics were collected from the results of the California Psychological Inventory and the Guilford-Zimmerman Temperament Survey. The Porter Interview Analysis Scale measured the following counseling behaviors: understanding, supportive, probing, evaluative, interpretive, and information giving. Freedman, et. al. reported conclusions which indicated a strong, predictable relationship between certain personality characteristics (i.e. namely responsibility, a sense of well-being, dominance, self-control, flexibility and sociability) and frequency of the counselor behaviors measured by the Porter Interview Analysis Scale.

Allen (1967) studied "Psychological Openness" as a possible correlate of counselor effectiveness. Using twenty-six graduate students enrolled in counseling at Harvard, Allen found a significant correlation \( (p < .01) \) between the Rorschach Index of Repressive Style and supervisory rated effectiveness as measured by the Responsiveness to Feeling Scale and the Response to Client Affect Scale. Allen concludes that the effective counselor is a person who is on basically good terms with his/her own emotional experience and that the ineffective counselor is one who is basically uneasy in regard to the character of his/her inner life.

Passons and Olsen (1969) investigated the relationship between five counselor characteristics and empathic sensitivity which was the criterion of counselor effectiveness. The five characteristics were: (1) open-mindedness as measured by the Rokeach Dogmatism Scale; (2) cognitive flexibility as measured by the Color-Word Test; (3) ability to sense feelings and (4) willingness to communicate in the realm of feel-
ings as measured by peer ratings; and (5) positive self-concept as measured by the Tennessee Self-Concept Scale. Results failed to support the correlation between the criterion measure and 1) open-mindedness, 2) cognitive flexibility and 3) positive self-concept. The ability to sense feelings and willingness to communicate in the realm of feelings did correlate significantly (p < .05 and < .01 respectively) with the criterion.

In a more recent study, Wittmer and Lister (1971) administered the 16PF Questionnaire to fifty-three counselor candidates enrolled at the University of Florida. Upon completion of the practicum, each practicum supervisor rated each counselor candidate using an evaluation scale designed to yield a composite counselor effectiveness score based upon counselor behavior in supervision and in interviews with clients. The investigators were testing the hypothesis that there was a significant relationship between a 16PF regression equation and the criterion measure. The hypothesis was accepted with the resulting correlation coefficient of .41, which was significant beyond the .01 level.

Jones (1974) investigated the correlations between the scores from the MMPI, the scores from the EPPS, a measure of tolerance of ambiguity, the Index of Communication (i.e. a measure of a person's level of interpersonal communications), the Index of Discrimination (i.e. a measure of one's ability to discriminate "effective from ineffective helping processes"), and letters of recommendation from selecting candidates for counselor education programs with rated levels of empathic understanding, genuineness, and respect. Nineteen counselor candidates served as the subjects in this study. The results indicated that empathic understanding and respect are significantly (p < .05) correlated to two similar
personality variables: tolerance of ambiguity and need for order. The rating from the Index of Communication and Si scale from the MMPI were significantly \( p < .05 \) correlated to empathic understanding. The Ma scale of the MMPI and letters of recommendation were significantly \( p < .05 \) related to respect. None of the variables investigated were significantly related to genuineness. The investigator suggests that with the replication of this study and additional studies completed in the area of predicting counselor effectiveness from personality characteristics, "...the time may soon come when regression analyses will produce valid criteria for the selection of trainees for counselor training programs" (p. 20).

Walton and Sweeney (1969) after a thorough review of the literature on counselor effectiveness point to open-mindedness as measured by the Rokeach Dogmatism Scale as one of the most promising predictors of counselor effectiveness, even though Passons and Olsen, cited earlier, were unable to demonstrate support for the Rokeach Dogmatism Scale as an effective predictor. The Edwards Personal Preference Schedule and some measure of tolerance of ambiguity are also suggested as having much promise as good predictors. Those indicators of counselor effectiveness listed as non-predictive are: GPA, MAT, MMPI, DAT and GATB, and the Taylor Manifest Anxiety Scale.

In concluding this section of the literature review, it can be stated that the research evidence is not clear on any of these variables as consistently predicting success or effectiveness of counselors. Even though several standardized measures have been used in the studies reported thus far, none seem to be indicative as consistent predictors of counselor effectiveness. It should not be surprising then to read Shert-
zer and Stone's (1971) statement that any conclusion to be drawn from a review of the literature regarding personality characteristics and counselor effectiveness would be that the findings to date have been inconclusive and often conflicting and that additional research is needed.

Cognitive Structures

Weitz (1957), cited earlier, contends that counseling involves the interaction of two personalities through the medium of communications. More specifically, Truax & Carkhuff (1967) have demonstrated that certain core conditions are present in the communications of the more effective counselor when compared to his/her less effective counterpart. These core conditions have been identified as having an acceptance of the client as a worthwhile individual, dealing with the core of the client's concerns, and sharing with the client the responsibility for his/her direction of growth. Truax and Mitchell (1971), after reviewing the literature, suggest that the degree to which these conditions are a part of the counseling process is important to counseling outcomes.

Communication on the part of the counselor, however, involves more than transmitting core conditions and/or other messages to the client. Communication also involves receiving and interpreting messages (Parish, et. al., 1976). This process of receiving messages, or the role of person perception, depends mostly on observations one makes about events (i.e. intentions, attitudes, emotions, ideas, abilities, purposes, traits, and so on) that are, so to speak, inside a person (Tagiuri & Petrullo, 1958). Rank (1966) contends that:

Whether termed perception, empathy, or sensitivity, the counselor's capability for observing client characteristics and understanding client communication is one of several relevant variables in the counseling process, and therefore offers pro-
mise in selection and training of counselors (p. 359).

Person perception, however, may not totally be based upon transfer of fact, but might rather be determined by the person's cognitive structures (i.e. the interlocking cognitive dimensions which organize one's social environment) (Bieri, et. al., 1966). These cognitive structures, which are the product of one's past experience, provide a network which is so structured that it both facilitates and restricts a person's range of behavior. It is in this type of framework that perception of a substance, whether animate or inanimate, assumes meaning (Kelly, 1955).

It should be noted that the amount of meaning derived from the environment is a function of the following cognitive structures: (1) Complexity, that is the number of conceptual dimensions or constructs a person employs in construing his/her environment (Bieri, et. al., 1966); (2) Differentiation, that is the degree to which one uses his/her constructs to discriminate environmental stimuli (Crockett, 1965); and (3) Integration, that is the synthesis of information contained in a variety of conceptual dimensions used by the person in processing information and interacting with the environment (Harvey, et. al., 1961).

Consequently, if one accepts the idea that the role of person perception is a relevant variable in the counseling process and that certain counselor verbal behaviors are more facilitative than others, then the relationship between these should be investigated. Of particular interest to this investigator is the question, Does that part of the counselor's personality called cognitive structure, more specifically referred to as cognitive complexity, cognitive differentiation, and cognitive integration, relate to his/her verbal effectiveness in counseling?
Cognitive Complexity and Counselor Verbal Effectiveness

The first variable to be investigated in this study, regarding its possible relationship to counselor verbal effectiveness, is cognitive complexity. Thus far in the literature survey, this is one area of research which has been overlooked. However, cognitive complexity has been studied regarding its relationship to perceptual discrimination, impression formation, and judgment (i.e. person perception). As was cited earlier, Rank concludes, based upon his investigation of the relationship of perception and counseling competence, that the role of person perception on the part of the counselor is a relevant variable in the counseling process worth continued study. Therefore, based on these observations, a few studies demonstrating the relationship of cognitive complexity and person perception will be included in this portion of the literature review.

Cognitive complexity, as was stated earlier, has been defined as the number of conceptual or construct dimensions a person employs in construing environmental stimuli (Bieri, et. al., 1966). In a study in which cognitive complexity was initially introduced into the literature, Bieri (1955) administered the modified version of the Role Construct Repertory Test (mRCRT) to thirty-seven college undergraduates. In addition, he had each of the subjects complete a Situations Questionnaire, and instrument designed to measure the predictive behavior of persons in a particular situation. From the results of this correlational study, the investigator concluded that the complexity of one's cognitive system for perceiving others is significantly \((p < .05)\) related to one's ability to predict accurately the behaviors of others.
In another study, Nidorf and Crockett (1965) investigated the relationship between a person's level of cognitive complexity and the ability to integrate conflicting information in the person-perception process. Thirty-six subjects were presented six stimulus traits said to be characteristic of a male college student. These traits were in conflict with each other (i.e., some were positive and some were negative). The subjects were given two minutes to form an impression of this student. They were then asked to write a complete description of the stimulus person, taking only five minutes. These descriptions were then classified into one of four categories ranging from unintegrated to integrated. These classifications were then related to the subjects' level of cognitive complexity, as measured by a questionnaire developed by Crockett. The direction of the correlation indicates that Ss high in complexity tend to form integrated impressions, while Ss low in complexity are likely to write unintegrated impressions. The investigators conclude that complex persons seem to be able to integrate conflict while their counterparts are unable to do so.

Tripodi and Biere (1966) tested sixty-four graduate students in social work and found that high complex judges, as measured by the modified version of the Role Construct Repertory Test, discriminated significantly \((p < .05)\) better inconsistently combined information describing a stimulus person than did low complex judges.

