RELATIONSHIP OF EMPATHY, COGNITIVE DEVELOPMENT, AND PERSONAL SUICIDE BEHAVIORS TO RESIDENCE HALL STAFF SUICIDE COUNSELING SKILL

By

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by

Kimberly J. Fugate
In memory of my dad
who would have read this document from cover to cover
simply because I had written it.

Robert W. Fugate 1936-2001
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Completing a project of this magnitude is certainly not an individual, isolated endeavor. There are many people and life events interwoven throughout the words. It was so much more than a scholarly process; it was a moment in time.

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TABLE OF CONTENTS

ACKNOWLEDGMENTS ............................................... iv

LIST OF TABLES ................................................... x

ABSTRACT .......................................................... xi

CHAPTER

1 INTRODUCTION .................................................. 1

The Problem .......................................................... 4
Purpose of the Study ................................................ 5
Significance of the Study ........................................... 6
Rationale and Theoretical Base ................................... 6
Summary ............................................................. 12
Research Questions ................................................ 13
Definition of Terms ................................................ 13

2 REVIEW OF THE LITERATURE .................................... 16

College Students and Suicide ..................................... 16
Suicide Prevention .................................................. 22
Suicide Intervention ................................................ 27
Residence Hall Staff as Suicide Interventionists ............. 30
Suicide Counseling Skill .......................................... 32
Empathy ............................................................. 44
Cognitive Development ............................................ 51
Summary ............................................................ 56

3 METHODOLOGY .................................................. 57

Research Design and Delineation of Variables ................. 57
Null Hypotheses .................................................... 58
Population .......................................................... 59
Sampling Procedures .............................................. 59
Instrumentation ..................................................... 60
Research Procedures .............................................. 71
Data Analysis ....................................................... 72
Summary ............................................................ 72
4 RESULTS ................................................................. 73
  Data Collection and Demographics ........................................ 73
  Data Analyses and Results .............................................. 75

5 DISCUSSION .......................................................... 86
  Overview of the Study .................................................... 86
  Findings and Discussion .................................................. 88
  Implications of the Findings ......................................... 103
  Limitations of the Study ............................................... 107
  Recommendations ......................................................... 109
  Summary ................................................................. 113

REFERENCES ........................................................... 115

BIOGRAPHICAL SKETCH .............................................. 124
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-1</td>
<td>Demographics of sample</td>
<td>75</td>
</tr>
<tr>
<td>4-2</td>
<td>Descriptive statistics for selected variables</td>
<td>75</td>
</tr>
<tr>
<td>4-3</td>
<td>Correlations of selected variables with SIRI-2 score</td>
<td>76</td>
</tr>
<tr>
<td>4-4</td>
<td>Correlations regarding internal variables</td>
<td>80</td>
</tr>
<tr>
<td>4-5</td>
<td>Correlations regarding external variables</td>
<td>80</td>
</tr>
<tr>
<td>4-6</td>
<td>Correlations regarding demographic variables</td>
<td>81</td>
</tr>
<tr>
<td>4-7</td>
<td>Prediction of suicide counseling skill based on demographic variables</td>
<td>82</td>
</tr>
<tr>
<td>4-8</td>
<td>Prediction of suicide counseling skill based on external variables</td>
<td>82</td>
</tr>
<tr>
<td>4-9</td>
<td>Prediction of suicide counseling skill, based on internal variables</td>
<td>83</td>
</tr>
<tr>
<td>4-10</td>
<td>Prediction of suicide counseling skill, based on a combination of variables</td>
<td>84</td>
</tr>
<tr>
<td>4-11</td>
<td>Prediction of suicide counseling skill based on selected variables. Backward elimination regression model</td>
<td>84</td>
</tr>
</tbody>
</table>
The purpose of this study was to expand the search for factors that relate to the ability of paraprofessionals to make effective verbal responses to someone who is considering suicide. Previous literature suggested that external variables such as training and experience were important factors in determining suicide counseling ability. However, it appeared that some individuals were better able to benefit from these outside experiences because of preexisting internal variables. This survey research was designed to examine how the suicide counseling skill of paraprofessional residence hall staff was related to demographic variables (gender, age, number of months in college, and number of months as a staff member), internal variables (level of empathy, level of cognitive development, and personal suicide behaviors), external variables (amount of counseling training, amount of suicide intervention training, and suicide intervention experience), and a combination of demographic, internal, and external variables. A total of 212
paraprofessional residence hall staff members from one institution completed a survey, which included the Suicide Intervention Response Inventory-II, the Interpersonal Reactivity Index, the Learning Environment Preferences, the Suicide Behaviors Questionnaire, and demographic questions. Data were analyzed using correlations and regression equations. Results indicated a significant positive association between suicide counseling skill and gender, age, suicide intervention training, and length of staff member employment. No significant association was found between suicide counseling skill and the internal variables of empathy, cognitive development, and personal suicide behaviors. Demographic variables were the most significant predictors of the suicide counseling skill of residence hall staff members, with women, older staff members, and more experienced staff members demonstrating better skills. The findings also reinforced the importance of suicide intervention training, specifically in preparing residence hall staff members as possible suicide interventionists.
CHAPTER 1
INTRODUCTION

There are approximately 10 suicides for every 100,000 youth each year in the United States. Suicide is the third leading cause of death for adolescents and young adults with only accidents and homicides occurring more frequently. Suicide is ranked as the second leading cause of death for college students aged 20 to 24 years, and it is estimated that there are more than 1,000 suicides on college campuses each year (American Association of Suicidology, 2004). The 2000 National College Health Assessment (American College Health Association, 2001) found that 9.5% of college students had seriously considered suicide in the previous year, and 1.5% had actually attempted suicide. Results of studies indicating the rise of distress and mental illness among college students (Gallagher, 2002; Kitzrow, 2003), as well as the increased attention this trend is receiving in academic and popular literature, have renewed the interest in and urgency of responding to mental health issues on college campuses.

The Suicide Prevention Resource Center (2004) supports the position that “the complex problem of suicide and suicidal behaviors on campuses demands a multifaceted, collaborative, coordinated response, and cannot be left solely to counselors and mental health centers” (p. 26). One component of the Center’s suggested response to these challenges includes training gatekeepers on crisis management and suicide intervention. The term "gatekeeper" is used to describe "individuals who by the nature of their job, their special interest in people, or in their personal relationships and friendships are in a
position to observe high risk behaviors and take action when necessary" (Coleman & O’Halloran, 2004, p. 9). Gatekeepers in communities have traditionally included professionals such as physicians, nurses, clergy, and teachers. In the college environment, students may also turn to professors, advisors, family members, or other students for assistance with personal issues. In a 1982 study, Mishara found that college students have significant contact with peers who are in distress and that they are often faced with responding verbally to a peer’s suicidal feelings. Students’ peers are likely to be points of contact for them when they are in distress. One reason is simply that college students spend the majority of their time with other students, and another is that students view the peer group as the acceptable “norming” group, the group by which they judge acceptable and unacceptable thoughts, behaviors, and feelings (Astin, 1993).

Perhaps the most compelling generalization from the myriad of findings is the pervasive effect of the peer group on the individual student’s development. Every aspect of the student’s development—cognitive and affective, psychological and behavioral—is affected in some way by peer group characteristics, and usually by several peer characteristics. Generally, students tend to change their values, behavior, and academic plans in the direction of the dominant orientation of their peer group (Astin, 1993).

In addition to this theoretical support, there is also some empirical support for the role of the peer group in responding to crisis. Research has shown that the majority of high school students would tell a friend if they were thinking of suicide, not a parent or counselor (Hennig, Crabtree, & Baum, 1998; Ross, 1985). From this evidence, one may conclude that peers are important gatekeepers in the college community. They are often the first contact for students in distress, and the students experiencing difficulties are likely to view the responses of their peers as extremely important.
The responses that peers provide to a student in distress are pivotal to the student receiving appropriate assistance and to the eventual outcome of the crisis. When confronting a difficult situation such as suicidal ideation, there are responses and actions that are considered to be more helpful than others (Grosz, 1990; James & Gilliland, 2001; Neimeyer & Pfeiffer, 1994a). At a minimum, helpers should be able to listen nonjudgmentally, talk about suicide openly, acknowledge feelings, and assist the suicidal student in receiving appropriate professional attention in a timely manner. These responses almost always require some level of training. Moreover, there is strong empirical evidence that training does increase the skill level of peer gatekeepers (Stuart, Waalen, & Haelstrom, 2003).

There are some areas of the university that already employ the assistance of trained peer helpers. Colleges and universities have used undergraduate peer helpers since the early 1900s (Ender & Newton, 2000). Housing programs have traditionally been one of the largest employers of students, using undergraduate staff members as Resident Assistants (RAs) and graduate staff members as Graduate Hall Directors or Assistant Hall Directors (GHDs). RAs typically live on and supervise a floor of 30 to 80 residents and are traditionally trained in the areas of community development, policy enforcement, programming, helping skills, and crisis management. GHDs also live in the residence halls and supervise from 2 to 12 RAs while having direct interaction with residents by way of programs, judicial hearings, roommate mediations, and student group advising. Undergraduate and graduate paraprofessional residence hall staff members, because of their training in helping skills and crisis management and proximity to students, serve as natural gatekeepers for students living in university housing.
The training that residence hall staff members receive in the area of suicide intervention varies by institution. For these staff members to be effective in their gatekeeping role, they should, at a minimum, be able to (a) explore and understand their own feelings about suicide; (b) recognize students who might be at risk for suicide; (c) provide facilitative responses to these students; (d) follow appropriate university and departmental protocol regarding suicidal students; and (e) make an appropriate referral to professional resources (Grosz, 1990). These competencies can be broken down into three areas: knowledge, attitude, and skill outcome (Hoff & Adamowski, 1998; Norton, Durlak, & Richards, 1989). It is relatively easy to provide an appropriate knowledge base through training and coursework. The signs of students in distress, the appropriate protocol to follow, and relevant campus resources are all tangible and teachable. Suicide counseling skill, although skill based, requires a certain attitude to be effective. Suicide interventionists need a willingness to intervene with someone in an emotionally charged situation and the ability to show acceptance toward a peer who is suffering and contemplating a controversial and frightening action. Making effective verbal responses to a peer who is in distress, particularly a peer who might be suicidal, is a skill with which even trained students struggle. It requires competence in several challenging areas: a knowledge base regarding suicide, university protocol, and resources; basic listening and responding skills; an attitude of basic acceptance and openness; and the ability to translate this knowledge, skill base, and attitude into an appropriate intervention under stressful conditions.

The Problem

Even though residence hall staff members are already trained in helping skills and crisis management, some student staff members are more effective at intervening with students experiencing a suicidal crisis. What makes the difference?
The professional literature reveals an ongoing search for personal and professional factors that relate to a helper’s ability to respond to someone who is suicidal (Brown & Range, 2005; Inman, Bascue, Kahn, & Shaw, 1984; King, Price, Telljohann, & Wahl, 1999a, 1999b; Lawrence & Ureda, 1990; Maine, Shute, & Martin, 2001; Neimeyer, Fortner, & Melby, 2001; Neimeyer & Pfeiffer, 1994a; Norton, Durlak, & Richards, 1989; Richards & Range, 2001; Stuart, Waalen, & Haelstrom, 2003). Some factors studied include age, gender, education level, psychological education, years of experience, experience with suicide intervention, type and amount of training, knowledge of suicide, attitudes toward suicide, self-efficacy, counseling training, counseling skill, religiosity, and dogmatism. The helpers studied have ranged from psychiatrists and doctoral level psychotherapists to college students with no known training. Training, whether it is in counseling skills or crisis intervention, does seem to increase competence in working with suicidal persons (Richards & Range, 2001). Other studies suggest that training in psychology, experience with suicide intervention, and attitude about suicide are related to ability to respond effectively. The majority of variance in suicide intervention skill, however, remains unaccounted for in the research literature. Therefore, the problem to which this study is directed is the identification of internal and external factors related to the ability of paraprofessional residence hall staff members to make effective verbal responses to students who might be suicidal.

**Purpose of the Study**

The purpose of this study is to expand the search for factors that relate to the ability of paraprofessionals to make effective verbal responses to someone who is considering suicide. Although previous studies suggest certain factors as important
predictors of this ability, the majority of variance in ability remains unaccounted for in the literature.

This study will examine the ability of paraprofessional residence hall staff members specifically. Using this population will provide practical information that will assist in the training of residence hall staff in the area of suicide intervention.

**Significance of the Study**

This study has both theoretical and practical significance. First, the results will contribute to the ongoing empirical search for factors that affect the ability of those in helping roles to provide effective verbal responses to suicidal clients. More specifically, the study will examine the role of cognitive development and empathy in the ability of helpers to respond appropriately to those in suicidal crisis. Although the link between empathy and counseling skill has been established, empathy has not been studied in relation to suicide intervention ability specifically.

On a practical level, paraprofessional residence hall staff members have the potential to interact more frequently with students who may be considering suicide than do other students or staff on a college campus. This, in combination with the training base already provided them, makes this group of paraprofessionals a valuable resource in the prevention of suicide on college campuses. This study will provide information that can be used to enhance the training of this population. The results may also provide some insight into personal characteristics that could be considered in the selection of residence hall staff members to increase the probability of positive training effects.

**Rationale and Theoretical Base**

Many factors have been studied in the search for predictors of suicide intervention skill (Brown & Range, 2005; Inman, Bascue, Kahn, & Shaw, 1984; King et
al., 1999a, 1999b; Lawrence & Ureda, 1990; Maine et al., 2001; Neimeyer et al., 2001; Neimeyer & Pfeiffer, 1994a; Richards & Range, 2001; Stuart et al., 2003). This study will focus on how six variables, along with demographic variables, interact to predict the ability of residence hall staff to make effective verbal responses to suicidal persons. These six variables are suicide intervention training, counseling training, suicide intervention experience, empathy, cognitive development, and personal suicide behavior. These were chosen based upon a survey of the existing literature and on human development theory.