Biere (1968) concludes, after reviewing the literature on cognitive complexity and person perception, that there is evidence to support the position that the person with higher levels of cognitive complexity will seem to be more sensitive to the discrepancies between consistent and inconsistent information in his/her social environment.
It would seem that from these research reports, cognitively complex persons are more sensitive message receivers than cognitively simple persons. If this is taken as generally true, then cognitive complexity should be investigated as a possible predictor of counselor verbal effectiveness.

Cognitive Differentiation and Counselor Verbal Effectiveness

A second possible potential predictor variable of counselor verbal effectiveness would be cognitive differentiation. This variable has also been overlooked in the research on counselor verbal effectiveness. However, some relevant research on cognitive differentiation was gleaned from the literature survey.

As was stated earlier, cognitive differentiation has been defined as the degree to which one uses his/her construct dimensions to discriminate environmental stimuli (Crockett, 1965). In a recent study involving this variable, Carr (1969) reports that those subjects classified as high in differentiation as measured by the Interpersonal Discrimination Test (i.e. this is a modification of the Role Repertory Test), were significantly \( p < .05 \) better able to differentiate both positive and negative persons than low cognitive differentiators.

Based on the logic that the more differentiating a person is in his/her interpersonal relationships, the more adaptive he or she would be in meeting new role expectations, Lawlis (1975) hypothesized that there would be a significant difference between the type of vocation chosen by females and their level of cognitive differentiation. To test this hypothesis, he divided eighty-three female college students into
Traditional (i.e. more female-dominated) vs. Pioneer (i.e. more male-dominated) occupations by examining their occupational choices. He then administered a modified version of the Role Construct Repertory Test to the women to determine their level of cognitive differentiation. The results indicated that women entering more male-dominated occupations exhibited significantly \((p < .05)\) greater differentiation than those women who enter the traditional, more female-dominated occupations. The investigator concluded from this that higher differentiators seem to be better able to perceive differences between themselves and others and are consequently better equipped in judging their relationship with various social roles.

It would seem then, based on the somewhat limited research which has been done with cognitive differentiation, that this ability to perceive differences in stimuli would be a possible correlate to a counselor verbal behavior. Cognitive differentiation, then, should be investigated as a potential predictor of counselor verbal effectiveness.

**Cognitive Integration and Counselor Verbal Effectiveness**

A third possible potential predictor variable of counselor verbal effectiveness would be cognitive integration. Unlike the previous two cognitive structure variables, more research has been done with this variable, including a major study in counselor verbal effectiveness. Again, as was earlier cited, cognitive integration has been defined as the synthesis of information contained in a variety of construct dimensions used by the person in processing information and interacting with environmental stimuli (Harvey, et. al., 1961).
Drawing on the cognitive integration theory of Harvey, et. al. (1961) which states that more abstractly functioning persons (i.e. high cognitive integrators) will tend to discriminate more finely than concretely functioning persons (i.e. low cognitive integrators), Sawatzky and Zingle (1971) found that those subjects classified by the Interpersonal Topical Inventory as low in cognitive integration made more extreme judgments (i.e. categorizing 'the self' in terms of black or white) than did those subjects classified as high in cognitive integration.

In a similar study, Frauenfelder (1974) also reports that Ss of low integration as measured by the Paragraph Completion Test tended to use more extreme responses in describing their impressions of stimulus persons than did their high integrative counterpart.

Murphy and Brown (1970), using the Conceptual Systems Test as a measure of cognitive integration, found a significant relationship between an individual's level of integration and his/her teaching style. The low integrative teachers seemed to prefer the more traditional, structure type approach whereas the higher integrative teachers tended to be more progressive and demographic in their styles of teaching.

In a more recent study, Goldberg (1974) investigated the relationship between cognitive integration and the effectiveness of counselor candidate verbal behavior. He administered the Conceptual Systems Test to eighty-four master's degree students enrolled in counseling methods. To obtain a sample of counselor verbal behavior, Goldberg had each subject respond to a series of simulated client verbalizations. These responses were then analyzed using the counselor interaction analysis system and the Counselor Verbal Response Scale. The results indicated that the subjects with higher levels of cognitive integration or con-
ceptual functioning asked questions which encouraged client exploration of behaviors and feelings and that their responses required the client to assume more responsibility for his/her statements. Low integrative counselors, however, produced more ineffective data or information seeking responses, indicating a need to keep the interview structured.

In light of the above research findings on cognitive integration, especially that of Goldberg's study, a new area of research regarding counselor verbal effectiveness has been discovered. One study in the area of counselor verbal effectiveness, though, is not enough in which to base any solid conclusions. Therefore cognitive integration should again be investigated as a potential predictor of counselor verbal effectiveness.

Summary and Conclusions

In this chapter, several studies relating to the personality characteristics of counselors were reviewed. A search of the literature to ascertain what characteristics would consistently relate themselves to counselor effectiveness (i.e. both verbal and/or non-verbal) yielded inconclusive and sometimes conflicting results. Because of this conclusion, the investigator presented the rationale to a rather overlooked yet promising area of research regarding the predictiveness of counselor verbal effectiveness. That area of research was defined as the counselor's level of cognitive structures. More specifically, three cognitive structures were gleaned from the literature survey as possible potential predictors of counselor verbal effectiveness worth investigating. These cognitive structure variables were as follows: (1) cognitive complexity; (2) cognitive differentiation; and (3) cognitive integration.
CHAPTER III

DESIGN AND METHODOLOGY

Introduction

The selection and education of students in counseling programs is a vital step in producing effective counselors for public and private agencies. At present, not enough is known regarding the characteristics of effective counselors to compare and select prospective counselor candidates who have the potential of becoming effective counselors. It was the purpose of the present study to identify certain counselor variables which will be helpful to counselor educators and professional counseling agency administrators in identifying those persons who will later perform as effective counselors.

Definition of Terms

The following terms and definitions are utilized throughout the remainder of this study:

1. **Cognitive Complexity**: The number of conceptual dimensions or constructs a person employs in construing his/her environment as measured by a modified version of the Role Construct Repertory Test (mRCRT).

2. **Cognitive Differentiation**: The degree to which one uses his/her constructs to discriminate environmental stimuli as measured by the mRCRT.

3. **Cognitive Integration**: The synthesis of information contained in a variety of conceptual dimensions used by the person in processing information and interacting with the environment as measured by the Conceptual Systems Test (CST).
4. **Counselor Candidate**: An Oklahoma State University student working on a master's degree in Student Personnel and Guidance enrolled in pre-practicum.

5. **Counselor Verbal Effectiveness**: The rating of a counselor candidate's written responses to an audio tape of simulated client verbalizations as measured by the Counselor Verbal Response Scale (CVRS).


**Hypotheses**

Stated in the null, the following hypotheses were tested:

- **H₁**: There is no significant relationship between the cognitive complexity scores on a modified version of the Role Construct Repertory Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.

- **H₂**: There is no significant relationship between the cognitive differentiation scores on a modified version of the Role Construct Repertory Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.

- **H₃**: There is no significant relationship between the level of cognitive integration as measured by the Conceptual Systems Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.

- **H₄**: There are no significant relationships between a combination of the measured counselor cognitive structures and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.

**Subjects**

Nineteen master's degree counselor candidates enrolled in pre-practicum at Oklahoma State University served as subjects. Pre-practicum was the first course in counseling in which all counselor candidates began their education. The content of the course consisted of lecture and discussion of various counseling approaches and techniques as well as laboratory experiences with simulated counselor-client interactions.
Instruments Used

Modified Version of the Role Construct Repertory Test (mRCRT)

The Role Construct Repertory Test was developed by George Kelly (1955). It was designed to measure an individual's system of personal constructs. Although a number of modifications of the original form of this procedure have been used, the basic procedure involves judging a number of persons using a series of construct dimensions.

The modified version of the RCRT was developed by Bieri (1966). It was designed to measure an individual's level of cognitive complexity and cognitive differentiation. It was used in the present study to determine each subject's level of these cognitive structures. The mRCRT is a grid matrix. The rows of the grid refer to each of eight "semantic differential-type" bi-polar construct dimensions, each scored using a six-point Likert-type scale with the more favorable end of each continuum receiving the higher scale value. The columns refer to the following eight role figures:

1. Closest friend of the same sex as yourself.
2. Person of the opposite sex you find hard to like.
3. A friend you admire of the same sex as yourself.
4. Person of the same sex with whom you feel most uncomfortable.
5. Closest friend of the opposite sex (or spouse).
6. Person of the same sex you find hard to like.
7. A friend you admire of the opposite sex.
8. Person of the opposite sex with whom you feel most uncomfortable.

Subjects are told to list eight different people they know who fit
these role figures. The subjects are then told to rate each of these persons utilizing the eight bi-polar construct dimensions. Again, the scale weights assigned to the ratings of each role figure using each of the eight bi-polar construct dimensions are such that the highest scores are given to those ratings at the more favorable end of each continuum. For example, the subject rating the role figure "closest friend of the same sex" using the bi-polar construct dimension Adjusted-Maladjusted, would have the following possible scale weights to choose from: 1 = mal-adjusted, 2 = rather maladjusted, 3 = somewhat maladjusted, 4 = somewhat adjusted, 5 = rather adjusted, and 6 = adjusted.

It should be noted that role figures of both positive and negative affect have been chosen because complexity scores can vary along this dimension (Irwin, et. al., 1967 and Koenig, 1971). Aside from this requirement, both role figures and construct dimensions can be arbitrarily selected and ordered for presentation to subjects (Seamen & Koenig, 1974). Most of the role figures and construct dimensions are derived from the list used by Bieri and his associates in their version of the RCRT.

The mRCRT is self-administering and is usually completed in about twenty minutes, although there is not a time limit. The mRCRT is scored by hand using the following procedures developed by Bieri (1966):

1. The cognitive complexity measures are derived from the completed grid by counting the number of tied ratings for each role figure across the eight construct dimensions; that is, the ties are counted down and within each of the columns of the grid. The total complexity score (TC) is then found by adding the total number of ties within each of the eight columns. A person who uses the eight construct dimensions to construe the different role figures in an identical manner would produce a large number of tied ratings and would thus be considered low in "cognitive complexity".
2. The cognitive differentiation measures are derived from the completed grid by counting the number of tied ratings for each construct dimension across the eight role figures; that is the ties are counted across within each of the rows of the grid. The total differentiation score (TD) is found by adding the total number of ties within each of the eight rows. Again, the person who uses each of the eight construct dimensions to construe the different role figures in an identical manner would produce a large number of tied ratings and would thus be considered low in "cognitive differentiation".

The reliability of the grid form of the mRCRT has been determined in a study by Tripodi and Bieri (1963). These investigators gave the grid form of the mRCRT to sixteen subjects and then one week later asked the subjects to replicate their task. The test-retest reliability coefficient of the test scores was .86.

The validity of the mRCRT is difficult to determine just as the validity of any measure derived from a rather abstract theory is uncertain. The important validity question to be answered for the present study is, "Does the mRCRT measure the theoretical constructs of cognitive complexity and cognitive differentiation?". In answering this question, Helmstadter (1964) lists five types of evidence which might be appropriate for supporting a test's degree of construct validity. These types of evidence are: (1) Group differences - groups with different amounts of the characteristics involved would be expected to perform differently from each other on certain tasks; (2) Changes in Performance - comparisons among groups of the same individuals over time will be observed to change or not to change depending upon the conception of the trait the test measures; (3) Correlations - two measures of the same trait should correlate highly as well as two measures of different traits should not correlate highly; (4) Internal Consistency - the degree to which the items of a test are homogeneous in the sense that they measure the same function; and (5) Study of the
Test-Taking Process - the kinds of mental activities one is required to go through when answering the items of the test. Helmstadter cautiously points out that "...no longer will a single study in one specific situation involving one particular criterion measure be acceptable as complete evidence that a test measures what its authors claim" (pp. 138-139).

In line with Helmstadter's comments on construct validity, credence is given to the construct validity of the mRCRT by the results of a study by Leventhal and Singer (1964). In this study, one hundred one male college students were divided into three groups of cognitive complexity based on the scores of the modified version of the RCRT. The groups were called low, middle, and high levels of cognitive complexity. The subjects were then given transcripts of interviews of three stimulus figures, each differing along dimensions of performance in school, career aspirations, attitudes towards family, family background, and so on. After reading each interview transcript, the subjects' reactions to the stimulus figures were assessed using three types of measures: (1) attitudes; (2) trait attribution; and (3) impression organization. The investigators reported a significant (p < .05) positive relationship between level of cognitive complexity and impression formation. In other words, low complex judges (i.e., those judges with few interpersonal constructs) formed less differentiated impressions with greater interdependence regarding their impressions than did their high complex counterpart. These results are consistent with the underlying theoretical foundation of the mRCRT presented in Chapter II, since the cognitively simple individual would be expected to have available less construct dimensions with which to categorize interpersonal stimuli.
The above study together with those reported in Chapter II suggest that the mRCRT has sufficient validity and reliability to be an acceptable instrument for the measurement of cognitive complexity and cognitive differentiation. A copy of the mRCRT is included in Appendix A.

**Conceptual Systems Test (CST)**

Harvey's Conceptual Systems Test (Harvey, 1967), an objective measure of cognitive integration, was used to determine each subject's level of that cognitive structure. There are four levels of cognitive integration with each level referring to a distinctive organization of constructs within an individual predisposing him/her to distinctive modes of processing information and interacting with the environment (Harvey, 1961).

**Level or System I.** At the lowest level of cognitive integration, the rules for categorizing stimuli are highly fixed and simple. Ambiguity is not tolerated and the emphasis is on immediate, right, and authority-sa tioned solutions to problems. Goldberg (1974) states that "...counselors at this level tend to prescribe courses of action, focus on how clients should or ought to behave, deliver information, and engage in fact-finding questioning" (p. 364).

**Level or System II.** This level of cognitive integration is somewhat above that of System I in that more alternatives are perceived for categorizing stimuli. The System II individual perceives his/her world against a background of self vs. others, and accepts self while rejecting others. This kind of thinking leads to an absolutistic view toward others who, when seen in a position of potential control are "warded off". Even though the interview behaviors of System II counselors are
less predictable in their expectations of clients (Goldberg, 1974).

Level or System III. At this higher level of cognitive integration the rules for "reading" the environment are more flexible and subsequently more alternatives are perceived. Relationships developed are on the basis of mutuality rather than authority. Individuals functioning in System III thinking exhibit an increased concern for understanding the interactions, wishes and viewpoints of others. System III counselors tend to "...encourage divergent and exploratory thinking through reflective responding and open-ended questioning" (Goldberg, 1974, p. 365).

Level or System IV. At the highest level of cognitive integration a diverse world filled with many alternatives is perceived. The System IV person can generate a large variety of alternative interpretations of environmental events and can thus react with appropriate and unique responses. In addition, System IV persons view knowledge as tentative and are open to various viewpoints. Consequently, Goldberg states that System IV counselors "...display greater tolerance for ambiguity and greater acceptance of the client's perspective and alternative modes of behavior and experiencing" (p. 365).

The CST consists of forty-eight statements of beliefs to which the subject responds across a five-point Likert-type scale, with 1 = I agree completely and 5 = I disagree completely. The CST yields scores on six factors: 1) Divine Fate Control (i.e. the conviction that a divine being has, and ought to have, control of a person's life); 2) Need for Structure Order (i.e. the desire for the various aspects and situations of a person's life to be highly organized and arranged); 3) Need to Help People (i.e. the feeling of satisfaction derived from and the importance attached to doing things for others); 4) Need for People (i.e. the
feeling that contact with people is very important and constitutes a primary source of one's own satisfaction); 5) Interpersonal Aggression (i.e. the feeling that a person will, or is likely to, express hostility toward others when they do something the person does not like); and 6) General Pessimism (i.e. the feeling of general distrust of people, especially those in power, such as politicians). The scoring profile provided by Harvey (Murphy & Brown, 1970) was used to place each subject in one of the four possible levels of cognitive integration.

The reliability of the CST is reported in a study by Bower and Anderson (1970). The investigators found a test-retest correlation coefficient of .89 over a one week interval between testings.

A study designed to investigate the construct validity of the CST was again reported by Bower and Anderson (1970). These investigators tested four hundred forty-eight college students using the CST, Rotter's Internal-External Scale, the Religious Orientation Scale, Agreement Response Scale, and the Myers-Briggs Type Indicator. The design of the study was to correlate the scores on the CST with the scores on each of the instruments previously mentioned. According to the theory upon which the CST is based, System IV persons would be expected to be more internally oriented as measured by the Internal-External Scale; more extrinsic individuals as measured by the Religious Orientation Scale; more "yea-sayers" as measured by the Agreement Response Scale; and more interested in concepts, better processors of information, have more extreme tolerance, and finally exhibit a greater ability to judge and perceive stimuli as measured by the Myers-Briggs Type Indicator than their System I counterpart. From the results, the investigators generally supported the theory of Harvey in which the CST was based. System
IV persons were most interested in concepts and open to information while their System I counterparts were intrinsically religious and least "yea-saying". The predicted scores on the Internal-External Scale was not supported for either System I or System IV individuals. The investigators concluded, however, that System I and System IV are the only ones of the four systems measured by the CST which have sufficient construct validity. They suggest, therefore, that individuals in Systems II and III be distributed into Systems I and IV. For the purposes of this study, Systems II and III individuals were combined with System IV individuals. Hence, low and high levels of cognitive integration was operationally defined as those individuals classified by the CST as System I or Systems II, III, or IV respectively. A copy of the CST is included in Appendix B.

Counselor Verbal Response Scale (CVRS)

The Counselor Verbal Response Scale (CVRS), developed by Griffin (1966), was chosen as the instrument to measure the criterion variable in this study, counselor verbal effectiveness. The CVRS was designed to evaluate those core conditions (i.e. empathic, understanding, specific, and exploratory responses) believed to reflect facilitative communication (Goldberg, 1967; and Griffin, 1968). These core conditions have already been shown to be an important part of effective counseling outcomes (Truax & Mitchell, 1971). More Specifically, Griffin (1968) developed the CVRS to measure these core counselor behaviors by evaluating "...the counselor-client unit (i.e. a client verbalization that has been emitted or elicited followed by the counselor's response)" (p. 691).