**Suicide Intervention Training**

Professional literature supports the idea that the amount of suicide intervention training one has had is a logical predictor of suicide intervention effectiveness (Brown & Range, 2005; Main et al., 2001; Neimeyer et al., 2001; Neimeyer & MacInnes, 1981; Stuart et al., 2003). Although there is some overlap with general counseling skill and suicide intervention effectiveness, responding effectively to suicidal individuals is a unique skill. For example, in a validation study of the Suicide Intervention Response Inventory, Neimeyer and MacInnes (1981) found moderate convergence between scores on the Counseling Skills Evaluation (Wolf & Wolf, 1974 as cited in Neimeyer & MacInnes, 1981) and scores on the Suicide Intervention Response Inventory. This supports the contention that skill in facilitative responding is necessary but not sufficient for effective suicide intervention.

Using videos in suicide intervention training has been successful with parents. At the conclusion of training, they could better identify signs of suicide and respond to scenarios of distressed adolescents more appropriately (Maine et al., 2001). In a recent study of trained peer counselors, Stuart, Waalen, and Haelstromm (2003) summarized...
their findings: “Training peer helpers in general helping skills and expecting that they will be effective in a school-based suicide prevention program is naïve. They need skill-specific training for suicide risk assessment” (p. 330). Just as counseling skills are necessary but not sufficient for suicide intervention effectiveness, suicide intervention training and the resulting skills appear to be necessary but not sufficient for suicide intervention effectiveness.

Counseling Training

As established above, counseling skills, whether somewhat natural or accrued by way of training, seem to be a necessary condition for appropriate suicide intervention (Neimeyer & Diamond, 1983; Neimeyer & MacInnes, 1981; Neimeyer & Pfeiffer, 1994a; Richards & Range, 2001). In one example, advanced psychology graduate students responded better to suicidal individuals than did beginning psychology graduate students. The beginning graduate psychology students responded better than nursing graduate students. All groups’ level of formal training in suicide intervention specifically was fairly low, with only about a one hour difference between the beginning psychology students and nursing graduate students (Richards & Range, 2001).

In another study, it was found that third-year medical students who had completed a course in medical interviewing scored higher on a measure of suicide intervention effectiveness than did their first-year colleagues who had not had this course. In addition, third-year students who had completed a psychiatry rotation scored even higher. Not all third-year students, however, scored in an acceptable range, leading the investigators to caution against the assumption that coursework and training develop intervention skills in all students (Neimeyer & Diamond, 1983).
Although training in counseling or psychology seems to improve suicide intervention skill, this training does not guarantee acceptable levels of performance. Counseling skill is an important factor in suicide intervention ability, but it seems that some individuals benefit more from training than others. This study will investigate counseling training, alone and in combination with other factors, as a possible predictor of increased suicide intervention ability.

**Suicide Intervention Experience**

Both professionals and paraprofessionals who have experience working with those who are suicidal tend to develop better intervention skills (King et al., 1999a; Neimeyer, Fortner, & Melby, 2001; Neimeyer & MacInnes, 1981; Neimeyer & Pfeiffer, 1994a). In fact, the amount of experience with potentially suicidal persons an interventionist has had was a good predictor of performance on a test of suicide intervention skill (Neimeyer et al., 2001). Moreover, this factor was found to be a better predictor than level of training and number of years of work experience.

**Empathy**

Counseling training, suicide intervention training, and suicide intervention experience have all been shown to contribute positively to suicide intervention ability. However, though each factor shows some level of contribution, none of the factors stands alone and the factors together still only account for a small portion of individual differences in suicide intervention skill.

In the search for factors that contribute to suicide intervention ability, the role of empathy has been relatively ignored. Research (e.g., Bohart & Greenberg, 1997; Goldstein & Michaels, 1985) does support the importance of empathy in counseling skill, and counseling skill is needed to respond appropriately to individuals who are suicidal.
(Neimeyer & Diamond, 1983; Neimeyer & Pfeiffer, 1994a); therefore, it is logical that empathy will positively impact suicide intervention skill.

Moreover, there is some evidence that college students’ levels of empathy do impact how they view peers’ emotional difficulties and the behaviors resulting from these difficulties and how likely they are to provide assistance to the peer experiencing difficulty (Knott & Range, 2001; Mueller & Waas, 2002). High empathy students tend to take the emotional difficulties of their peers more seriously, even when suicide is not mentioned directly, and they are more likely to provide assistance to their peers experiencing difficulty. Possibly, the most important finding emerges from the Mueller and Waas (2002) study, “that empathy may be a significant contributor to previously reported gender differences, and that increasing young adults’ empathy toward peers exhibiting early at-risk characteristics may be an important intervention objective for prevention programs” (p. 337). Finally, Knott and Range (2001) also found that empathy was moderately related to social acceptance of those who were suicidal.

**Cognitive Development**

Theories have linked cognitive development and empathy for some time; many have hypothesized that a certain level of cognitive development is necessary for empathy development (Kohlberg, 1984; Loevinger, 1976; Perry, 1970). Research in the counseling area supports the idea that empathy and cognitive development are related. According to Lovell (1999), “an expanding body of evidence accumulated to support the contention that a counselor’s level of empathy is related to those evolving structures of thought depicted by the most prominent stage theorists: Harvey, Hunt, and Schroeder; Kohlberg; Loevinger; and Perry” (p. 196). Research also supports the idea that an individual’s stage of cognitive development is related to one’s ability to learn client-centered counseling
techniques (Benack, 1988; Hatcher et al., 1994), as well as current level of empathy prior to counseling training (Benack, 1988). One thought is that level of cognitive development affects a person’s capacity for empathy. According to Benack (1988), “a person’s epistemological assumptions may be a powerful determinant of his or her aptitude for learning to express empathy as a counseling technique” (p. 230).

Theories of cognitive development have been created to explain the way individuals develop their reasoning processes and critical thinking abilities. These theories focus on how people think, and challenges to current ways of thinking promote development (Carter & McClellan, 2000). William Perry’s (1970) scheme of intellectual and ethical development is the most commonly cited cognitive development theory in the higher education literature. Perry’s theory deals with the cognitive development of college students in particular; and, even though it was developed in the 1960s, it is still relevant to today’s students.

Perry’s scheme still has saliency today because the basic underlying structure—movement from a right-wrong mentality, to one in which multiple viewpoints are experienced as valid, and finally to one in which evaluations of evidence are made in a relativistic world—remains viable. (Love & Guthrie, 1999, p. 13)

**Personal Suicide Behaviors**

Some of the most recent research on suicide counseling skill suggests that a personal history of suicide ideation and behaviors affects counseling skill (Neimeyer et al, 2001). The results of this research indicated that personal suicide behavior in mental health practitioners was significantly negatively correlated with suicide counseling skill as measured by the Suicide Intervention Response Inventory. Personal suicide behavior remained important in the regression model using the entire sample and became even...
more significant when the sample was narrowed to those participants with the most professional training.

**Summary**

The incidence of mental illness and emotional distress among college students is on the rise (Gallagher, 2002; Kitzrow, 2003). In addition, approximately 10% of college students seriously consider suicide each year (American College Health Association, 2005). Therefore, students often find themselves in a position of responding to a peer who is having suicidal thoughts (Mishara, 1982). One recommended method of prevention is to train peers, gatekeepers in the college community, to intervene effectively with those who are suicidal (Suicide Prevention Resource Center, 2004).

Residence hall student staff members are obvious gatekeepers in the college community. They have some level of training in peer assistance, are recognized as leaders in the peer group, and have the advantage of proximity in the living environment. Some staff members seem more responsive to training efforts in suicide intervention than others.

The purpose of this study is to expand the search for factors that relate to the ability of paraprofessionals to make effective verbal responses to someone who is considering suicide. Although previous studies suggest certain factors as important predictors of this ability, the majority of variance in ability remains unaccounted for in the literature.

This study focuses on how six variables, along with demographic variables, interact to predict the ability of residence hall staff to make effective verbal responses to suicidal persons. These five variables are suicide intervention training, counseling training, suicide intervention experience, personal suicide behaviors, empathy, and
cognitive development. These were chosen based upon a survey of the existing literature and on human development theory.

**Research Questions**

The following questions were addressed in this study. To what extent is the suicide counseling skill of residence hall staff members related to

- Demographic variables (gender, age, number of months in college, number of months as a residence hall staff member)?
- External variables (counseling training, suicide intervention training, suicide intervention experience)?
- Internal variables (level of empathy, cognitive development, personal suicide behaviors)?
- A combination of demographic, external, and internal variables?

**Definition of Terms**

The use of terminology varies widely. For the purpose of this study, the following definitions will be used.

**Cognitive development** in this study refers specifically to William Perry’s (1970) scheme of intellectual development. Perry’s scheme is based on the idea that there is a progression in ways of thinking during the course of the college experience.

**Dualism** refers to the first two positions of Perry’s (1970) scheme of intellectual and ethical development. Dualists view the world in absolutes. Things are either right or wrong or good or bad and authorities possess the truth.

**Empathy** “is broadly defined as a set of constructs having to do with the responses of one individual to the experiences of another. These constructs specifically include the processes taking place within the observer and the affective and non-affective outcomes which result from those processes” (Davis, 1996, p. 12).
Graduate hall directors (GHDs) are graduate students who live in a residence hall and provide supervision for a group of Resident Assistants. Most GHDs have some residence hall staff experience and training prior to being hired in this role.

Multiplicity refers to positions three and four of Perry’s (1970) scheme of intellectual development. Individuals in this position acknowledge uncertainty and multiple viewpoints: however, they only tolerate this ambiguity. They believe that there will be one known correct answer in the future and that this uncertainty is temporary.

Paraprofessional is defined as a student who is selected, trained, and supervised in assuming responsibilities and performing tasks that are intended to (1) directly promote the individual personal development of his or her peers, (2) foster the creation and maintenance of environments that stimulate and support residents’ personal and educational development, and/or (3) perform tasks that ensure the maintenance of secure, clean, healthy, psychologically safe, and esthetically pleasing living accommodations. (Winston & Fitch, 1993, p. 317)

Position is used instead of “stage” in Perry’s scheme of cognitive development. The term position is used because there is no assumption made about duration as there is in a stage; position describes a dominance of structures or a central tendency in the variety of structures one might use at a given time; and position accurately describes a “position from which a person views his world” (Perry, 1970, p. 48).

Relativism refers to position five (and beyond) of Perry’s scheme of intellectual development. The shift into position five is the most significant transition in the Perry scheme. This transition requires a radical shift in thinking from a vision of a world that is rule-bound with situational exceptions to the rules, to a vision of a world as primarily context-bound. Position five thinkers are conscious of their role in making meaning (Moore, 2001).
**Resident assistants (RAs)** are undergraduate student employees who live on a residence hall floor and supervise a living community of 20 to 80 residents. Most report to a Graduate Hall director, though some report to a professional staff member. The job duties of RAs include community development, policy enforcement, programming, peer assistance, crisis management, and administrative duties.

**Residence hall staff** is a general term referring to a group of student staff members employed by Departments of Housing to live in campus residence halls and to attend to daily administration. For this study, residence hall staff refers only to paraprofessional student staff members, resident assistants and graduate hall directors.

**Suicide counseling skill** is the term that will be used in this study to refer to the ability of individuals to make an appropriate, more helpful than harmful, verbal response to someone considering suicide.
CHAPTER 2
REVIEW OF THE LITERATURE

This review of literature begins by introducing the historic and current landscape of college student suicide, including prevalence, etiology, and prevention efforts. Suicide intervention is also defined, and the use of residence hall staff as suicide interventionists is introduced. The chapter reviews the research literature regarding suicide counseling skill related to interventionist training and personal characteristics. Next, the concepts of empathy and cognitive development are explained, and their use in the present study is empirically supported. Lastly, all aspects of the chapter are summarized.

College Students and Suicide

Prevalence

The suicide rate for adolescents and young adults in the United States increased dramatically between the 1950s and the 1980s. The rate for adolescent and young adult men tripled, while the rate for women of the same age doubled. This increase was alarming, and it spawned an outcry for suicide prevention programs nationwide (Haas, Hendin, & Mann, 2003). The suicide rates for 15 to 24 year olds have declined 25.6% since 1995. In 1996, suicide was the third leading cause of death for adolescents and young adults with approximately 10,200 people ages 15 to 34 killing themselves each year (Maris, Berman, Silverman, & Nisbet, 2000). It is estimated that for every youth that completes suicide that there are between 100 to 200 attempts (American Association of Suicidology, 2004). Statistics on suicide, especially in the
adolescent and young adult cohort, tend to underestimate the true incidence because of
the stigma associated with suicide and the difficulty in differentiating some accidents
from suicide (Garland & Zigler, 1993).

Suicide is often quoted as the second or third leading cause of death for young
adults. It is consistently preceded by only accidents and occasionally preceded by
homicide (Miller & DuPaul, 1996). Separate health statistics are not kept on college
students, so most inferences that are drawn about college student suicide are a product of
two age cohorts, adolescence and young adulthood. More recently, individual studies
have tried to determine the rate of college student suicide.