The CVRS consists of four forced-choice, dichotomous dimensions:
1) affect - cognitive; 2) understanding - non-understanding; 3) specific - non-specific; and 4) exploratory - non-exploratory. Briefly, the dimensions are defined as follows:

I. Affective - Cognitive

A. Affective responses make reference to client emotions, feelings, fears, and so forth, as well as any ideas or convictions which are based upon such referents.

B. Cognitive responses are devoid of any such references which may be implied in the client's communication.

II. Understanding - Non-understanding

A. Understanding responses demonstrate the counselor's ability to communicate to the client the fact that he/she knows what the client is talking about, whether concern is basically affective or cognitive.

B. Non-understanding responses show that the counselor lacks an understanding of what the client is talking about.

III. Specific - Non-specific

A. Specific responses are characterized as being concrete and getting to the core of the client's problem areas.

B. Non-specific responses stay away from the client and his/her problem.

IV. Exploratory - Non-exploratory

A. Exploratory responses help the client to examine his/her own feelings or problem areas.

B. Non-exploratory responses indicate no recognition of the client's basic problem and/or no attempt is made to have the client search them out.

There is a fifth dimension called the effective - non-effective dimension and is measured using a four point scale. This dimension evaluates the more global and overall effectiveness of each counselor's
response in terms of how appropriately the response dealt with the client's verbalization and the degree to which the response contributed to counseling progress.

The CVRS is therefore used to evaluate the counselor-client unit, rating each counselor response on all five dimensions of the scale. Griffin (1968) states: "One forced-choice rating is made independently for each of the first four dimensions and a fifth rating is made on the global effectiveness of the counselor's response" (p. 691).

The scoring procedures used for the first four dimensions are as follows: a score of 1 is assigned to each cognitive, non-understanding, non-specific, and non-exploratory response given; and a score of 2 is assigned to each affective, understanding, specific and exploratory response given. For the effective - non-effective dimension, each response is scored on a four-point scale. A score of 4 indicates that the judge's evaluation of the counselor's response is about the "best" possible in terms of counseling progress; a rating of 3 indicates that the judge's evaluation of the response shows that it is effective towards some counseling progress but that it was not the "best" response that could have been given; a score of 2 indicates a response which contributes in no way to counseling progress (i.e. sort of neutral); and a score of 1 indicates a complete lack of understanding regarding the client's problem situation and/or is a response which is detrimental to counseling progress.

When all the responses are rated, two measures of counselor verbal effectiveness are then derived from two scores on the CVRS. The first measure of counselor verbal effectiveness is derived from the total score on the CVRS (i.e. the sum of all five dimension scores). The
second measure of counselor verbal effectiveness is then derived using the total score from the first four dimensions of the CVRS (i.e. the affect, understanding, specific, and exploratory dimension scores). These two grand total scores from the CVRS dimension scores was used to operationally define counselor verbal effectiveness.

To increase the validity of the ratings, the final score assigned to each counselor response on each of the CVRS dimensions was the average of the three independent ratings given by the judges using the CVRS.

The reliability of the CVRS is reported by Griffin (1966) in a study of fifty-three master and doctoral level counselor candidates. The investigator found interjudge reliabilities ranging from .590 to .890 for each response rating within the dimensions and .697 to .953 for the total response rating for the dimensions.

In a more recent study of the reliability of the CVRS (Boyd & Pate, Jr., 1975), verbal responses of twenty-five counselors were analyzed. The investigators had twenty counselor responses of each counselor rated by three judges using each of the dimensions of the CVRS. The correlations between the ratings of the three judges ranged from .91 to .99.

The validity of the CVRS has been studied by Griffin (1966) in three of the five types of evidence appropriate for construct validity previously described (Helmstadter, 1964). In his first study, Griffin wanted to determine if the CVRS could discriminate between two levels of counselor candidates. He used ten counselor candidate volunteers, five Ph.D. candidates just completing their senior practicum and five master candidates just beginning pre-practicum. Each subject was asked to submit to the investigator a thirty minute video taped interview with a client exhibiting personal-social type problems. A ten minute segment
from each tape was rated using the CVRS by three trained judges. The scores from the ratings were significantly greater of Ph.D. candidates than for the M.A. candidates.

In a second study of the construct validity of the CVRS, Griffin wanted to determine if the instrument could detect changes in performance of two groups of counselor candidates. The investigator randomly assigned ten counselor candidates to either an experimental or a control group. The experimental group received training and supervision along the four dimensions of the CVRS and the control group received no such training or supervision. The post test ratings of the E group were significantly greater than the control group.

In a third study, Griffin had three trained judges rate the responses of fifty-three counselor candidates. Using Hoyt's analysis of variance method, the investigator determined the internal consistency of the scale. The internal consistency coefficient of each response rating within the dimensions ranged from .812 to .961 and the internal consistency coefficients of the total response rating for the dimensions ranged from .873 to .984.

The foregoing studies on the CVRS indicate that the instrument is apparently reliable and has sufficient construct validity. Because of these features and because the CVRS is the only known measure of counselor verbal effectiveness specifically designed to evaluate the counselor-client unit of verbalization, it was selected as the most appropriate criterion measure for this study. A copy of the CVRS is included in Appendix C.
Procedure

The investigator met with the subjects during one of their scheduled course meetings. Each student was handed a packet of materials which included the mRCRT, the CST, and forms for writing responses to selected audio excerpts of stimulus expressions of individuals in need of help (the written version of the excerpts are included in Appendix D). Each kit was packaged in a 9 x 12 inch envelope with a code number on the outside corresponding to the same code number on all materials in the envelope. After all envelopes were handed out, the subjects were then asked to open their envelopes and take out only the mRCRT. Instructions for this test were given by the investigator and the subjects then completed the test. Next, all the subjects were asked to return the completed mRCRT back to the envelope and take out the response forms for the simulated client verbalizations (i.e. stimulus expressions).

A sample of counseling behavior was subsequently elicited by asking each subject to respond to an audio tape consisting of a series of ten excerpts of simulated client verbalizations. The subjects were given thirty seconds to write their response to each stimulus expression. At the conclusion of the tenth response, the subjects were asked to return the response forms to the envelope and to take out the CST.

The investigator asked the subjects to read the instructions to the CST carefully and then to complete it. When all subjects had completed the CST, the subjects were then asked to return the CST to the envelope and then to return the envelope back to the investigator.

Each of the subject's completed mRCRT and CST were scored by the investigator, since both of these tests were objective instruments. Each of the subject's responses to the simulated client verbalizations
were presented randomly to three judges trained by the investigator in the use of the criterion measure. Each judge independently rated each response using the CVRS. Hoyt's analysis of variance method was used to determine the coefficients of interjudge reliability. The interjudge reliability was based on the total score obtained by each counselor candidate on each of the scale's five dimensions as well as the two counselor verbal effectiveness scores described earlier.

Treatment of the Data

The first two hypotheses of the study sought to determine if there was a relationship between counselor verbal effectiveness and the total cognitive complexity scores and the total cognitive differentiation scores derived from the mRCRT. A Pearson's product-moment correlation coefficient was computed between the criterion measure and these two predictor variables. The resulting correlation coefficients were then compared with the tabled values for significance of $r$, using the appropriate degrees of freedom (Bruning and Kintz, 1968, pp. 228-229). Correlation coefficients were accepted as significant when they reached the .05 level of confidence.

The third hypothesis sought to determine if there is a relationship between counselor verbal effectiveness and the score on the CST. Due to the fact that the variable of cognitive integration as measured by the CST is a dichotomous variable (i.e., a subject is classified as either high cognitive integration or low cognitive integration), the point-biserial correlation coefficient was computed. As stated above, the coefficients were compared with the tabled values for significance of $r_p$, using the appropriate degrees of freedom. Correlation coeffi-
cient were then taken as being significant when they reached the .05 level of confidence.

A stepwise regression analysis was used to test the forth hypothesis. Utilizing the services of the University Computer Center, a Maximum R² Improvement technique of stepwise multiple regression was used (Service, 1972). This technique selects the optimum set of independent variables for predicting the criterion variable, in this case counselor verbal effectiveness. At the point where R² failed to reach significance at the .05 level of confidence, no further variables were added to the equation.

The advantage of this Maximum R² Improvement technique over other stepwise procedures is that a predictor may not contribute individually to the efficiency of the regression equation but may contribute a great deal in combination with another variable (i.e. the best single predictor and the second best predictor may not predict as well as the best pair or two-variable model).

Assumptions of the Study

1. Master level students enrolled in pre-practicum are heterogeneous with respect to level of cognitive complexity, cognitive differentiation, and cognitive integration.

2. Simulated client verbalizations will elicit similar counselor responses as those elicited in an actual interview.

Limitations of the Study

1. Conclusions drawn from this study will be applicable to the population of counselor candidates only to the degree that the sample is representative of counselor candidates in general.

2. The ratings of counselor verbal effectiveness do not include the counselor's non-verbal behavior. It is very possible
that these verbal behavior ratings could be different when the non-verbal behaviors are included.

Summary

In this chapter, the definitions of terms were included along with the four major hypotheses of the present investigation, which were stated in the null. Nineteen master's degree counselor candidates enrolled in pre-practicum at Oklahoma State University were identified as subjects. The instruments used to measure the predictor variables were discussed. They were the modified version of the Role Construct Repertory Test and the Conceptual Systems Test. The criterion measure, the Counselor Verbal Response Scale, was also discussed. Procedures used in collecting and treating the data were given along with the assumptions and limitations of the study. The results of the application of those statistical techniques to the data obtained are presented in Chapter IV.
CHAPTER IV

RESULTS OF THE STUDY

This study investigated the relationship of certain selected counselor characteristics called cognitive structures, as measured by the modified version of the Role Construct Repertory Test and the Conceptual Systems Test, with counselor verbal effectiveness as measured by the Counselor Verbal Response Scale. Four hypotheses were tested. Stated in the null, these hypotheses were as follows:

\[ H_1: \text{There is no significant relationship between the cognitive complexity scores on a modified version of the Role Construct Repertory Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.} \]

\[ H_2: \text{There is no significant relationship between the cognitive differentiation scores on a modified version of the Role Construct Repertory Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.} \]

\[ H_3: \text{There is no significant relationship between the level of cognitive integration as measured by the Conceptual Systems Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.} \]

\[ H_4: \text{There are no significant relationships between a combination of the measured counselor cognitive structures and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.} \]

Description of Sample

Nineteen counselor candidates enrolled in pre-practicum at Oklahoma State University served as the subjects in this investigation. The mRCRT was the instrument used to measure the predictor variables, cogni-
tive complexity and cognitive differentiation. The CST was the instrument used to measure the predictor variable, cognitive integration. A description of how the sample performed on each of the predictor variable measures was obtained. This description was comprised of the ranges, the means, and the standard deviations of the subjects' scores derived from the mRCRT and the CST. The results are presented in Table I.

<table>
<thead>
<tr>
<th>Test</th>
<th>Variable</th>
<th>Range</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>mRCRT</td>
<td>Cognitive Complexity</td>
<td>61-85</td>
<td>72.37</td>
<td>7.38</td>
</tr>
<tr>
<td>mRCRT</td>
<td>Cognitive Differentiation</td>
<td>35-71</td>
<td>54.47</td>
<td>11.70</td>
</tr>
<tr>
<td>CST</td>
<td>Cognitive Integration</td>
<td>9-38</td>
<td>25.16</td>
<td>7.43</td>
</tr>
</tbody>
</table>

With a possible range of scores from 16 to 224 on the mRCRT (16 being more cognitively complex and more cognitively differentiating), the sample's scores ranged from 61 to 85 on the cognitive complexity dimension and ranged from 35 to 71 on the cognitive differentiation dimension. The mean score for cognitive complexity was 72.37 with a standard deviation of 7.38, indicating a narrow variation among the scores. The mean score for cognitive differentiation was 54.47 with a standard deviation
of 11.70, indicating a somewhat wider variation among these scores than those of the cognitive complexity dimension.

With a possible range of scores from 8 to 40 on the CST (8 being more cognitive integrative), the sample varied with scores ranging from 9 to 38. The mean score was 25.16 with a standard deviation of 7.43, indicating that the majority of the scores were more representative of low cognitive integration than high cognitive integration.

The CVRS was the instrument used to measure the criterion variable, counselor verbal effectiveness. Two scores from the CVRS served as the measure of the criterion variable. The first score consisted of the total score on the CVRS (i.e. the sum of all five dimension scores). The second score used as a measure of counselor verbal effectiveness was the total score from the first four dimensions of the CVRS (i.e. the affect, understanding, specific, and exploratory dimension scores).

A description of how the sample performed on each measure of counselor verbal effectiveness derived from the CVRS was obtained. This description was comprised of the ranges, the means, and the standard deviations of the subjects' scores derived from the CVRS. The results are presented in Table II.

The range of total possible scores from using all dimensions of the CVRS as a measure of counselor verbal effectiveness was 50 to 120 with 120 being the most desirable rating. The scores from the sample studied ranged from 73 to 106, with a mean of 92.37 and a standard deviation of 7.26. The mean rating for this measure of counselor verbal effectiveness indicates that the judges rated these counselor candidates, as a whole, somewhat above average.

The second score used for counselor verbal effectiveness as meas-
TABLE II
RANGES, MEANS AND STANDARD DEVIATIONS OF THE TWO
COUNSELOR VERBAL EFFECTIVENESS
SCORES FROM THE CVRS
(N = 19)

<table>
<thead>
<tr>
<th>Counselor Verbal Effectiveness Scores</th>
<th>Range</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total dimension scores from the CVRS</td>
<td>73-106</td>
<td>92.37</td>
<td>7.26</td>
</tr>
<tr>
<td>Total of the first four dimension scores from the CVRS</td>
<td>61-77</td>
<td>67.26</td>
<td>5.71</td>
</tr>
</tbody>
</table>

ured by the CVRS had a possible range of 40 to 80 with 80 being the most desirable rating. In the present study, these scores ranged from 61 to 77, with a mean of 67.26 and a standard deviation of 5.71. The mean rating for this measure of counselor verbal effectiveness indicates that the judges rated these counselor candidates, as a whole, somewhat above average.

Interjudge Reliability of the Criterion Measure

The counselor verbal effectiveness scores derived from the CVRS were based on the average of three judges' ratings. Each judge independently rated each of the counselor candidate's responses to the stimulus expressions using the CVRS. Hoyt's (1941) analysis of variance method was used to determine the coefficients of interjudge reliability. The interjudge reliability was based on the total score obtained by each counselor on each of the scale's five dimensions as well as the two counselor verbal effectiveness scores. These interjudge
reliabilities are presented in Table III.

**TABLE III**

**INTERJUDGE RELIABILITIES OF THE TWO COUNSELOR VERBAL EFFECTIVENESS SCORES AND THE DIMENSION SCORES FROM THE CVRS (N = 3)**

<table>
<thead>
<tr>
<th>CVRS Scores</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Counselor Verbal Effectiveness Scores</strong></td>
<td></td>
</tr>
<tr>
<td>Total dimension scores from the CVRS</td>
<td>.508</td>
</tr>
<tr>
<td>Total of the first four dimension scores from the CVRS</td>
<td>.505</td>
</tr>
<tr>
<td><strong>Dimension Scores</strong></td>
<td></td>
</tr>
<tr>
<td>Affective - Cognitive</td>
<td>.680</td>
</tr>
<tr>
<td>Understanding - Non-understanding</td>
<td>.558</td>
</tr>
<tr>
<td>Specific - Non-specific</td>
<td>.362</td>
</tr>
<tr>
<td>Exploratory - Non-exploratory</td>
<td>.221</td>
</tr>
<tr>
<td>Effective - Non-effective</td>
<td>.175</td>
</tr>
</tbody>
</table>

From the results presented in Table III, it is observed that the interjudge reliabilities for the two counselor verbal effectiveness scores are somewhat low. This could indicate that the verbal effectiveness rating of each of the counselor candidate's responses might not be completely representative of their true performance. Therefore, a certain amount of discretion should be used as to how much confidence is to be placed in the counselor verbal effectiveness scores as measured by
the CVRS in the present study.

Cognitive Complexity and Counselor Verbal Effectiveness

The first hypothesis called for the study of the relationship between cognitive complexity and counselor verbal effectiveness. It was stated as follows:

\[ H_1: \text{There is no significant relationship between the cognitive complexity scores on a modified version of the Role Construct Repertory Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.} \]

This hypothesis was tested by computing a Pearson's product-moment correlation coefficient between the scores on the criterion measure (CVRS) and the cognitive complexity scores from the mRCRT. The results are presented in Table IV.

**TABLE IV**

**CORRELATION COEFFICIENTS OF COGNITIVE COMPLEXITY AS MEASURED BY THE mRCRT WITH COUNSELOR VERBAL EFFECTIVENESS**

\[ (N = 19) \]

<table>
<thead>
<tr>
<th>Counselor Verbal Effectiveness Scores</th>
<th>( r )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total dimension scores from the CVRS</td>
<td>(-0.027)</td>
</tr>
<tr>
<td>Total of the first four dimension scores from the CVRS</td>
<td>(-0.016)</td>
</tr>
</tbody>
</table>

The resulting correlation coefficients of \(-0.027\) and \(-0.016\) were found to be nonsignificant at the .05 level of confidence when compared,
using 17 degrees of freedom, with the tabled value of .456 for significance of $r$ (Bruning and Kintz, pp. 228-229). Therefore from these results, the stated null hypothesis was accepted. There is no evidence from this tested hypothesis to support the position that persons who are more cognitively complex as measured by the mRCRT are more verbally effective counselor candidates, as measured by the CVRS.

Cognitive Differentiation and Counselor Verbal Effectiveness

The second hypothesis required a study of the relationship between cognitive differentiation and counselor verbal effectiveness. It was stated as follows:

$H_2$: There is no significant relationship between the cognitive differentiation scores on a modified version of the Role Construct Repertory Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.

This hypothesis was tested by computing a Pearson's product-moment correlation coefficient between the scores on the criterion measure (CVRS) and the cognitive differentiation scores from the mRCRT. The results are presented in Table V.