The impetus for this research on college student suicide was the prevailing
thought, based on some previous, flawed studies and media reports, that young adults in
college had a higher risk of suicide than did individuals of the same age who were not in
college (Rickgarn, 1994). In fact, in a carefully designed study, Schwartz and Reifler
(1980) determined that the incidence of suicide among young adults in college was
significantly lower than the incidence of suicide among same age adults not enrolled in
college. The *Big Ten Student Suicide Study* (Silverman, Meyer, Sloane, Raffel, & Pratt,
1997) provides the most extensive exploration of the incidence of college student suicide
to date. This study compared undergraduate and graduate students to a national sample
matched on age, race, and gender. These researchers discovered that between 1980 and
1990, the rate of completed suicides for college students was 7.5 per 100,000, while the
rate of suicide for the matched sample was 15 per 100,000. Other studies have found,
based on self-report measures, that the rate of suicide for adolescents and young adults
not in college has ranged from 32% to 70% (Rich & Bonner, 1987; Rudd, 1989; Strang &
A 1989 study (Rudd) provides a more specific snapshot of college student suicide. In this study, Rudd surveyed 737 college students who ranged in age from 16 to 30. He found that 43.7% of the students who participated in his research had experienced some level of suicide ideation in the last year. Of this 43.7%, 14.9% acted on their ideation in some way, even if it was just telling a friend about it. Lastly, 5.5% reported that they had actually made an attempt to take their life.

There are several difficulties in determining the incidence of college student suicide. One thing that should be considered when reviewing the rates of college student suicide is that, according to the Centers for Disease Control and Prevention (as cited in Slimak, 1990) older adolescents ages 20 to 24 have approximately double the suicide rate of younger adolescents ages 15 to 19. In 1998, suicide was the second leading cause of death in the 20 to 24 year old age range. This method of reporting divides the college population, which is generally described as young adults ages 18 to 24. Yet, it does clearly place the majority of college students in a higher risk population.

Another challenge in determining college student suicide risk is the reluctance of institutions to keep records regarding this issue. Westefeld and Pattillo (1987) sent a questionnaire regarding this issue to 187 college counseling center directors. They found that 13.6% of the institutions had a formal procedure for recording both attempters and completers, 6.1% had a procedure for recording attempters but not completers, and 2.7% had a process for recording completers but not attempters. The remaining 77.6% did not keep records. Some of the reasons given for not collecting data were “too difficult to compile data,” “confidentiality issues,” “no one has thought about it,” “not necessary,” and “this is a politically sensitive issue.”
The true rate of college student suicide is difficult to determine. Defining exactly who college students are is a task complicated by how demographic data are collected, and more recently by the changing demographics of college students. Also, tracking the rates of college student suicides is often up to individual studies. Finally, as noted previously, colleges and universities are not always helpful in recording incidents possibly because of apathy or concerns about appearance.

Some of the most recent statistics quoted regarding college student suicide come from the American College Health Behavior Survey (American College Health Association, 2001). Using a sample of 16,000 college students from 28 colleges, this study indicated that 9.5% of college students had seriously contemplated suicide and that 1.5% had made a suicide attempt. Half of the sample reported feeling very sad within the last year while one third reported feeling hopeless, and 22% reported that they were so depressed that they could not function. Most alarmingly, less than 20% of the students who reported suicidal feelings were receiving medical or psychological treatment.

Rickgarn (1994) suggests that it is useful to view the limits of the current knowledge of college student suicide using the iceberg paradigm. When one sees an iceberg floating in the sea, what is visible appears to be the entire picture; however, it is really only a minute fraction. More specifically, Rickgarn states, “Suicidal behavior, like the iceberg, conceals much from the discerning observer and even more from the general public” (p. 40).

Suicidal Behavior in College Students

Bernard and Bernard (1982) surveyed 838 college students from one institution to find those who had either threatened or attempted suicide while enrolled in college. Data were collected to investigate whether suicidal behavior was related to academic pressures
and/or to other factors specifically related the college student population. The study also solicited student feeling states prior to suicidal behavior, how students perceived the prospect of withdrawing from school after a suicidal incident, how involved university personnel were in their incident, how helpful this involvement was, and finally, what preventive measures they thought the institution should take. The results of the study indicated that only 7% of the students who had been suicidal related this to academic pressures. Almost 75% of the students surveyed cited social or family problems as the reason for their behavior. Though the sample size is adequate and the findings are strong, an obvious limitation of this study is the fact that all of the students surveyed were from the same institution. This is particularly significant when exploring the role of academic pressure as a predictor of suicide.

In a review of the literature pertaining to college student suicide, Slimak (1990) found two factors related to the etiology of suicide. First, he surmised from previous studies that suicidal students tend to have higher academic ability and/or performance than other students. Second, he noted that suicidal students were often isolated and distant and spent a significant amount of time alone.

In another, more specific, overview of the literature, Whitaker and Slimak (1990) highlighted some risk factors that they believed were particularly salient to college student suicide. They, too, noted introversion as frequently related to college student suicide and reminded readers that males have a suicide rate 2½ times that of females. In one survey of 43 colleges, 100% of 33 completed suicides were associated with either current (at the time of the suicide) drug use and/or a history of drug use. The rate of drug use for attempters was 67%. Even though this finding was limited to one individual study in the review, the findings were enlightening. Whitaker and Slimak (1990) also listed
severe depression as a risk factor; however, the risk factor that they paid the most attention to was that of psychosis. They claim that the presence of psychosis increases one’s risk of suicide 100 fold. They even suggest that psychosis is the most powerful individual predictor for suicide.

In regard to the roles of alcohol and drug use and depression, Maris, Berman, and Silverman make an important observation from King (1997, as cited in Maris, Berman & Silverman, 2000). The only time in the human lifespan that the prevalence of alcohol abuse and depression increases at such a rapid rate is during the transition from childhood to adolescence and young adulthood. This is also the only time in the human lifespan that the ratio of suicide attempts to completions is so high.

Another, more recent, review of the literature on college student suicide (Gutierrez, Osman, Kopper, Barrios, & Bagge, 2000) highlights some of the same risk factors as the other studies. These authors mention loneliness, depression, academic problems, and difficulties with parents (family problems). In addition, they also list hopelessness, helplessness, relationship problems, financial concerns, an inability to identify reasons for living, and poor confidence in problem-solving ability as additional risk factors.

The American College Health Association (2001) survey found that two particular groups of college students might be at a higher risk for suicide. One group is composed of those students who enter college with a preexisting mental health condition, and the second group consists of students who develop a mental health condition while in college. There are several reasons why mental health disorders may increase or appear in the college years:

- A new and unfamiliar environment.
- Academic and social pressures.
- Feelings of failure or decreased performance.
• Alienation.
• Family history of mental illness.
• Lack of adequate coping skills.
• Difficulties adjusting to new demands and different work loads. (American Association of Suicidology, 2004)

Identifying the risk factors for suicide is a difficult process that leads to a broad range of results. Many risk factors for college students appear repeatedly in research. Some of these are the presence of a mood disorder, drug or alcohol abuse, social or family problems, academic pressures, access to firearms, and negative life events. One of the difficulties underlying the attempt to understand the etiology of suicide is the search for a single causative factor; research, thus far, has not been able to isolate one single factor (Rickgarn, 1994). Laux (2002) also cautions that some suicidal persons do not have a cluster of risk factors. Lastly, even though a broad range of risk factors have been identified, it is probable that all have not been identified.

**Suicide Prevention**

**What is Prevention?**

The drastic rise in the rate of adolescent suicides between the 1960s and the 1980s led to a national call for prevention efforts. Westefeld et al. (2000) define prevention as “actions within broad settings, such as school or community, designed to reduce the suicide rate” (p. 476). Many prevention efforts have used a model of prevention that is based on Caplan’s (1964) conceptualization of crisis intervention. His models often use stages, and as such, there are three levels of intervention recognized in most prevention efforts: primary, secondary, and tertiary (Johnson & Maile, 1987). In primary prevention, the efforts are directed at helping an individual, or possibly a school or community, avoid situations that might be harmful. A primary prevention effort might be a depression screening and information drive or a workshop on family communication. In secondary
prevention, efforts are geared toward helping an individual or community to contain the severity and course of a crisis situation by providing intervention and support. The recognition of potentially dangerous statements and behaviors falls in this category even though many try to place these activities under primary prevention in their crisis plans. True primary prevention efforts attempt to reduce the prevalence of risk factors (Garland & Zigler, 1993). Tertiary prevention efforts are directed toward recovery efforts.

**Prevention Efforts in Communities**

Although the majority of suicide prevention programs have taken place in schools, there have been some community-wide efforts including such things as the establishment of crisis centers and suicide hotlines. There is a limited amount of data available on the effectiveness of crisis centers and hotlines, and the data that are available are inconclusive. However, one conclusion is that young white women seem to benefit the most from these services (Laux, 2002).

**Prevention Efforts in Schools**

Schools are often viewed as ideal places for suicide prevention programs. Not only can school programs reach many adolescents at once, but teachers and administrators also have as much, if not more, contact with the students than students do with their own families (Malley & Kush, 1994). As the 1980s brought more awareness of the increasing problem of adolescent suicide, the number of schools using suicide prevention programs also increased. Between 1984 and 1986, it is reported that the number of schools using suicide intervention programs increased from 789 to 1,709 (Garland, Shaffer, & Whittle, 1989).

School-based suicide prevention programs are usually goal-based. In a review of more than 100 school-based programs (Garland et al., 1989), it was determined that the
most frequent, broad-based goals were (a) increasing the awareness of suicidal behavior in adolescents, (b) assistance with identifying those students that might be at higher risk for suicide, and (c) educating students and staff about accessing available mental health resources. It was also determined, however, that the programs offered in these schools were very time-limited, often lasting only 2 hours or less.

Garland and Zigler (1993), after a review of empirical literature, make several conclusions regarding school-based suicide prevention programs. First, suicide awareness and intervention training directed at educators seems to be effective. One benefit of training teachers and school counselors about suicide is that this training does not carry with it the same risk of imitation as programs directed toward the adolescents themselves. Second, support of the utilization of crisis intervention hotlines appears time worthy. Adolescents are particularly attracted to these services, and programs in school can increase students’ interest in and knowledge of them.

**Prevention Efforts in Higher Education**

Prevention efforts in higher education have been slower to emerge. Overall, the literature on suicide in higher education seems dominated by studies of the etiology and prevalence of college student suicide and recommendations for prevention efforts. Most of the prevention efforts on college campuses are educational in nature, seeking to increase student knowledge about stress, self injurious behaviors, and suicide (Haas et al., 2003).

There are a few prevention efforts on campuses that focus on targeting students who have attempted suicide or on identifying students who might be at risk for suicide. The University of Illinois requires students who threaten or attempt suicide to have four weekly sessions with a mental health practitioner. This policy is based on the assumption
that students who are suicidal do not voluntarily seek help. The program has been somewhat controversial; however, the university reports that the suicide rate on campus has decreased 54% and none of the 1500 students who have participated in the program have committed suicide in the 18 years the program has been in existence (Joffè, 2002, as cited in Haas et al., 2003). Alternatively, The American Foundation for Suicide Prevention (AFSP) is collaboratively developing an effort to identify students at risk for suicide before any suicidal threat or attempt is made—The College Screening Project: A Program to Identify and Help Students with Significant Psychological Problems (Haas et al., 2003). In this program, students are contacted by e-mail and invited to participate in a screening process by completing a web-based questionnaire. Students use a self-created log-in ID and password, which is the only identification provided. Responses are evaluated by a computer and a mental health clinician for signs of significant pathology. The student receives a personalized counselor assessment that can be accessed using the ID and password. Some students are urged to come in for a face-to-face contact. Students of great concern who do not respond initially are contacted frequently by way of follow-up messages on the Web site. Even though the project was in the pilot stages, it was successful in identifying and referring six high risk students. The effort also seems to have increased awareness about mental health issues and suicide.

Within the last several years, several high profile cases of college student suicide in addition to a national focus on the issue of suicide (U.S. Public Health Service, 1999), have led to more intentional suicide prevention efforts within higher education. Phillip and Donna Satow established the Jed Foundation (2005) in 2000 after losing their college student son to suicide in 1998. The Jed Foundation is a charitable organization working
to reduce suicide among college students in the United States. The Foundation works
with leaders in research, government, and higher education to
• Foster greater public awareness of college student suicides,
• Collaborate with universities to strengthen mental health services on campus
correlated with suicide prevention,
• Create linkages between the academic research community working with suicide
prevention and the education professionals who work directly with students,
• Produce innovative internet-based intervention systems for college students (Jed

Most recently, the President of the United States signed into law the Garrett Lee
Smith Memorial Act (S. Res. 2634, 2004). The legislation was introduced by Senator
Gordon Smith whose son had recently committed suicide. Senator Smith introduced the
Act as a combination of bills, the Youth Suicide Early Intervention and Prevention
Expansion Act of 2004 and the Campus Care and Counseling Act. The American
Psychological Association (APA) considers this bill an important first step in addressing
the need for more mental health services on college campuses. The bill acknowledges the
mental health needs of today’s college students. The majority of funds made available by
this legislation will be dedicated to statewide Youth Suicide Early Intervention and
Prevention Strategies (APA, 2005).

Though prevention efforts in higher education emerged more slowly than efforts
in secondary settings, it seems that the present university environment is now fecund.
With public and political acknowledgment of the challenges of mental health provision,
and more specifically suicide prevention and intervention in colleges and universities,
and with funding opportunities now available, suicide prevention and intervention on
today’s college campuses will become more salient and active.
Suicide Intervention

The Basics of Crisis Intervention

One of the most basic models of crisis intervention is the equilibrium model (Caplan, 1961). People in crisis are experiencing a state of psychological or emotional disequilibrium. A crisis event overwhelms a person’s normal coping and problem-solving skills resulting in a psychological imbalance. The goal of crisis intervention, according to this model, is to restore a state of precrisis equilibrium. This model is most useful early in a crisis when the main focus of intervention is stabilization. James and Gilliland (2001) provide an example, “It does little good to dig into the underlying factors that cause suicidal ideation until the person can be stabilized to the point of agreeing that life is worth living for at least another week” (p. 15).