<table>
<thead>
<tr>
<th>TABLE V</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORRELATION COEFFICIENTS OF COGNITIVE DIFFERENTIATION AS MEASURED BY THE mRCRT WITH COUNSELOR VERBAL EFFECTIVENESS (N = 19)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Counselor Verbal Effectiveness Scores</th>
<th>$r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total dimension scores from the CVRS</td>
<td>-.190</td>
</tr>
<tr>
<td>Total of the first four dimension scores from the CVRS</td>
<td>-.332</td>
</tr>
</tbody>
</table>
The resulting correlation coefficients of -.190 and -.332 were found to be nonsignificant at the .05 level of confidence when compared, using 17 degrees of freedom, with the tabled value of .456 for significance of \( r \) (Bruning and Kintz, pp. 228-229). Therefore from these results, the stated null hypothesis was accepted. There is no evidence from this tested hypothesis to support the position that persons who are more cognitively differentiating as measured by the mRCRT, are more verbally effective counselor candidates as measured by the CVRS.

Cognitive Integration and Counselor Verbal Effectiveness

The third hypothesis required a study of the relationship between cognitive integration and counselor verbal effectiveness. It was stated as follows:

\[ H_3: \text{There is no significant relationship between level of cognitive integration as measured by the Conceptual Systems Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.} \]

This hypothesis was to be tested using the point-biserial correlation coefficient. However, since sixteen of the nineteen subjects were classified as having low cognitive integration (i.e. they were classified as System I) and only three were classified as having high cognitive integration (i.e. they were classified as either Systems II, III, or IV), the formulas used by the CST to classify each individual were dropped. The score used for cognitive integration was now the total raw score from the Divine Fate Control cluster score of the CST. The score on this cluster separated System I persons from Systems II, III, and IV persons. This cluster score consisted of eight items that were rated by each subject from 1 to 5 on a Likert-type scale. This change in scoring procedures was done to provide greater variance among the...
cognitive integration scores.

The hypothesis was now tested by computing a Pearson's product-moment correlation coefficient between the scores from the criterion measure (CVRS) and the cognitive integration scores from the CST. The results are presented in Table VI.

<table>
<thead>
<tr>
<th>Counselor Verbal Effectiveness Scores</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total dimension scores from the CVRS</td>
<td>-.025</td>
</tr>
<tr>
<td>Total of the first four dimension scores from the CVRS</td>
<td>-.025</td>
</tr>
</tbody>
</table>

The resulting correlation coefficients of -.025 and -.025 were found to be nonsignificant at the .05 level of confidence when compared, using 17 degrees of freedom, with the tabled value of .456 for significance of r (Bruning and Kintz, pp. 228-229). Therefore from these results, the stated null hypothesis was accepted. There is no evidence from this tested hypothesis to support the position that persons who are more cognitively integrative as measured by the CST, are more verbally effective counselor candidates as measured by the CVRS.
Combined Counselor Candidate Cognitive Structures and Counselor Verbal Effectiveness

The forth hypothesis required a study of the relationship between a combination of measured counselor candidate cognitive structures and counselor verbal effectiveness. It was stated as follows:

\( H_4: \) There are no significant relationships between a combination of the measured counselor cognitive structures and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.

This hypothesis was to be tested utilizing the services of the University Computer Center to compute a Maximum \( R^2 \) Improvement equation through stepwise multiple regression. However, since the first three null hypotheses were accepted, it was decided to compute a multiple regression coefficient by hand using the Aitken's method of pivotal condensation. This procedure requires the successive calculation of differences between cross products (Ferguson, 1966). In the present study the cross products were the predictor variable scores and the criterion variable scores. The cognitively complex variable acted as the pivotal element throughout the calculations. The result was a correlation between the criterion variable, counselor verbal effectiveness, and the weighted sum of the three cognitive structure variables (i.e. these predictor variables being weighted in order to maximize the correlation). The results are presented in Table VII.

The resulting correlation coefficients of \(-.197\) and \(-.347\) were then converted into the F ratios, \(.202\) and \(.684\), respectively. These F ratios were found to be nonsignificant at the .05 level of confidence when compared, using \( df_1 = 3 \) and \( df_2 = 15 \), with the tabled value of 8.70 for significance of F (Ferguson, 1966, pp. 408-411). Therefore
TABLE VII
MULTIPLE CORRELATION COEFFICIENTS AND F VALUES OF A COMBINATION OF THE COGNITIVE STRUCTURE VARIABLES WITH COUNSELOR VERBAL EFFECTIVENESS (N = 19)

<table>
<thead>
<tr>
<th>Counselor Verbal Effectiveness Scores</th>
<th>F Value</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total dimension scores from the CVRS</td>
<td>.202</td>
<td>-.197</td>
</tr>
<tr>
<td>Total of the first four dimension scores from the CVRS</td>
<td>.684</td>
<td>-.347</td>
</tr>
</tbody>
</table>

from these results, the stated null hypothesis was accepted. There is no evidence from this tested hypothesis to support the position that a combination of a person's level of cognitive structures relate to more verbally effective counselor candidates as measured by the CVRS.

Intercorrelations of Predictor Variables

Table VIII presents an intercorrelational matrix, using Pearson's product-moment correlation coefficient computations, of the three predictor variable used in this study.

The resulting correlation coefficients of .269, -.081, and -.124 were found to be nonsignificant at the .05 level of confidence when compared, using 17 degrees of freedom, with the tabled value of .456 for significance of r (Bruning and Kintz, pp. 228-229). There is therefore no evidence that any of the three predictor variables were measuring the same aspect of cognitive structure.
### TABLE VIII

**INTERCORRELATION OF PREDICTOR VARIABLES USED IN MULTIPLE R**

(N = 19)

<table>
<thead>
<tr>
<th></th>
<th>CC</th>
<th>CD</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Complexity (CC)</td>
<td>1.000</td>
<td>.269</td>
<td>-.081</td>
</tr>
<tr>
<td>Cognitive Differentiation (CD)</td>
<td>1.000</td>
<td></td>
<td>-.124</td>
</tr>
<tr>
<td>Cognitive Integration (CI)</td>
<td></td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>

**Summary**

This chapter included a description of the sample on the variables investigated in the present study. There was no evidence in the data gathered by this investigator to reject any of the four hypotheses.

In addition, the relationship between the predictor variables used in this study were presented by means of an intercorrelation matrix.
CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Overview

The present study involved nineteen master's degree counselor candidates enrolled in pre-practicum at Oklahoma State University. Each counselor candidate was asked to complete a modified version of the Role Construct Repertory Test (mRCRT) and the Conceptual Systems Test (CST). The mRCRT and the CST served as the measures of the cognitive structure predictor variables. More specifically, the mRCRT measured cognitive complexity and cognitive differentiation, while the CST measured cognitive integration. A sample of the Ss counseling verbal behavior was subsequently elicited by asking each counselor candidate to respond to an audio tape consisting of a series of ten excerpts of stimulus expressions of individuals in need of help. The Ss responses were then independently rated by three judges using the Counselor Verbal Response Scale (CVRS). The CVRS served as the criterion measure, counselor verbal effectiveness. Data gathered on the mRCRT and the CST were then correlated with the Ss scores on the criterion measure, the CVRS.

Pearson product-moment correlation coefficients were then computed between the CVRS scores and each of the three predictor variable scores. Finally, Aitken's method of pivotal condensation was utilized to compute a multiple regression coefficient between the CVRS scores and a combination of the counselor candidate's cognitive structures.
Summary of the Results

The CVRS was used as the measure of the criterion variable, counselor verbal effectiveness. In the present study, two scores from the CVRS were used as measures of counselor verbal effectiveness. The first measure of counselor verbal effectiveness was the total score of all five dimension scores of the CVRS. The second measure of counselor verbal effectiveness was the total score of the first four CVRS dimension scores. The raw scores comprising each dimension score represented the average of three independent ratings given by the three judges used in this study.

Hoyt's analysis of variance method was used to determine the coefficients of interjudge reliability. The resulting interjudge reliabilities may be seen in Table III of Chapter IV. The interjudge reliabilities of the counselor verbal effectiveness scores were somewhat low (i.e. \( r = .508 \) for counselor verbal effectiveness scores based on all of the CVRS dimension scores and \( r = .505 \) for counselor verbal effectiveness scores based on the first four CVRS dimension scores). (IT IS TO BE NOTED that in light of such low interjudge reliabilities, the conclusions and implications for future research drawn from the following results of this study should be read in a very tentative framework. The investigator of this study is currently involved in a follow-up study investigating the interjudge reliabilities of the present study. All interested readers are encouraged to contact him for the results of this follow-up investigation.)

In this study, four hypotheses were tested. Hypothesis one was stated as follows:

\[ H_1: \text{There is no significant relationship between the cognitive} \]
complexity scores on a modified version of the Role Construct Repertory Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.

The resulting correlation coefficients between the scores on the mRCRT and the CVRS may be seen in Table IV of Chapter IV. The null hypothesis was accepted indicating no evidence to support the position that persons who are more cognitively complex as measured by the mRCRT are more verbally effective counselor candidates, as measured by the CVRS.

The second hypothesis was stated as follows:

$$H_2: \text{ There is no significant relationship between the cognitive differentiation scores on a modified version of the Role Construct Repertory Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.}$$

The resulting correlation coefficients between the scores on the mRCRT and the CVRS may be seen in Table V of Chapter IV. The null hypothesis was accepted indicating no evidence to support the position that persons who are more cognitively differentiating as measured by the mRCRT are more verbally effective counselor candidates, as measured by the CVRS.

The third hypothesis was stated as follows:

$$H_3: \text{ There is no significant relationship between level of cognitive integration as measured by the Conceptual Systems Test and counselor verbal effectiveness as measured by the Counselor Verbal Response Scale.}$$

The resulting correlation coefficients between the scores on the CST and the CVRS may be seen in Table VI of Chapter IV. The null hypothesis was accepted indicating no evidence to support the position that persons who are more cognitively integrative as measured by the CST are more verbally effective counselor candidates as measured by the CVRS.

The forth hypothesis was stated as follows:

$$H_4: \text{ There are no significant relationships between a combination of the measured counselor cognitive structures and counselor}$$
verbal effectiveness as measured by the Counselor Verbal Response Scale.

The resulting multiple correlation coefficients between the scores of both the mRCRT and the CST and the CVRS may be seen in Table VII of Chapter IV. The null hypothesis was accepted indicating no evidence to support the position that a combination of a person's level of cognitive structures relate to more verbally effective counselor candidates as measured by the CVRS.

An intercorrelational matrix, using Pearson's product-moment correlation coefficient computations, of the three predictor variables used in this study may be seen in Table VIII of Chapter IV. The testing of the resulting correlation coefficients indicated no evidence that any of the three predictor variables were measuring the same aspect of cognitive structure.

Conclusions

In the present study, none of the predictor variables (i.e. cognitive complexity, cognitive differentiation, and cognitive integration) were found to be predictive of counselor verbal effectiveness. From these findings, a number of conclusions can be drawn. (IT IS TO BE NOTED that in lite of the low interjudge reliabilities, the conclusions drawn from this study's findings should be read in a very tentative framework.)

From the results of the predictor variable, cognitive complexity, a conclusion could be made stating that the ability to construe environmental stimuli with the use of a wide variety of construct dimensions has no relationship with how well a counselor communicates to the client those therapeutic conditions measured by the CVRS.
From the results of the predictor variable, cognitive differentiation, a conclusion could be made stating that the ability to use one's construct dimensions to differentiate environmental stimuli has no relationship with how well a counselor communicates to the client those therapeutic conditions measured by the CVRS.

Finally, from the results of the predictor variable, cognitive integration, a conclusion could be made stating that the ability to synthesize information being processed from environmental stimuli (i.e. closed vs. open-mindedness) has no relationship with how well a counselor communicates to the client those therapeutic conditions measured by the CVRS. However, this conclusion does not support the findings reported by Goldberg (1974). He states that counselor candidates classified as having low cognitive integration, as measured by the CST, were more likely to respond to simulated client verbalizations with minimal therapeutic communication as measured by the CVRS than those counselor candidates classified as having high cognitive integration.

From this apparent conflict of the findings of the present study with the findings reported in Goldberg's study on the predictiveness of cognitive integration with counselor verbal effectiveness, several additional conclusions can be offered. The first such conclusion would be that, as a whole, it might be possible for persons who indicate an agreement to a belief in a divine being as the controller of their fate and the fate of others to be verbally effective counselors as measured by the CVRS (It is to be noted that low cognitive integration of closed-mindedness as measured by the CST is derived from the Divine Fate Control cluster score. This cluster score is composed of those items indicating the conviction that a divine being has, and ought to have, control of
Finally, a second conclusion regarding the above conflict of findings would be that it might be possible for persons, as a whole, to have strong beliefs in a divine being and still remain a verbally effective counselor, as measured by the CVRS, to those clients whose beliefs differ from their own.

However, before a great deal of confidence is placed in any of the previously stated conclusions regarding the predictor variables, several implications for further investigation with these variables are presented in the next section of this chapter.

Implications for Future Research

Since none of the predictor variables were found to be predictive of counselor verbal effectiveness, a number of implications for further research involving both the criterion variable and the predictor variables can be suggested. (IT IS TO BE NOTED that in light of the low interjudge reliabilities, the implications for further research drawn from this study's findings should be read in a very tentative framework.)

As was previously reported in Chapter IV, the interjudge reliabilities for the two counselor verbal effectiveness scores were somewhat low. This could indicate that the verbal effectiveness rating of each of the counselor candidate's responses might not be completely representative of their true performance. Several implications can be offered as possible ways of improving the interjudge reliabilities between the judges' ratings on the CVRS.

The first implication would be to increase the number of responses being rated by including more simulated client verbalizations. Accord-
ing to Neale and Liebert (1973), the reliability of a test tends to increase as the number of items in the test increases toward the total number of items possible in the population of interest. In the present study, only ten simulated client verbalication responses were rated, yet in the original development of the CVRS, the interjudge reliability was derived from the ratings of twenty counselor responses (Griffin, 1966). This decrease in the number of responses rated in the present study may have contributed to the lower interjudge reliabilities.

Another consideration would be to increase the number of judges rating the counselor candidates' responses. The increase in the number of judges might possibly diminish the variance between the judges' ratings by minimizing the influence of deviant ratings from the cluster ratings represented by the rest of the group.

Still another suggestion for increasing the interjudge reliabilities of the criterion measure would be to complete a pilot study to determine the interjudge reliabilities following the training of the judges in the use of the CVRS. This pilot study would allow the trainer the opportunity to assess the areas of greatest disagreement among the ratings. From this formative evaluation, improvements, if needed, in the training of the judges could then be added and further training of the judges could be done.

Therefore, based on these preceding implications, the following specific changes in the present study are recommended for future research regarding the CVRS:

1. Increase the number of simulated client verbalizations from ten to twenty;
2. Increase the number of judges from three to five;
3. Check the interjudge reliabilities immediately following the
training of the judges; and

4. If the interjudge reliabilities derived from item (3) above are low, make appropriate changes in the training procedures for the judges and then follow-up with additional training.

However, despite the moderately low interjudge reliabilities for the criterion variable, counselor verbal effectiveness, several implications for future research regarding the predictor variables can still be drawn from the conclusions stated earlier in this chapter.

Regarding the predictor variable, cognitive complexity, the first recommendation relates to the affective value of the person being described when using the mRCRT to measure this variable. According to Miller and Bieri (1965), their subjects tended to be significantly more complex when describing persons with whom negative affect was associated than among persons with whom positive affect was associated. However, Turner and Tripodi (1968) reported that when their subjects were asked to describe ten different clients from their clinical practice using the mRCRT, the type of affect associated with the client did not relate to their subjects' level of cognitive complexity. Therefore based on these studies, it is specifically recommended that six types of cognitive complexity scores be derived from the mRCRT. The six cognitive complexity (CC) scores derived would be as follows:

1. The total score for CC when describing clients;

2. The CC score when describing clients with whom negative affect is associated;

3. The CC score when describing clients with whom positive affect is associated;

4. The total score for CC when describing role figures;

5. The CC score when describing role figures with whom negative affect is associated; and

6. The CC score when describing role figures with whom positive affect is associated.
A second recommendation regarding cognitive complexity, would be to have the subjects provide their own construct dimensions when using the mRCRT. According to Metcalfe (1974), it might make a difference in the CC scores if the subjects are asked to use their own construct dimensions instead of using construct dimensions provided for them.

Regarding the predictor variable, cognitive differentiation, several implications for future research with this variable can be made.

Initially, the same two recommendations for measuring cognitive complexity by the mRCRT would be applicable for cognitive differentiation (CD). These recommendations would be to derive six CD scores, again accounting for the affective values associated with clients and role figures, and to have the subjects provide their own construct dimensions when using the mRCRT.

Even though the above suggested changes for measuring CD by the mRCRT might improve the measurement of this variable, another recommendation should be mentioned. This would be to use another instrument to measure cognitive differentiation. Such an instrument would be Crockett's (1965) measure of cognitive differentiation. Crockett's procedure requires each subject "...to identify eight different individuals, each of whom fits a predetermined role, and then to spend 3 minutes describing each of these individuals as fully as possible in writing. The number of interpersonal constructs in these descriptions is taken as the measure of cognitive differentiation" (p. 51).

It might well be that "cognitive differentiation" is a term which is defined differently by the Crockett measure than by the mRCRT. Therefore a comparison of these two measures of cognitive differentiation and their correlation with counselor verbal effectiveness, as measured by
the CVRS, would be of value in better defining the characteristic called "cognitive differentiation".

Finally, regarding the predictor variable, cognitive integration, it is suggested that low cognitive integration of closed-mindedness, as measured by the CST, might be more than the degree to which one believes is a divine being having control over one's life. If the ability to synthesize or integrate information being processed from environmental stimuli goes beyond one's belief in a divine being, then a more sensitive measure of cognitive integration is needed than the one provided for by the CST. Such a measure might be the Philosophic-mindedness Test (Marks, et. al., 1974). This test assesses four basic characteristics of the ability to synthesize information being processed from environmental stimuli (i.e. the ability to think flexibly). These characteristics are as follows:

1. Freedom from psychological rigidity;
2. The ability to evaluate ideas apart from the source;
3. The ability to see issues as many-sided rather than two-sided and to develop a relatively large number of alternative viewpoints; and
4. The ability to maintain a tolerance for tentativeness and ambiguity.