James and Gilliland (2001) use a six step “action-oriented, situation based method of crisis intervention” (p. 33). They caution that the model should be carried out with the over-arching goal of continual assessment. This model can be used as a generic guide to structure suicide intervention. The steps of the model are the following:

- **Defining the problem** which includes using listening skills to make sure that the client and interventionist both understand the problem. In suicide intervention, this might include asking if the client is thinking about suicide and if the client has any plans.

- **Ensuring client safety** entails providing for client physical and emotional safety.

- **Providing support** involves communicating care and acceptance.

- **Examining alternatives** refers to the process of client and interventionist exploring different alternatives available to the client. These alternatives might involve identifying support systems, coping mechanisms, and positive thinking patterns.

- **Making plans** is a direct extension of step four. This step is a collaborative process between client and interventionist and involves direct action. It might include resources to contact for immediate support and the provision of some concrete coping mechanisms.
• **Obtaining commitment** involves confirming the action steps that will be taken by the interventionist and client. Often, the interventionist simply asks the client to summarize the plans to provide a verbal commitment to the action steps.

**The Basics of Suicide Intervention**

Suicide intervention can fit into almost any model of crisis intervention; however, there are some unique considerations when intervening in a suicidal crisis. Suicide intervention is defined as “prevention of an imminent attempt or an in process attempt” (Salvatore, 2005). Two dictionary definitions of intervention provide some perspective:

• To involve oneself in a situation so as to alter or hinder an action or development.

• To come, appear or lie between two things (Dictionary.com, 2005).

In crisis intervention, an effective intervention lies between positive resolution of the crisis and possible growth and the alternative of a negative resolution and a lower level of functioning. In suicide intervention, the intervention lies between life and the alternative of possible death.

Moreover, suicide intervention requires awareness. In order to intervene appropriately, interventionists must not only know the basic facts of suicide, but also the signs and symptoms of depression and suicidal ideation. The focus of this study is on the intervention that occurs after the recognition that someone is in danger. This person-to-person encounter requires an appropriate attitude toward suicidal individuals as well as the prerequisite crisis intervention skills. At a minimum, the interventionist should be able to listen nonjudgmentally, talk about suicide openly, acknowledge feelings, and assist the suicidal student in receiving appropriate professional attention in a timely manner.
Ten Common Mistakes in Suicide Intervention

Another way to examine the basics of suicide intervention, especially in regard to the actual person to person interaction, is to review the common mistakes of suicide interventionists. Neimeyer and Pfeiffer (1994b), using the responses of identified helpers on the Suicide Intervention Response Inventory, identified the most common errors in suicide intervention. These errors fell into 10 categories:

- Superficial reassurance.
- Avoidance of strong feelings.
- Excessive professionalism.
- Inadequate assessment of suicidal intent.
- Failure to identify the precipitating event.
- Passivity.
- Insufficient directiveness.
- Advice giving.
- Stereotypic responses.
- Defensiveness.

These 10 categories can help to focus suicide intervention training efforts.

Gatekeepers

Suicidology professionals view education and awareness as the cornerstones of prevention efforts (Rickgarn, 1994); and they have paid special attention to the role of “gatekeepers” (Grollman, 1971). “Gatekeeper” is a term that is often used to describe those who are in a position to identify and intervene with those who might be potentially suicidal (Rickgarn, 1994). More specifically, gatekeepers are “individuals who by the nature of their job, their special interest in people, or in their personal relationships and friendships are in a position to observe high risk behaviors and take action when necessary” (Coleman & O’Halloran, 2004, p. 9). Clergy and physicians often serve as community gatekeepers. Teachers are obvious gatekeepers at the middle and high school levels, and student affairs staff, particularly those who work in the residence halls, serve as important gatekeepers in the college environment.
Resistance

Suicide is a sensitive issue, and as such, provokes many reactions. Rickgarn (1994) suggests that one reason that the mythology of suicide has persisted so long is because of its protective factor. Somehow, believing statements such as, “Only the mentally ill commit suicide,” and “People who really want to die don’t talk about it,” allow individuals to avoid an uncomfortable subject, to remove themselves emotionally, and to absolve themselves of involvement.

Another thing that might make some paraprofessionals shy away from engaging someone who is suicidal is, ironically, the fact that suicidal ideation, at varying levels, is so common (Rickgarn, 1994). One might equate his or her passing thought of suicide to a suicidal thought that someone else expresses. The danger of this, of course, is that the levels of ideation might not be equal, but the person who is in a position to help, chooses not to intervene based on a mistaken assumption.

There may be other things that inhibit one’s ability to intervene in a suicidal crisis. Also, trainers are learning that individuals must not only be educated, but they must also be willing to act. Then again, Rickgarn (1994) suggests that even if people learn something reluctantly, it does not mean that they will not act on what they have learned.

Residence Hall Staff as Suicide Interventionists

Residence hall staff members may be called upon to serve as suicide interventionists. A chapter on suicide and appropriate intervention is included in The Resident Assistant (Blimling, 2003), a textbook commonly used in Resident Assistant training courses across the country. Yet, the extent of training residence hall staff members receive varies markedly. Grosz (1990) refers to suicide intervention training for
resident assistants as “a critical preventive measure, which all campuses can implement” (p. 180).

In 1980, Holmes and Howard determined that college students were generally unable to recognize suicidal behavior in their peers. Later, Inman and colleagues (1984) found that college students could identify the risk factors for suicide, but they did not know how to respond to peers who were suicidal. Appropriate suicide intervention training gives RAs the “skills and permission to take an active role with the student who may be exhibiting suicidal ideation and behavior” (Grosz, 1990, p. 180).

An effective suicide training program for residence hall staff should include the following:

- Campus policy and procedure regarding suicide behavior.
- An exploration of personal feelings about suicide.
- Recognizing a student at risk for suicide.
- Screening and assessment of students who might be suicidal.
- Making an effective referral.
- Handling the aftermath of suicide (Grosz, 1990).

Grosz accurately summarizes the responsibility of RAs as such, “The RA’s responsibility is to recognize and intervene with the suicidal student but not to be cast in the therapeutic role. Suicidal students are an institutional responsibility with the RA being a key suicide prevention member” (p. 193).

Residence hall staff members are in a good position to assess students for potential suicidal behavior and to provide initial intervention and referral. The intentionality of and extent of training that these staff members receive varies from one institution to another, but the literature suggests that training is important for effective suicide intervention (Neimeyer & Diamond, 1983; Neimeyer et al., 2001; Neimeyer & MacInnes, 1981; Maine et al., 2001; Stuart et al., 2003). In addition, while utilization of
32

residence hall staff and the appropriate training of residence hall staff are recommended, the issue of residence hall staff members’ performance of these skills remains unaddressed in the literature.

**Suicide Counseling Skill**

**Research Examining the Effectiveness of Suicide Intervention Response**

In 1981, Neimeyer and MacInnes noted that most efforts to rate counseling skills using questionnaires focused on rating general helping responses, not those related to more specific situations. In particular, they were interested in skills, beyond that of basic facilitative responding, that certain crisis situations might require. The Suicide Intervention Response Inventory (SIRI; Neimeyer & MacInnes, 1981) was created to assess individuals’ ability to discriminate between facilitative and nonfacilitative responses to a person in suicidal crisis. The SIRI includes 25 “client” statements paired with two possible responses that a helper might use. One of the two responses, according to crisis theory, is more facilitative than the other and therefore equals a correct response on the inventory.

Several studies (Neimeyer & MacInnes, 1981) were conducted to provide evidence of validity and reliability for the SIRI. These studies not only provided evidence of acceptable validity and reliability for this instrument, but they also provided some other initial information regarding how different groups performed on the instrument.

The first study, a known groups comparison, used several groups of paraprofessionals recruited from four different crisis centers in three different cities, one group of alcohol counselor trainees, and students from two different adult education classes. The SIRI was administered to crisis intervention trainees twice, once before a 3-month long training and once after the training. The training consisted on
presentations on crisis theory, suicide intervention, active listening, and role-playing. The control group was also given the instrument twice, once initially and then once 3 months later with no training in between administrations. The results showed that the scores of those in training were significantly higher than those not in training. Also, experienced crisis interventionists scored higher than both the untrained group and the less experienced interventionists.

In a related investigation, it was predicted that SIRI scores would increase over the 3-month training period for new crisis volunteers and alcohol counselors, whereas the SIRI scores for the control group would not increase over 3 months. As predicted, SIRI scores for the training groups increased significantly over the 3-month period, but the scores for the control group did not.

Lastly, the researchers also examined the convergent validity of the SIRI by administering the SIRI to 14 crisis intervention trainees before and after training. The same trainees were also given the half of the items of the Counseling Skills Evaluation (Wolf & Wolf, 1974, as cited in Neimeyer & MacInnes, 1981) prior to training and half of the items after training. The SIRI was correlated significantly with the Counseling Skills Evaluation at both administrations. Neimeyer and MacInnes (1981) suggested that, while the convergence provides additional support for validity of the instrument, the fact that the convergence was only moderate seems to indicate that the two instruments do assess different areas of counseling ability.

In 1983, Neimeyer and Diamond (1983) used the SIRI to examine the suicide response effectiveness of 141 medical students. In this study, they found that third-year students who had completed a course in medical interviewing scored higher on the SIRI than the first-year students who had not completed the course. Moreover, third-year
students who had already completed the psychiatry rotation scored significantly higher on the instrument than those who had not completed this rotation. Additional findings were that age, medical specialty, marital status, and religion were not related to scores on the SIRI. Gender was significantly related with female students doing better on the measure than male students.

A year later, the relationship between death anxiety and suicide intervention response effectiveness was examined using a group of 109 suicide prevention workers from three separate crisis centers (Neimeyer & Neimeyer, 1984). The SIRI was again used as a measure of suicide intervention response effectiveness, while the Death Anxiety Scale (Templer, 1970, as cited in Neimeyer & Neimeyer, 1984) was used as a measure of death anxiety. The results indicated that the interventionists had significantly lower death anxiety than did the control group. Also, there was no linear or curvilinear relationship between death anxiety and suicide counseling skill.

In 1984, the SIRI was used in another study (Inman et al., 1984) using a sample of 89 nursing students. The sample was small, but both the design of the study and the results were intriguing. It is logical that once someone has identified a person in emotional distress that the next necessary intervention skill would be the ability to make an appropriate verbal response. This study used the Lethality Scale (Holmes & Howard, 1980) as a measure of the ability to identify suicide signs and the SIRI. The results of this study indicated that both the Lethality Scale scores and SIRI scores for the nurses were in the same range as that of college students and other untrained workers. An interesting finding was that there was not a correlation between the scores on the Lethality Scale and SIRI suggesting that the ability to recognize suicidal risk factors and the ability to respond effectively to a suicidal person are two different competencies (Inman et al.,
Another finding was that there was a positive relationship between the belief in suicide intervention and scores on both instruments. More specifically, students who believed that some suicides should be prevented scored higher on both instruments than those who thought that either all suicides should be prevented or that none should be prevented.

Norton et al. (1989) conducted a similar study using a population of high school students (N = 120). This study also explored the relationship of suicide knowledge and suicide intervention response effectiveness but added a third area, attitude towards suicide. The researchers used locally developed surveys to assess knowledge and attitude and the SIRI was used to measure response skill. The results of the study indicated that the majority of the students lacked knowledge of potential warning signs of suicide, held negative attitudes about peers who were suicidal, and had limited ability to respond appropriately to a peer’s suicidal communication.

A 1990 study (Lawrence & Ureda) surveyed 1,131 college freshmen to explore their ability to recognize a peer who was suicidal and their ability to respond effectively. This survey, however, did not use either the SIRI or the Lethality Scale. The central question was, “If asking a suicidal adolescent, ‘Are you thinking about killing yourself?’ is a gatekeeping, helpful initiative to getting an adolescent to professional help, what barriers prevent its being asked?” (p. 167) So, the researchers not only assessed the recognition of lethality factors and the ability to respond effectively, they also assessed the students’ self-efficacy in asking a peer “Are you thinking of killing yourself?”, their emotional discomfort asking this question, and their knowledge that asking the question would be helpful. The researchers developed the questionnaire, which consisted mainly of Likert scale questions, using a review of the current literature. The results indicated
that these college freshmen were generally able to recognize the risk factors for suicidal behavior; however, they generally were not sure of a helpful response to make to a peer in this situation. The researchers also wanted to know if knowledge of risk factors, knowledge of an appropriate response, emotional comfort with asking peer about suicidal intent, and self-efficacy related to asking a peer about suicidal intent, were related to the students’ intention to ask. Using these variables, 38% of a student’s intention to confront a peer about suicidal ideation was explained. When regressed alone, self-efficacy explained 34% of the variance and emotional discomfort explained 21%; however, when the four variables were regressed together, self-efficacy explained 34% of the variance while the other three variables combined explained only 4%. The remaining 62% of variance was not identified. This led the researchers to conclude that “Knowledge of suicidal behavior and knowledge of a helpful response may be necessary but not sufficient to predict a college student’s asking a possibly suicidal peer, ‘Are you thinking about killing yourself?’” (p. 74).

Interest in the predictors of suicide counseling skill and the efficacy of suicide intervention training seems to have reemerged in the recent literature (Brown & Range, 2005; Main et al., 2001; Neimeyer et al., 2001; Stuart et al., 2003; Murphy, 2004). Neimeyer et al. (2001) explored the role of personal and professional factors as related to the ability of counselors to respond appropriately to suicidal verbalizations. More specifically, since other studies had shown that professional factors such as experience and education are related to suicide counseling ability, Neimeyer and colleagues wanted to determine if personal factors contributed to the ability to predict suicide intervention skills. The researchers did find that higher levels of training and more experience with suicidal clients did, as expected, predict higher SIRI scores. The personal factor of death
acceptance was also significantly positively related while the attitude that “suicide is a personal right” and a history of personal suicidality were significantly negatively related to SIRI score. In a hierarchical regression, once the factor of experience with suicidal clients was entered, level of training and years of experience did not account for any unique variance in SIRI score. Finally, entry of the personal variables into the regression led to the retention of personal suicidality and ‘suicide as a personal right’ in the final model. Overall, the addition of personal variables significantly improved the prediction of SIRI scores above and beyond professional variables alone.

About the same time as the Neimeyer et al. (2001) study, Maine et al. (2001) were involved in research evaluating the use of a training video for parents. This study explored the impact of training on the knowledge of suicidal signs, responses to suicidal statements (SIRI), attitudes toward suicide, and intentionality as well as the relationship of the four measures. As predicted, participants performed better on measures of suicide knowledge and suicide intervention ability after watching the video. They also demonstrated more rejection of suicide and more intention to assist suicidal youth than they did prior to the video. A significant positive relationship was found, both pre- and postvideo, between suicide knowledge and ability to respond appropriately, and between intention to help and ability to respond appropriately. There was no relationship between attitude toward suicide with suicide knowledge, suicide response, or intention to help in a suicidal crisis.

In 2001, Richards and Range compared SIRI-II scores of several groups and found that advanced graduate students in psychology and mental health practitioners scored better than introductory psychology students who scored better than nursing graduate students. The participants were queried as to their history of suicide intervention
training and the reported levels were low to moderate with only a 1 hour difference between beginning psychology students and nursing graduate students. This result can indicate the positive effect of counseling training, though it also points to other possibilities such as a more general psychological mindedness or an appropriate career related self-selection process.

A study of related issues involved evaluating the effectiveness of suicide intervention training for peer helpers (Stuart et. al, 2003). The researchers hypothesized that knowledge of suicide, positive attitudes toward suicide intervention, and suicide counseling skills would improve after training and be maintained three months after training. All hypotheses were supported, lending preliminary support for the practice of training peer helpers in suicide intervention.

Murphy (2004), in an experimental study, examined the impact of a 2-hour crisis intervention training model on the suicide intervention knowledge and skills of graduate counseling students as well as their feelings of preparation, comfort, and confidence. Suicide intervention skill was measured using the SIRI-2. The results indicated that the training had a significant positive effect on crisis intervention knowledge and the students’ feelings of preparation, comfort, and confidence to intervene with individuals in crisis. However, the results did not indicate a significant improvement in SIRI-2 scores.

In the most recent study of factors that affect suicide counseling skill, Brown and Range (2005) found no difference on SIRI-2 scores according to gender, religion, whether participants knew a suicidal person, or had read books on suicide. They did find a difference in SIRI-2 scores related to race, with European American students scoring significantly better than African American students and related to age, with older students scoring significantly better than younger students. The researchers also found
that having a higher level of trait anxiety, taken a crisis course, counseled a suicidal person, or been in therapy were associated with higher SIRI-2 scores. Lastly, they found that personal suicidality, as measured by the Scale for Suicide Ideation—Self Report (SSI; Beck, Steer, & Ranieri, 1988, as cited in Brown & Range, 2005) was not associated with suicide counseling skills; however, students who were ever suicidal scored significantly better than students who were never suicidal.

**Summary of Findings**

There has been great interest in finding out what makes some professionals and paraprofessionals better at suicide intervention than others. This effort has produced sometimes conflicting, but nonetheless fascinating, results that leave both theoretical and practical questions unanswered. When examined together, the research does begin to point to some things that might affect one’s suicide counseling ability.

With one exception (Murphy, 2004), all of the studies reviewed support the importance of suicide intervention training as a predictor of suicide counseling ability. Three studies (Neimeyer & MacInnes, 1981; Maine et al., 2001; Stuart et al., 2003) incorporated various training models into the study using a pre-post design, while three studies (Brown & Range, 2005; Neimeyer & Diamond, 1983; Neimeyer et al., 2001) relied on self-reports of participants’ previous suicide intervention training to use in the analysis. Both methods showed a significant training effect. However, Murphy (2004) designed a study to specifically test the effects of a 2-hour, formal training program in suicide intervention on the suicide counseling knowledge and skills of school counseling graduate students. Her results indicated a significant training effect for suicide knowledge, but neither the 2-hour training nor self-reported previous training significantly affected suicide counseling ability as measured by the SIRI-II.
Experience intervening with suicidal persons also seems to be a reliable predictor of suicide counseling ability (Brown & Range, 2005; Neimeyer & Diamond, 1983; Neimeyer, et al., 2001; Neimeyer & MacInnes, 1981). In a study (Neimeyer, et al., 2001) examining the personal and professional factors related to suicide counseling ability, experience with suicidal clients was retained in the final regression model as one of the most important predictors of this ability. In fact, this study was able to isolate some of the difficulties surrounding the definition of experience in previous studies. Once the factor of experience with suicidal clients was entered into the regression, one’s level of training and years of experience in general were not important. Once again, in the studies reviewed, only one (Murphy, 2004) did not support the role of previous intervention experience; however, in this study, experience was defined more broadly as crisis intervention experience.

When considering suicide counseling skill, it is logical that basic counseling skill would be an important predictor. The evidence thus far supports this idea (Neimeyer & Diamond, 1983; Neimeyer & MacInnes, 1981; Richards & Range, 2001; Stuart et al., 2003). More specifically, the evidence supports the hypothesis that general counseling skill is an important component of suicide counseling skill but is not equal to suicide counseling skill. In the original validation studies of the SIRI, Neimeyer and MacInnes (1981) found that the instrument showed moderate convergence with the Counseling Skills Evaluation (Wolf & Wolf, 1974, as cited in Neimeyer & MacInnes, 1981), suggesting that the two abilities are related, but not the same. In another study, medical students who completed a course in interviewing showed more ability in responding to suicidal clients, but those students who had completed the course in interviewing and a
psychiatry rotation, exposing them to suicidal clients, showed even greater ability to make appropriate responses to suicidal persons (Neimeyer & Diamond, 1983).

The empirical evidence is mixed regarding how knowledge of suicide and suicide risk factors impacts suicide counseling skill. Training in suicide intervention does seem to consistently increase suicide knowledge (Maine et al., 2001; Murphy, 2004; Stuart et al., 2003). Suicide knowledge seems to be related to suicide counseling skill in some cases (Lawrence & Ureda, 1990; Maine et al., 2001), while in others (Inman et al., 1984; Murphy, 2004) there is no correlation. Domino and Swain (1985), however, did find a positive relationship between suicide knowledge and an attitude accepting suicide as a reaction to external events.

Several studies have, at least in part, examined the capacity of individual attitudes and beliefs to affect suicide counseling ability (Inman, et. al, 1984; Maine, et al., 2001; Neimeyer et al., 2001; Norton et al., 1989; Stuart, et al., 2003). There has been some difficulty in examining the effects of attitude since researchers tend to conceptualize attitude differently. It is difficult to differentiate and compare those that measure attitude about suicide, attitude toward people who consider or commit suicide, and attitude toward suicide intervention. At this point, it can be hypothesized from the literature that

- The majority of high school students tend to have negative attitudes toward peers who are suicidal (Norton et al., 1989).

- The belief that some suicides should be prevented versus the belief that either all or none should be prevented seems to predict suicide intervention ability (Inman, et al., 1984).

- Those who believe that “suicide is a personal right” tend not to perform as well on measures of suicide counseling ability (Neimeyer et al., 2001).

- Training can positively affect attitudes toward suicide intervention (Stuart et al., 2003) and promote more rejection of suicide as an acceptable alternative (Maine, et al., 2001).
In the search for significant predictors of suicide counseling skill, attitudes, beliefs, and basic demographic variables can be considered personal factors or internal factors; and variables such as suicide intervention training, counseling training, and knowledge can be considered professional factors or external factors. Neimeyer et al. included a new personal factor in their 2001 study. They used a measure of suicide ideation and behavior and found this variable to be important in predicting one’s ability to make an appropriate response to someone considering suicide. More specifically, a personal history of suicide behavior was significantly negatively correlated with performance on the SIRI. This factor remained important in the regression model using the entire sample and became even more significant when the sample was narrowed to those participants with the most professional training. Brown and Range (2005) also examined the role of personal suicide behaviors, but they used a different instrument. They found that personal suicidality was not related to suicide counseling skill; however, they did find that SIRI-2 scores were significantly higher for those students who had ever been suicidal than for the students who had never been suicidal.

Self-efficacy also emerged as a significant factor involved in one’s response effectiveness, accounting for 34% of the variance in skill in one study (Lawrence & Ureda, 1990); however, skill was not measured by the SIRI or SIRI-II as in most studies investigating this construct. Murphy (2004) found that although training significantly increased participants’ self-efficacy and comfort related to working with suicidal individuals, this increase in self-efficacy and comfort did not produce significant skill improvement.

Remaining Questions

The literature reviewed indicates that suicide intervention training and suicide intervention experience both affect suicide counseling skill. Basic counseling skill,
logically, also has a positive affect on suicide counseling skill, but it is not equal to
suicide counseling skill. Other, more personal or intrinsic variables also seem to have a
role in determining suicide counseling ability.

Attitude and beliefs regarding suicide have some role, though studies have not
consistently measured attitude in the same way. The evidence does suggest two things
about attitude and its relation to suicide counseling skill. First, only attitudes and beliefs
directly affiliated with suicide matter. Second, the evidence shows that more rigid
attitudes toward suicide negatively impact suicide counseling skills. For example, the
belief that suicide is a personal right (Neimeyer et al, 2001) is negatively associated with
ability to effectively intervene with someone who is suicidal, and the belief that some
suicides should be prevented versus the belief that either all or none should be prevented
predicted suicide intervention ability (Inman et al., 1984). Other literature suggests that
counseling skill is negatively affected by dogmatic beliefs (Carlozzi, Campbell, & Ward,
1982; Carlozzi, Edwards, & Ward, 1978). The ability to be open to another’s experience
and to think broadly about this experience might be related to counseling skill in general
and even more related to suicide counseling skill specifically because of the strong
beliefs some persons hold regarding the act of suicide.

Some of the later studies (Brown & Range, 2005; Neimeyer et al., 2001) suggest
that there are also factors that detract from one’s ability to intervene with someone who is
suicidal. A history of personal suicide behavior was negatively associated with suicide
counseling skill, even with trained, experienced practitioners. In fact, the negative effect
was greater with the most highly trained individuals. This finding suggests that some
level of emotional involvement may inhibit the otherwise positive effects of training.
Even though personal suicidality as measured by the SSI (Beck et al., 1988, as cited in
Brown & Range, 2005) was not related to suicide counseling skill, whether someone had ever been suicidal was significantly related, with those who had ever been suicidal scoring significantly better on the SIRI-2 than those who had never been suicidal.

Training works better for some people than others. Individuals who have the capacity to empathize and who possess a certain level of cognitive complexity might be more receptive to training. Theory and empirical evidence suggest that students functioning at higher levels of cognitive development have an increased ability to experience empathy for others (Benack, 1988; Ivey, 1991; Kohlberg, 1984; Loevinger, 1976; Lovell, 1999; Schlossberg, Lynch, & Chickering, 1989). The current study will examine the role of empathy and level of cognitive development as predictors of suicide counseling ability.

**Empathy**

Empathy, as a concept, is a central component of psychotherapy, developmental psychology, altruism research, and basic human relational behavior; yet, it remains a complex and controversial phenomenon. According to Eagle and Wolitzky (1997) there are at least six different uses for the term empathy:

1) Empathy as a genetically based capacity for understanding, relating to, and reacting to others in particular ways, 2) Empathy as a method of observation and data-gathering, 3) Empathy as a mode of listening, 4) Empathy as a developmental need, 5) Empathy in communication, and 6) Empathy as a curative agent. (pp. 219-222).

Empathy is an obscure concept, with difficulties in definition and measurement. “What empathy is, does, and relates to is very much a function of a particular theoretical position and a particular procedure of measurement” (Feshbach, 1997, p. 36). The following are some examples of prominent definitions of empathy, organized from early ideas to more contemporary thoughts:
Accurate empathy involves more than just the ability of the therapist to sense the client or patient’s private world as if it were his own. It also involves more than just his ability to know what the patient means. Accurate empathy involves both the therapist’s sensitivity to current feelings and his verbal facility to communicate this understanding in a language attuned to the client’s current feelings. It is not necessary—in fact it would seem undesirable—for the therapist to share the client’s feelings in any sense that would require him to share the same emotions. It is instead an appreciation and sensitive awareness of those feelings. (Truax & Carkhuff, 1967, p. 46, as cited in Goldstein & Michaels, 1985)

The way of being with another person which is termed empathic has several facets. It means entering the private perceptual world of the other and becoming thoroughly at home in it. It involves being sensitive moment to moment, to the changing felt meanings which flow in this other person…It involves communicating your sensing of his/her world as you look with fresh and unfrightened eyes. (Rogers, 1975, p. 4)

Empathy is broadly defined as a set of constructs having to do with the responses of one individual to the experiences of another. These constructs specifically include the processes taking place within the observer and the affective and non-affective outcomes which result from those processes. (Davis, 1996, p. 12)

Empathy is a complex cognitive—affective experience of joining in understanding, a feeling—resonance that leads to a more differentiated understanding of self, other and relationship. . . . Empathy involves the capacity to perceive another’s affective state, to resonate with that emotional state, and to gain some understanding or clarity about the other’s subjective world. Rather than a more distance mediated way of knowing through cognitive channels alone, empathy involves an emotional resonance that gives one a compelling psychological-physiological sense of joining with the experience of the other person. (Jordan, 1997, p. 344)

A Historical Perspective on Empathy

Empathy has its roots in aesthetic perception and appreciation. In 1897, Lipps (as cited in Goldstein & Michaels, 1985) used the German term Einfühlung, which meant “feeling oneself into,” to describe a process that occurred while contemplating an object of art or nature. Lipps believed that people came to fully appreciate these objects by projecting themselves into the object, identifying with it, and engaging it in a process of inner imitation. Lipps expanded his definition to include people in 1910 (Goldstein & Michaels, 1985).
In 1934, George Mead (as cited in Goldstein & Michaels, 1985) refined the existing definition of empathy by adding a cognitive dimension to the definition. The notion of an empathizer merging identities gave way to a process where the empathizer took the role of another temporarily.