Therefore based upon these implications for future research regarding both the criterion variable and the predictor variables, the present investigation should be repeated. (IT IS TO BE NOTED that in light of the low interjudge reliabilities, the conclusions and implications for future research drawn from the results of this study should have been read in a very tentative framework. The investigator of this study is currently involved in a follow-up study investigating the interjudge reliabilities of the present study. All interested readers are encour-
to contact him for the results of this follow-up investigation.

Concluding Statement

The perplexing problem of predicting counselor effectiveness (i.e. both verbal and/or nonverbal) can not be solved by any one study, regardless of the findings. However, each study can make a partial contribution toward answering the question raised by Freedman, et al. (1967) in Chapter I of this study: "...is there any 'ideal' combination of counselor characteristics that would predispose effective counselor behavior?" (p. 29). The goal of identifying those characteristics of counselors which make a difference in their effectiveness in counseling is still a worthwhile objective and should be continually investigated.
BIBLIOGRAPHY


APPENDIX A

MODIFIED VERSION OF THE ROLE CONSTRUCT REPERTORY TEST
ROLE CONSTRUCT REPERTORY TEST
Modified Version

The following test is designed to provide you a unique way of describing various persons you know. You are to list eight different people you know who would fit the various role figure codes listed below the grid.

You are now asked to rate each person using each of the eight bi-polar constructs. There are six possible responses for each construct continuum. For example, using the construct continuum of shy to outgoing, the six possible responses would be as follows:

1 = shy
2 = rather shy
3 = somewhat shy
4 = somewhat outgoing
5 = rather outgoing
6 = outgoing

The same scale values would be used for the other construct continuums.

For example, in box 1,1 of the grid, you would rate the closest friend of the same sex as yourself using the shy to outgoing construct continuum. In box 1,2 of the grid, you would rate the person of the opposite sex you find hard to like using the shy to outgoing construct continuum. Remember that the horizontal numbers or columns refer to the role figures and the vertical numbers or rows refer to the construct continuums.

While there is no time limit, it is best not to think too long on any one rating. Usually your first thought is most accurate. Please fill-in all of the grid for each person before handing this test to the supervisor.
ROLE CONSTRUCT REPERTORY TEST
Modified Version

Role Figures* | Construct Continuums
-------------|---------------------

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<th>8</th>
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<tbody>
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--------- Shy (1) - Outgoing (6)
--------- Maladjusted (1) - Adjusted (6)
--------- Indecisive (1) - Decisive (6)
--------- Unfriendly (1) - Friendly (6)
--------- Self-absorbed (1) - Interested in others (6)
--------- Ill-humored (1) - Cheerful (6)
--------- Submissive (1) - Dominant (6)
--------- Inconsiderate (1) - Considerate (6)

*Role Figure Codes:

1. Closest friend of the same sex as yourself
2. Person of the opposite sex you find hard to like
3. A friend you admire of the same sex as yourself
4. Person of the same sex with whom you feel most uncomfortable
5. Closest friend of the opposite sex (or spouse)
6. Person of the same sex you find hard to like
7. A friend you admire of the opposite sex
8. Person of the opposite sex with whom you feel most uncomfortable
APPENDIX B

CONCEPTUAL SYSTEMS TEST
PLEASE NOTE:


UNIVERSITY MICROFILMS.
APPENDIX C

COUNSELOR VERBAL RESPONSE SCALE
COUNSELOR VERBAL RESPONSE SCALE

Judge: ___________________________ Subject: ___________________________

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<th>Response</th>
<th>Affect</th>
<th>Cognitive</th>
<th>Understanding</th>
<th>Non-understanding</th>
<th>Specific</th>
<th>Non-specific</th>
<th>Exploratory</th>
<th>Non-exploratory</th>
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Grand total for first four dimensions: _____

Grand total of dimensions + global response evaluations: _____
APPENDIX D

SIMULATED CLIENT VERBALIZATIONS
Excerpt 1:

Who do you think you are? You call yourself a therapist! Damn, here I am spilling my guts out and all you do is look at the clock. You don't hear what I say. Your responses are not attuned to what I'm saying. I never heard of such therapy. You are supposed to be helping me. You are so wrapped up in your world you don't hear a thing I'm saying. You don't give me the time. The minute the hour is up you push me out the dumb door.

Excerpt 2:

I'm so disappointed. I thought we could get along together and you could help me. We don't seem to be getting anywhere. You don't understand me. You don't know I'm here. I don't even think you care for me. You don't hear me when I talk. You seem to be somewhere else. I don't know where to turn. I'm just so.... ahh... hell, I don't know what I'm going to do, but I know you can't help me. There just is no hope.

Excerpt 3:

Guess what? I'm going to California! I'm so excited! I found a marvelous job. It's just great! It's so great, I can't believe it's true. I have a secretarial job. I can be a mother and can have a part time job which I think I will enjoy very much. I can be home when the kids get home from school. It's too good to be true. It's so exciting. New horizons are unfolding. I just can't wait to get started.

Excerpt 4:

I don't know if I am right or wrong feeling the way I do. But I find myself withdrawing from people. I don't seem to socialize and play their stupid little games any more. I get upset and come home depressed and have headaches. It all seems so superficial. There was a time when I used to get along with everybody. Everybody said, "Isn't she wonderful. She gets along with everybody. Everybody likes her." I used to think that was something to be really proud of, but that was who I was at that particular time. I had no depth. I was what the particular group I was with wanted me to be.
Excerpt 5:

I finally found somebody I can really get along with. There is no pretentiousness about them at all. They are real and they understand me. I can be myself with them. I don't have to worry about what I say and that they might take me wrong, because I do sometimes say things that don't come out the way that I want them to. I don't have to worry that they are going to criticize me. They are just fantastic people! I just can't wait to be with them. For once I actually enjoy going out and interacting. I didn't think I could ever find people like this again. I can really be myself. It's such a wonderful feeling not to have people criticizing you for everything you say that doesn't agree with them. They are warm and understanding and I just love them!

Excerpt 6:

They wave that degree up like it's a pot of gold at the end of the rainbow. I used to think that, too, until I tried it. I'm happy being a housewife; I don't care to get a degree. But the people I associate with, the first think they ask me is where did you get your degree. I tell them, "I don't have a degree." Man, they look at you like you are some sort of a freak, some backwoodsman your husband picked up along the way. They actually believe that people with degrees are better. In fact, I think they are worse. I've found a lot of people without degrees that are a hell of a lot smarter than these people. They think that just because they have degrees they are something special. These poor people make me sick!

Excerpt 7:

I love my children and my husband and I like doing most household things. They get boring at times but on the whole I think it can be a very rewarding thing at times. I don't miss working, going to the office every day. Most women complain of being just a housewife and just a mother. But then, again, I wonder if there is more for me. Others say there has to be. I really don't know.

Excerpt 8:

I'm so thrilled to have found a counselor like you. I didn't know any existed. You seem to understand me so well. It's just great! I feel like I'm coming alive again. I have not felt like this in so long.
Excerpt 9:

Those people! Who do they think they are? I just can't stand interacting with them any more. Just a bunch of phonies. They leave me so frustrated. They make me so anxious, I get angry at myself. I don't even want to be bothered with them any more. I just wish I could be honest with them and tell them all to go to hell! But I guess I just can't do that.

Excerpt 10:

I get so frustrated and furious with my daughter. I just don't know what to do with her. She is bright and sensitive, but damn, she has some characteristics that make me so on edge. I can't handle it sometimes. I feel myself getting more and more angry! She won't do what you tell her to. She tests limits like mad. I scream and yell and lose control and think there is something with me. I'm not an understanding mother or something! Damn! What potential! What she could do with what she has. There are times she doesn't need what she's got. She gets by too cheaply. I just don't know what to do with her. She can be so nice and then she can be as ornery as she can be. Then I scream and yell and I'm about ready to slam her across the room. I don't like to feel this way. I don't know what to do with it.
VITA
Kenneth Logan Londot
Candidate for the Degree of
Doctor of Education

Dissertation: COGNITIVE STRUCTURES AS PREDICTORS OF COUNSELOR VERBAL EFFECTIVENESS

Major Field: Student Personnel and Guidance

Biographical:

Personal Data: Born in Long Beach, California, August 5, 1947, the son of Mr. and Mrs. Kenneth Leon Londot. Married, two children, ages four and two.

Education: Graduated from Dominguez High School, Compton, California, in June, 1965; received the Bachelor of Arts degree in Psychology from California State University - Fullerton, in 1970; received the Master of Education degree in Counseling and Personnel Services from the University of Missouri - Columbia, in 1971; completed the requirements for the Doctor of Education degree at Oklahoma State University in May, 1977.

Professional Experience: Graduate Assistant to Associate Director of Housing, University of Missouri, September, 1970 to June, 1971; Sole Proprietor of Progressive Piano Studies, Fullerton, California, June, 1972 to August, 1974; Director of Program Resource Center, Oklahoma State University, September, 1974 to May, 1976; Research Assistant, Oklahoma State University, September, 1976 to May, 1977; Counselor, University Counseling Services, Oklahoma State University, September, 1976 to May, 1977.

Professional Organizations: American Personnel and Guidance Association, American College Personnel Association, the Association for Counselor Education and Supervision, and Kappa Delta Pi.