The original research interest in the construct of empathy emerged in the 1960s and early 1970s (Bohart & Greenberg, 1997). During this time, affective sensitivity definitions of empathy dominated (Danish & Kagan, 1971; Rogers, 1975; Truax & Carkhuff, 1967, as cited in Goldstein & Michaels, 1985). Most of the research in this period focused on testing Rogers’ hypothesis that the three therapeutic conditions of unconditional positive regard, empathy, and genuineness were necessary and sufficient for therapeutic change (Bohart & Greenberg, 1997). More comprehensive views of empathy also began to emerge. Katz (1963, p. 41, as cited in Goldstein & Michaels, 1985) followed Theodore Reik’s model and outlined four phases of the empathic process:

- **Identification**: one allows oneself to be absorbed in contemplating the other person’s experiences through a relaxation of conscious control and instinctive, imitative activity; projecting one’s being into that of another

- **Incorporation**: taking the experience of the other person into oneself

- **Reverberation**: allowing for an interplay between the internalized feelings of others and one’s own experience and fantasy

- **Detachment**: breaking away from identification to gain the social and psychic distance necessary for objectivity

By the late 1970s, Charles Truax and colleagues (Truax & Carkhuff, 1967; Truax and Mitchell, 1971, as cited in Bohart and Greenberg, 1997) had accumulated enough evidence to suggest a correlation between empathy and positive therapeutic outcome. However, inconsistencies in the research and the use of only one response technique, empathic reflection, led to many questions about the findings. Research on empathy in
the 1980s was sparse, but the importance of empathy in psychology was bolstered once again by the development of self-psychology and the feminist ideas of self-in-relation (Bohart & Greenberg, 1997).

Feshbach (1997) concludes, “the contemporary concept of empathy is integrative and synthetic, including both cognitive and affective facets . . . the relative salience of each varies markedly” (p. 39). Also, Goldstein and Michaels (1985) suggest that another way to refine the definition of empathy is by separating it from what it is not. Empathy is not sympathy, projection, or identification.

**A Multidimensional Approach to Empathy**

Davis (1996) promotes a multidimensional view of empathy. He acknowledges that empathy continues to be a matter of some disagreement and notes three problems in particular: (a) Empathy is often used to describe two separate phenomena, cognitive role-taking and affective reactivity; (b) There is a failure to agree on the relationships among the core constructs of empathy; and (c) There has been long-term confusion regarding empathy as a process versus empathy as an outcome. In Davis’ view of empathy, equal status is given to cognition and emotion, process and outcome, and disposition and situation.

According to Davis (1996), “Empathy is broadly defined as a set of constructs having to do with the responses of one individual to the experience of another. These constructs specifically include the processes taking place within the observer and the affective and non-affective outcomes which result from the processes” (p. 12). Davis’ organizational model of empathy begins with an empathy “episode.” An episode consists of the exposure of an observer to a target and the resulting cognitive, affective, and/or behavioral response of the observer. There are four related constructs involved in an
empathy episode: (a) antecedents, (b) processes, (c) intrapersonal outcomes, and (d) interpersonal outcomes.

Antecedents. Antecedents are the characteristics of the person, target, and/or situation. Some of the person antecedents include the individual’s capacity for empathy, the learning history of the individual, and the individual’s tendency to participate in empathy processes or to experience empathy-related outcomes. Davis (1996) views these person antecedents as stable characteristics of the individual. These characteristics influence the likelihood that someone will engage in an empathy-related process or experience an empathy-related outcome during a particular event. In addition, there are two important situational antecedents, the strength of the situation and the degree of similarity between the observer and target. Situations vary markedly in their ability to arouse an affective response in an observer. Helpless targets who display strong negative emotions are particularly likely to create powerful responses in the observer. In the face of such strong situations, other situational variables and/or person variables may ebb in importance. The other situational feature, degree of similarity between observer and target, has a simple premise—greater similarity between observer and target generally increases the likelihood of an empathic response and/or the intensity of the empathic response.

Processes. Processes are the second construct in the empathy model. This refers to the specific processes working in the observer to generate an empathic outcome. There are three classes of cognitive processes distinguished by the level of cognitive sophistication required for them to operate: (a) noncognitive; (b) simple cognitive; and (c) advanced cognitive.
• Noncognitive processes include primary circular reaction and motor mimicry. Primary circular reaction (Hoffman, 1984, as cited in Davis, 1996) refers to a noncognitive process which creates an affective outcome. An example of this is when newborn infants cry in response to the crying of other infants. Motor mimicry refers to the inclination of observers to automatically and mostly subconsciously imitate the target. It is believed that this mimicry produces an emotional state in the observer consistent with the emotional state of the target.

• Simple cognitive processes include classical conditioning, direct association, and labelling. Classical conditioning requires only enough cognitive sophistication to be able to distinguish stimuli and to be conditioned. An example of conditioning could be that an observer previously, while experiencing a certain affect, also perceived affective cues in others. Hence, the affective cues in others might come to evoke the emotional state in the observer. Direct Association (Hoffman, 1984, as cited in Davis, 1996) is a more general form of conditioning. With direct association, it is not necessary to experience an emotion simultaneously with another person; one only has to have experienced a similar emotion in the past. Labelling is a process identified by Eisenberg and colleagues (1991 as cited in Davis, 1996). In this process, an observer uses simple cues to infer things about the experiences of the target. For example, a person may know that a situation such as a birthday party usually produces happiness; therefore, when witnessing a birthday party the observer infers that the target is happy.

• Advanced cognitive processes consist of language mediated association, elaborated cognitive networks, and perspective taking. Language mediated association is a term coined by Hoffman (1984 as cited in Davis, 1996). In this process, “the observer’s reaction to the target’s plight is produced by activating language-based cognitive networks which trigger associations with the observer’s own feelings or experiences” (p. 16). For example, a target may utter “I’m getting a divorce” with no facial or vocal cues indicating negative emotion; however, an observer might respond empathically because the words trigger personal memories relevant to the situation. Elaborated cognitive networks (Eisenberg et al., 1991, as cited in Davis, 1996) is a process very similar to the above wherein observers use cues from a target to access their own existing knowledge in order to make inferences about the target. Perspective Taking is the most advanced process. It refers to “the attempts by one individual to understand another by imagining the other’s perspective” (Davis, 1996, p. 17). This process takes effort on two fronts. The observer must suppress one’s own perspective and consider the perspective of someone else.

Intrapersonal outcomes. These make up the third construct of the empathy model. Intrapersonal outcomes can be either affective or nonaffective.

• Affective outcomes are observers’ emotional reactions to a target. Parallel outcome is a reproduction of the target’s affect, while reactive outcomes are affective reactions in the observer which are different from the emotion being experienced by the target.
• Nonaffective outcomes are the cognitive outcomes experienced by observers in reaction to a target. There are two types of nonaffective outcomes. *Interpersonal accuracy* is accurate interpretation of the feelings, thoughts, and characteristics of others. Empathy processes, however, also affect the *attributional judgments* observers make of a target’s behavior (e.g., Regan & Totten, 1975 and Gould & Sigall, 1977, as cited in Davis, 1996).

**Interpersonal outcomes.** Interpersonal outcomes are the fourth construct in Davis’ (1996) model of empathy. Interpersonal outcomes are observer behaviors directed at a target that result from previous exposure to the target. *Helping behavior, aggressive behavior,* and *social relationships* are all examples of interpersonal outcomes. Empathy has a negative relationship with aggressive behavior, and there is a history of thought that links both the cognitive and affective parts of empathy to helping behavior.

**Empathy in the Current Study**

Empathy, even though it is a complicated and somewhat controversial psychological concept, is important in human relationships. “Empathy is an important but subtle mechanism of human communication that is difficult to capture in empirical studies. Nevertheless, the research on empathy has provided suggestive evidence of its significant role in social understanding and social relationships” (Feshbach, 1997, p. 53). Goleman (1995) refers to the popular literature on emotional intelligence, of which empathy is a main component. This literature argues that emotional intelligence, and therefore empathy, may be more important than IQ. Bohart and Greenberg (1997) propose that empathy is an important precursor to understanding individuals as a part of a diverse society, “If reality is multiple and we construct our own realities, then empathy becomes the fundamental way of knowing across diverse personal realities” (Bohart & Greenberg, p. 12). Lastly, evidence suggests that in therapy, the relationship between the therapist and client is the best predictor of success. Even though the therapeutic
relationship is downplayed in some theoretical frameworks, it still remains that most models of the etiology of psychopathology highlight relationship deficits (Bohart & Greenberg).

This study explores empathy as a predictor of suicide counseling skill because empathy is a crucial element in human relationships in general and even more important in helping relationships. One’s ability to establish an empathic relationship should affect one’s ability to be nonjudgmental toward someone who is suicidal and should facilitate communication between helper and helpee.

Davis’ multidimensional model of empathy is used as a theoretical framework for the current study. Also, the Interpersonal Reactivity Index (Davis, 1980), designed to measure empathy according to Davis’ multidimensional model, is used as the measure of empathy. This instrument measures dispositional empathy or the capacity for empathy, an intrinsic trait that can influence one’s capacity to empathize with others. Dispositional empathy may be a precursor to helpful, altruistic behavior.

**Cognitive Development**

**Overview of Cognitive Development**

There are two branches of research in the area of cognitive development. One focuses on the concept of intelligence and the other on the process of cognition and the development of cognitive abilities. The present study uses the theory base and empirical evidence from the latter definition. William Perry’s (1998) scheme of intellectual development has at its roots the work of Jean Piaget (Piaget & Inhelder, 1969). Both Perry’s and Piaget’s theories focus on the process by which individuals develop a new awareness of self, awareness of environmental influences, and the balance between the two (Perry, 1998). Perry (1970) described the similarity between the theories as a
“movement away from a naïve egocentrism to a differentiated awareness of the environment” (p. 204). Piaget’s theory traces cognitive development through age fifteen, while Perry’s scheme focuses on the development of college students.

William Perry’s Scheme of Intellectual Development

Perry (1998) was motivated to study the cognitive development of college students when he noticed the increasing diversity on campus and in society and wanted to understand how students came to make sense of their world. Perry did his research in the 1950s and 1960s using undergraduates mostly from Harvard. His theory emerged from qualitative analyses of a series of longitudinal interviews in which students discussed their experiences and transformations during their college years (Moore, 2001). This study showed that although the content of individual interviews differed significantly, the underlying structures the students used to make meaning and the sequence of development did not vary (Love & Guthrie, 1999).

Perry’s theory is complex. In order to understand it adequately, it is necessary to know the terms and concepts that are imbedded within (adapted from Love & Guthrie, 1999):

**Position.** Perry and his colleagues chose to use the term position instead of the term stage. Stage refers to a stable and enduring way of making meaning that pervades one’s experience. The term position, however, does not assume anything about duration. Alternatively, position expresses more of a central tendency in a student’s way of making meaning, and the term implies a “place” from which a student views the world (Perry, 1970).

**Absolute.** Perry used an uppercase Absolute to refer to Truth, a universal truth. This Truth was known by Authorities (also uppercase) (Love & Guthrie, 1999).
**Authorities.** Authorities (using uppercase) have the right answers and possess the Absolute. In contrast, authorities (using lower case) exist in the world of relativism and get their authority from several sources which could include expertise, training, wisdom, experience, and position (Love & Guthrie, 1999).

**Adherence and Opposition.** Perry and his colleagues noticed that in some of the early positions of the scheme, that students had different perceptions of their relationships with Authorities. These different relationships influenced the form of their intellectual development. Some students identified and aligned with Authority using a dualistic structure of the world in which Authorities were a part of “we” and were right. These students were labeled *adherents.* Other students separated themselves from Authorities and relegated Authorities to a part of “they” in which “they” were wrong. Perry identified these students as being in *opposition.*

Perry’s scheme consists of nine positions that have been grouped in several ways. Perry initially clustered the positions into three groups with positions one, two, and three making up the transition from right-wrong outlook to the recognition of relativism. Positions four, five, and six represented the development of a relativistic point of view, and positions seven, eight, and nine represented the development of commitments in a relativistic world (Love & Guthrie, 1999).

Perry’s scheme also has two major orientations. The most significant change in sense making occurs in position five, so the scheme is often broken down into preposition five where knowledge and values are certain, objective, and universal and position five and postposition five where knowledge and values are relative, subjective, and contextual (Love and Guthrie, 1999). The scheme can also be divided in another way. The first five positions describe epistemological/intellectual development while the
last four describe moral, ethical, and identity development. The first five positions are the most developed and researched, and they also encompass the development of college students. Undergraduate students rarely reflect postcontextual-relativistic thinking (Moore, 2001).

A basic description of Perry positions one through five follows. The descriptions were adapted from Love and Guthrie’s (1999) summary as well as Perry’s (1970) original description of the scheme. The labels in parentheses are labels created by Knefelkamp (1999) and Perry to help minimize confusion.

**Position one: Basic dualism (strict dualism)**

- The world is divided into absolutes such as right versus wrong and good versus bad.
- Everything is known.
- Authorities possess Absolute Truth.
- The world of Authority is conflict free.
- All problems are solvable. One must simply obey Authority, conform to what is right, and do what Authorities want.

**Position two: Multiplicity prelegitimate (strict dualism)**

- Multiplicity refers to the concept that there are many answers and opinions regarding issues and problem solving.
- Students in position two recognize but stand in opposition to this diversity, complexity, ambiguity, and room for interpretation.
  - Loyalty to Authority is maintained.
  - Starts to differentiate good Authority from bad Authority
  - Students can experience stress and even sadness when they realize that the world is not known and may not be knowable.

**Position three: Multiplicity legitimate by subordinate (early multiplicity)**

- Students start to recognize that human uncertainty is legitimate, but they only acknowledge this uncertainty as temporary. Temporary uncertainty does not affect Truth.
• Tolerance for uncertainty has grown, but uncertainty still causes anxiety.
• Everyone has a right to a personal opinion.
• If there is no agreement on what is right, then there is no wrong.
• At this point students might begin to question grading practices. They start to find out what Authorities (professors) want and then try to give them what they want.

**Position four: Late multiplicity**

• This position is where students tend to diverge in their journey. Perry and colleagues (1970) identified two ways that students might visit position four.

  4a: Multiplicity Correlate (oppositional alternative)
  □ Authorities are still seen dualistically as right versus wrong; however, there is room for personal multiplicity.
  □ When Authority does not have a right answer, no opinion is wrong.
  □ The student’s personal multiplicity is seen as equal in legitimacy as Authorities right versus wrong.

  4b: Relativism Subordinate (adherence alternative)
  □ Knowledge becomes contextual and subjective; ideas become better or worse instead of good or bad.
  □ Rules of evidence start to be incorporated which allows for analysis and comparison.
  □ Students in this position recognize context, rules of evidence, and subjectivity, but this relativism is still subordinate to overall multiplicity.
  □ The transition to this position from position three can be characterized as a transition from “what they want” to “the way they want us to think.”
  □ Most students take the adherence alternative path.

**Position five: Relativism (contextual relativism or relational knowing)**

• This position represents a radical change. All knowledge is contextual and relativistic. Assimilation to a basic dualistic structure no longer works.
• Relativistic thinking becomes normal and automatic.
• Authority (with an uppercase A) becomes authority (with a lowercase a).
• This position is the first to require meta-cognition.
  □ Authorities’ answers become open to questioning, testing, and interpretation.
  □ Authorities are viewed as learners also struggling with questions; however, their experience and expertise is acknowledged.
  □ Relativistic thought provides the foundation for objectivity.
Perry’s positions six through nine, representing Commitment within Relativism, focus on ethical as opposed to intellectual development. Moore (2001) describes this shift to ethical development as the anticipation, clarification, and refinement of one’s Commitments. These Commitments are not simply choices, but choices made in the face of legitimate alternatives, after experiencing honest doubt. These Commitments clearly reflect one’s identity within a relativistic world. Perry’s original idea was that the changes in perspective experienced after position five were not structural changes. There has been little research done on these upper-levels which leaves many questions unanswered.

Summary

Chapter 2 included an extensive review of the literature to provide a foundation of knowledge and support for the current study. The literature review included information on the prevalence and etiology of college student suicide, suicide prevention, suicide intervention, the role of residence hall staff in suicide intervention. It also included a review of the research on suicide intervention effectiveness, and brief introductions to the concepts of empathy and cognitive development. Chapter 3 introduces the research design and methodology of the current study.
CHAPTER 3
METHODOLOGY

The purpose of this study is to identify internal and external factors related to the suicide counseling skills of paraprofessional residence hall staff members. This chapter will include the research design and delineation of variables, population and sampling procedures, instrumentation, data collection and analyses, and research hypotheses.

Research Design and Delineation of Variables

There are many unresolved questions about the predictors of suicide counseling ability in the literature. This study was designed to investigate to what extent the suicide counseling skill of residence hall staff members is related to the following variables:

- Demographic variables (gender, age, number of months in college, residence hall staff experience)
- External variables (counseling training, suicide intervention training, suicide intervention experience)
- Internal variables (empathy, cognitive development, personal suicide behavior)
- A combination of demographic, external, and internal variables.

The most efficient way to explore these variables of interest is by survey research. Thus, this study will utilize a survey consisting of three existing, psychometrically sound instruments, as well as a self-report questionnaire.

This study contains a total of 11 variables including demographic variables:

- **Gender** is a self-report dichotomous variable.
- **Age** is a self-report continuous variable.
- **Months in college** refers to the number of months that staff members have been enrolled at an institution of higher education.
• **Months of residence hall staff experience** refers to the number of months staff members have served as residence hall staff (as RAs and/or GHDs), including summer terms, at any institution.

• **Counseling Training** was operationalized by self-report estimates of number of hours of counseling or helping skills training received over a lifetime.

• **Suicide Intervention Training** was operationalized by self-report estimates of number of hours of suicide intervention training received over a lifetime.

• **Suicide Intervention Experience** was operationalized by self-report estimates of number of suicide intervention contacts one has had, personally or professionally, over a lifetime.

• **Empathy** level was measured by the Perspective Taking and Empathic Concern scales of the Interpersonal Reactivity Index (Davis, 1980). The sum of these two scale scores will be used as one total empathy score.

• **Cognitive Development** was measured using the Cognitive Complexity Index of the Learning Environment Preferences measure (Moore, 1987). The LEP measures cognitive development using Perry (1970) scheme positions one through five. The Cognitive Complexity Index (CCI) score is calculated by using all of the position preference percentages to produce a single score. These scores range from 200 (a stable position two) to a 500 (a stable position five). Cognitive development will also be measured using the percentage of dualism score of the LEP. The author of the LEP recommended that both scores be used to give a complete picture of cognitive development (William Moore, personal communication, May 27, 2005)

• **Personal Suicide Behavior** was measured by using the Suicidal Behaviors Questionnaire (Cole, 1988).

There is one outcome variable in this study:

• **Suicide Counseling Skill** was measured using the Suicide Intervention Response Inventory-II. This inventory measures the ability to identify an appropriate verbal response to someone who may be considering suicide. It yields one criterion referenced score.

**Null Hypotheses**

This study includes 11 hypotheses. The hypotheses are the following:

H 1: There is no significant relationship between suicide counseling skill and gender.

H 2: There is no significant relationship between suicide counseling skill and age.
H 3: There is no significant relationship between suicide counseling skill and number of months in college.

H 4: There is no significant relationship between suicide counseling skill and number of months as a residence hall staff member.

H 5: There is no significant relationship between suicide counseling skill and counseling training.

H 6: There is no significant relationship between suicide counseling skill and suicide intervention training.

H 7: There is no significant relationship between suicide counseling skill and suicide intervention experience.

H 8: There is no significant relationship between suicide counseling skill and empathy.

H 9: There is no significant relationship between suicide counseling skill and cognitive development position.

H 10: There is no significant relationship between suicide counseling skill and personal suicide behaviors.

H 11: Gender, age, number of months in college, residence hall staff experience, personal suicide behaviors, counseling training, suicide intervention training, suicide intervention experience, empathy, and cognitive development do not significantly predict the suicide counseling ability of residence hall staff members.

**Population**

The target population for this study was the paraprofessional residence hall staff members at the University of Florida. Live-in, paraprofessional staff members at the University of Florida include resident assistants and graduate hall directors. Resident assistants are undergraduate students, while graduate hall directors may be graduate or undergraduate students in their fifth year of undergraduate studies.

**Sampling Procedures**

All 220 paraprofessional residence hall staff members at the University of Florida were invited to participate in the study during fall staff training. The study was conducted
prior to any counseling or suicide intervention training the staff members were scheduled
to receive. In groups of 40 to 60, the staff members were given instructions and asked to
read, sign, and return the consent form if they agreed to participate. Those who agreed
were given a packet containing the survey instruments and answer sheets. Participants
were given a $5.00 gift certificate to a local restaurant for their participation in the study.

**Instrumentation**

The instruments in this study include the Interpersonal Reactivity Index (Davis,
1980), the Learning Environment Preferences inventory (Moore, 1987), the Suicidal
Behaviors Questionnaire (Cole, 1988), the Suicide Intervention Response Inventory—II
(Neimeyer & Bonnelle, 1997), and a general questionnaire (Appendix A) assessing
demographic information and training experience. Only the Learning Environment
Preferences instrument is copyrighted.

**Interpersonal Reactivity Index**

The Interpersonal Reactivity Index (IRI; Davis, 1980) is a 28-item,
multidimensional measure of empathy. The IRI “takes as its starting point the notion that
empathy consists of a set of separate but related constructs, and seeks to provide
measures of dispositional tendencies in several areas” (Davis, 1996, p. 55). The IRI
consists of four seven-item subscales and yields four separate subscale scores. Only
scores from two subscales, Perspective Taking and Empathic Concern, will be used in
this study. The two scores will be added together to achieve one score that takes into
consideration both cognitive and affective dimensions of empathy.

Davis developed the IRI in 1980 as a way to operationalize empathy as a
multidimensional construct. The IRI was developed from an initial bank of 50 items.
Davis used a sample of 251 college students who responded to the Likert scale items on a
scale from zero (does not describe me well) to four (describes me very well). Factor analysis resulted in four major factors: two affective components of empathy—Empathic Concern (EC) and Personal Distress (PD)—and two cognitive components of empathy—Perspective Taking (PT) and Fantasy (FS).

The Perspective Taking and Empathic Concern scales are the ones most often used in research (Atkins & Steitz, 2005). The Perspective Taking scale measures the tendency of one to adopt the viewpoint of another in everyday life situations. (“I sometimes try to understand my friends better by imagining how things look from their perspective.”) This involves a cognitive shift from a self-oriented reaction to distress to a more other-oriented reaction to distress. The Perspective Taking scale seems to be the only existing adult measure that assesses social role-taking (Davis, 1996). The Empathic Concern scale measures the tendency of one to react to distress in others with sympathy and compassion. (“I often have tender, concerned feelings for people less fortunate than me.”). This scale taps affective outcomes, whereas the Perspective Taking scale taps cognitive process (Davis, 1996).

The Personal Distress scale also measures affective outcome. With this scale, it is not known whether the response is reactive or parallel. The scale measures one’s personal distress when faced with the distress of another. (“Being in an intense emotional situation scares me.”) This suggests that an individual might have difficulty separating from the reaction of the target and could have symptoms of anxiety and discomfort regardless of the feelings of the target. The Fantasy scale deals with a subject’s ability to relate to fantasy characters in books and movies. (“When I am reading an interesting story or novel, I imagine how I would feel if the events were happening to me.”) This scale was meant to measure role-taking like the Perspective Taking scale; however, since it deals
strictly with imaginary characters, its place in the current model is less clear (Davis, 1996).

Davis (1983) showed convergent and discriminant validity of the IRI by showing the predicted relationship to other psychological constructs using the Texas Social Behavior Inventory (Helmreich, Stapp & Ervin, 1974 as cited in Atkins & Steitz, 2005). Perspective Taking was significantly related to self-esteem and other-oriented sensitivity, and Empathic Concern was significantly related to emotional reactivity and awareness of and concern for feelings of others. Personal Distress was significantly related to fearfulness, self-oriented sensitivity, emotional vulnerability, and social dysfunction and inversely related to self-esteem. Lastly, the Fantasy scale showed a significant relationship to emotional reactivity and other-oriented tendencies, but the relationships were weaker than with the other measures.

Davis (1980) reported standardized Alpha coefficients for each dimension as

- Perspective Taking: males .71, females .62
- Empathic Concern: males .72, females .70
- Personal Distress: males .77, females .75
- Fantasy: males .78, females .79

The 2-month test-retest reliabilities were

- Perspective Taking: males .61, females .62
- Empathic Concern: males .72, females .70
- Personal Distress: males .68, females .76
- Fantasy: males .78, females .79

The Interpersonal Reactivity Index is appropriate for this study for several reasons. First, it is a measure of empathy that takes into account both cognitive and affective components as well as both process and outcome. Second, the IRI has been used effectively with college students. Moreover, one study (Hatcher et al., 1994) supports a developmental sequence in the components of empathy and suggests that Perspective
Taking and Empathic Concern develop in the college years with appropriate training. Third, the IRI has maintained its factor structure over time and still appears to be psychometrically sound (Atkins & Steitz, 2005). Fourth, the IRI is a short, easy to complete instrument that complements the lengthier and more complex instruments used in this study. Finally, only the Perspective Taking and Empathic Concern Scales are used in this study. Together, these two scales provide a score indicative of level of empathy that takes into account both the cognitive and affective components of the construct. The Fantasy and Personal Distress Scales, although useful for other purposes, are not necessary for the current study. Therefore, the sum of the scores on the Perspective Taking scale and the Empathic Concern scale are used to operationalize empathy.

**Learning Environment Preferences**

The Learning Environment Preferences (LEP; Moore, 1987) is a self-administered instrument that measures cognitive development according to the Perry scheme. The LEP was designed to be used with college students, and it deals exclusively with the intellectual portion of the Perry scheme, only measuring through position five. The transition to position five is significant because it reflects the shift to relativistic thinking.

The LEP consists of 65 items spread across five content domains. The five domains are (a) view of knowledge/learning, (b) role of the instructor, role of the student/peers, (c) classroom atmosphere/activities, and (d) role of evaluation/grading. “These domains focus on student preferences for specific aspects of the classroom learning environment shown to be associated with increasing complexity on the Perry scheme of intellectual development” (Moore, 1990, p. 5).
Each of the five sections (domains) of the LEP consists of a sentence stem and thirteen responses.

Example: My ideal learning environment would . . .

(1) Emphasize basic facts and definitions.

To complete the LEP, respondents are asked to rate each of the thirteen items in each section on a 4-point Likert type scale as to its importance to them in an ideal learning environment. At the end of each section, the respondents are asked to choose their top three items (preferences) from that section in rank order.

The LEP is scored by the Center for Intellectual Development. Since the style and format of the LEP are patterned after the Defining Issues Test (DIT; Rest, 1979), the scoring procedures for the LEP are also based on, and adapted from, research from the DIT.

The scoring of the LEP yields two types of scores. The first score is the R index, which indicates the percentage of position five or relativistic thinking. The second score is the Cognitive Complexity Index (CCI), which is calculated by using all of the position preference percentages to produce a single score. These scores range from 200 (a stable position two) to a 500 (a stable position five).

The reliability of the LEP was tested using a test-retest method as well as Cronbach’s coefficient alpha as a measure of internal consistency. In a 1-week test-retest reliability study, the CCI showed a test-retest correlation of .89 (Moore, 1990). A Cronbach’s coefficient alpha was computed for each individual domain as well as each position. The coefficient alphas were computed for each of the position item sets even though they are not scored as scales. This was done because each of the position item sets are keyed to the four Perry (1970) positions covered in the measure, and it is important
that they have adequate internal consistency (Moore, 1990). The alpha-reliability coefficients are all in the .80s except for position three, which was .72 (Moore, 1989).

Determining the validity of a developmental measurement is complicated. According to Moore (1990),

The psychometric validity of a developmental measurement instrument represents the extent to which the measure seems to be actually assessing a phenomenon that is consistent with developmental tenets in general as well as the characteristics of the particular construct in question. (p. 10)

Moore examined the validity of the LEP in three ways: criterion group differences, concurrent validity, and construct validity.

To examine criterion group differences, a gender-balanced subgroup was selected randomly from the total sample collected. The mean CCI scores for this sample (N = 470) showed a steady increase from freshmen to seniors although the sophomore and junior means showed little variance. The analysis of variance, as expected with a developmental measure, showed a significant difference across class levels on the CCI, but no significant difference by gender (Moore, 1990).

To determine concurrent validity, Moore (1990) examined intercorrelations of Measure of Intellectual Development (MID; Knefelkamp, 1974 and Widick, 1975 as cited in Moore) scores, grade point average and CCI. The correlation of MID and CCI scores was .36 (N = 215) and the correlation of CCI and GPA was .18 (N = 215). Moore reports, however, that it is not uncommon for correlations between developmental measures or between developmental measures and outside factors such as GPA to be in this range.

To determine construct validity, Moore (1990) computed two factor analyses. He was exploring two questions:

- To what extent does the LEP measure underlying constructs which correspond to Perry positions two through five?
• To what extent does the LEP measure some phenomenon that shows a hierarchical progression?

In the first factor analysis, four factors were extracted. After examining the items associated with each factor, it seemed that two factors were clearly defined with factor two reflecting position two and factor four reflecting position three. The other two factors seemed to represent two combinations of positions four and five.

A second factor analysis, a principal components factor analysis, was performed using four variables, the average-item scores for positions two through five. Using the metric unfolding model (Coombs & Kao, 1960 and Davison, 1977 as cited in Moore, 1990), if this factor analysis is based on data reflecting a developmental hierarchy, it should show two main outcomes. First, it should produce a simplex structure in the correlation matrix where, as one moves from the unity elements on the diagonal, the correlations should decrease. Second, there should be two factors with specific loadings. On one, only the middle positions should have significant loadings; and on the other, the four positions should show sequenced, increasing loadings from position two through five. The factor loadings seemed to partially support the metric unfolding model hypotheses. The first factor reflects the expected sequence with loadings ranging from -0.02 for position two to 0.95 for position five. Also, the other factor shows two strong loadings and two negligible loadings, although the pattern differs from the prediction. Lastly, with the exception of a position three and five correlation, the simplex matrix structure was found (Moore, 1989).

The LEP is an appropriate measure of cognitive development for this study. It is an objective, paper and pencil instrument that is easy to use and cost effective. Other measures such as the Measure of Intellectual Development (Knefelkamp, 1974 and
Widick, 1975 as cited in Moore, 1990) and the Measure of Epistemological Reflection (Baxter Magolda & Porterfield, 1985) require trained raters for scoring. Training raters is time consuming and costly and includes the challenge of achieving sufficient inter-rater reliability. The LEP is also more theoretically grounded in Perry’s scheme than other objective instruments such as the Scale of Intellectual Development (Erwin, 1983) and the Parker Cognitive Developmental Inventory (Parker, 1985). Designed for use with a college population, the LEP is sufficiently reliable and valid for research purposes.

The Suicidal Behaviors Questionnaire

The Suicidal Behaviors Questionnaire (SBQ; Cole, 1988) was originally (Linehan, 1981) a seven-page questionnaire designed for use as a structured interview. This instrument had the advantage of asking about past, present, and future suicidal behavior as well as suicide ideas, plans, and attempts. It covered behaviors and thoughts.

Using factor analysis, Cole (1988) was able to shorten the SBQ to only four questions. The answers to these four questions can be summed to produce a total score ranging from 0 to 16. In reliability and validity studies (Cotton, Peters, & Range, 1995) of the abbreviated version, the mean score for a clinical sample was 6.47, and the mean score for a nonclinical sample was 1.94. These scores were consistent with the mean scores reported by Linehan (1981).

In reliability and validity studies (Cotton et al., 1995), this form of the SBQ (Cole, 1988) had good internal consistency \((r = .75\) for clinical sample; \(r = .80\) for nonclinical sample) and test-retest reliability \((r = .95\) over a 2-week period). The construct validity was acceptable. The SBQ is significantly correlated with the Scale for Suicide Ideation \((r = .69, p<.001;\) Beck, Kovacs, & Weissman, 1979) and the Reasons for Living Inventory \((r = -.34, p<.01;\) Linehan, Goodstein, Nielsen, & Chiles, 1983).
The shortened version of the SBQ has several advantages and some disadvantages (Cotton et al., 1995). Some of the disadvantages are that it shows some restricted range in nonclinical samples, it does not address current suicidality, and that it could easily be faked because the questions are so direct. This instrument is still recommended for use as a screening tool in research and in clinical settings because of its advantages. The instrument is widely used, is easy to administer and score, and is reliable and valid.

**Suicide Intervention Response Inventory-II**

The Suicide Intervention Response Inventory-II (SIRI-2; Neimeyer & Bonnelle, 1997) is a self-administered instrument that measures suicide counseling skills. Individuals are required to rate two separate caregiver responses to 24 client statements. Each caregiver response is rated on a 7-point Likert type scale from highly appropriate to highly inappropriate. Since two responses are rated for 24 client statements, the number of actual responses totals 48. The following is an example of a client statement and the two responses to be rated:

- Client: I really need help . . . It’s just . . . [voice breaks: silence]
  - Helper A: It must be hard for you to talk about what’s bothering you.
  - Helper B: Go on, I’m here to listen to you talk.

The SIRI—2 is the original Suicide Intervention Response Inventory (Neimeyer & MacInnes, 1981) with a revised scoring procedure and with one less question. Question #14 of the SIRI was found to be psychometrically ambiguous, and therefore it is recommended that it be removed from scoring procedures for the SIRI-2. The SIRI was developed originally to fulfill a need to assess suicide counseling ability. Measures existed to measure counseling ability, but none specifically addressed the issue of suicide intervention. The two skills, although highly related, require distinct competencies (Neimeyer & Pfeiffer, 1994a).
The content of the SIRI was developed to tap common challenges in suicide intervention scenarios such as the need to

- Confront covert communications of suicidal intent.
- Join with, rather than respond defensively to, the angry client.
- Pinpoint specific crisis-precipitating events in a vague litany of complaints.
- Help the silent but desperate client to open up.
- Facilitate expression of painful feelings.
- Respond with acceptance to a client’s sense of stigmatization.
- Elicit a “no harm” contract.
- Direct the client to minimize risk of immediate self-injury by distancing him/herself from a lethal weapon.
- Explore potential sources of support. (Neimeyer & Pfeiffer, 1994b, p. 144)

The SIRI-2 was developed to remedy two limitations of the SIRI. The SIRI demonstrated a potential ceiling effect which limited its use among more highly trained samples. This ceiling effect also interfered with the sensitivity the instrument needed to evaluate training effects of more advanced workshops. The second problem with the SIRI is that it lacked a clear factor structure. Its original factor structure (Neimeyer & Hartley, 1986) was unable to be replicated (Cotton & Range, 1992).

These problems with the SIRI were eliminated by changing the scoring method. The SIRI consisted of 25 client statements each followed by two helper responses. Participants were instructed to choose the better of the two responses. The SIRI-2 retained the same items, minus item #14, and simply changed the instructions and scoring. Participants were instructed to rate each helper response on a 7-point Likert type scale from highly appropriate to highly inappropriate. A panel of national experts was used to determine a mean response for each item that would be used as a criterion by which to score individual responses (Neimeyer & Bonnelle, 1997; Neimeyer & Pfeiffer, 1994a).
The construct validity of the SIRI-2 was determined by using a known groups comparison and by demonstrating a training effect. In the known groups comparison, there was a significant difference $F(1, 60) = 18.92, p < .001$ between the scores of master’s level counselors ($M = 47.84; SD = 12.96$) and beginning psychology students ($M = 70.36; SD = 25.76$). The training effect was detected by using the SIRI-2 as a pretest and posttest to a suicide intervention training workshop. The scores did improve significantly with the training in suicide intervention (pretraining $M = 54.66; SD = 17.86$; posttraining $M = 41.02; SD = 9.95$), $F (1,31) = 30.65, p<.001$.

The SIRI-2 shows good internal consistency with coefficient alphas of .90 at pretesting and .93 at posttesting. The test-retest reliability for the instrument results in a coefficient $r = .92, p < .001$, showing a high correlation between two administrations during a 2-week period (Neimeyer & Bonnelle, 1997).

The SIRI-2 is appropriate for the current study for several reasons. First, it is a reliable and valid self-administered instrument that measures suicide counseling skill. Suicide counseling skill, measured another way such as by rating role plays, has serious drawbacks such as time, a necessarily limited sample size, and difficulties with standardization. Second, the SIRI-2 is commonly used in research studies as a measure of suicide counseling skill, which provides a base for comparison and an easy transition into the ongoing empirical conversation involving suicide counseling skill and its competencies and predictors. Lastly, the SIRI-2 demonstrates improved psychometric properties over the SIRI and allows for increased variance in scores. The criterion-based scores for the SIRI-2 will be utilized in the present study to operationalize the construct of suicide counseling skill.
Self-Report Questionnaire

A self-report questionnaire was designed to request information about demographic variables (gender, age, number of months in college, and number of months as a residence hall staff member) and information on training and experience in the areas of counseling and suicide intervention. In addition to demographic questions, staff members were asked three multiple-choice questions (one each) regarding their estimated number of hours of counseling training, their estimated number of hours of suicide intervention training, and their estimated number of intervention contacts with suicidal individuals.

These seven questions, since not a part of a researched instrument, were pilot tested among subjects selected according to the same eligibility criteria as those in the main study. Minor modifications to the content or format of the questions were made as a result of the feedback from respondents. Content validity of the additional questions was established through a review of current literature and a review by experts in the field.

Research Procedures

At the designated meeting time, groups of participants were given two copies of the informed consent letter. Each person who agreed to participate turned in one signed copy of the letter to the researcher and was instructed to keep the other for personal records. In exchange for a signed letter, each participant received a numbered envelope containing the instruments and answer sheets. The participants were instructed to sit quietly when finished. The researcher collected the completed packets in the original envelopes provided, and each participant was given a $5.00 gift certificate to a local restaurant. The informed consent documents were kept in a locked file drawer and destroyed at the completion of the project.
Data Analysis

There were a total of 11 variables in this study. The independent variables were empathy, cognitive development, personal suicide behavior, counseling training, suicide intervention training, suicide intervention experience, gender, age, number of months in college, and number of months as a residence hall staff member. The dependent variable was suicide counseling ability.

The data were initially tabulated and summarized using standard summary statistics. Then, bivariate statistical analyses were performed for continuous variables using Pearson Product Moment correlations. The primary analysis tool used to address research questions was multiple regression. For the fourth research question a backward elimination regression model was used to identify statistically significant predictors. The alpha level was $p = .05$ for statistical analyses.

Summary

This chapter included a presentation of the research design and delineation of variables. The hypotheses were identified and the population of interest and sampling techniques were described. Lastly, the instruments used in the study were reviewed, and the methods of data collection and analyses were presented.
CHAPTER 4
RESULTS

The purpose of this study was to expand the search for factors that relate to the ability of paraprofessionals to make effective verbal responses to someone who is considering suicide. This survey research was designed to examine how the suicide counseling skill of paraprofessional residence hall staff was related to demographic variables, internal variables, external variables, and a combination of demographic, internal, and external variables. This chapter reviews the data collection procedures and analyses and presents the demographic information and results of analyses.

Data Collection and Demographics

The sample was drawn from the paraprofessional residence hall staff, resident assistants, and graduate hall directors at the University of Florida. The staff members were recruited during fall training events with staff members given training time to complete the instruments. The researcher attended events, prior to any counseling or suicide intervention training, and asked for volunteers to participate in the study. Those who chose to participate were given time immediately to complete the survey that took approximately 40 minutes to complete. Informed consent documents were distributed and collected, and the participants were given survey packets and pencils in exchange. They were given instructions to sit quietly when finished so as not to disturb the other participants. The researcher collected completed packets in the original envelopes, and in
exchange for their participation, students were given a gift certificate for ice cream. No one declined participation in the study.

The Suicide Intervention Response Inventory-II (SIRI-2), the Interpersonal Reactivity Index (IRI), the Suicidal Behaviors Questionnaire (SBQ), and the demographic questionnaire were scored and recorded by the researcher and a paid assistant. The assistant was trained by the researcher, and the work of both the researcher and assistant was spot checked. Also, each item score for the SIRI-2 was entered into a spreadsheet to allow for a visual check to help ensure the accuracy of scoring and recording. The Learning Environment Preferences instrument was sent to the Center for the Study of Intellectual Development for scoring at a cost of $1.00 per instrument. All scores were matched using a numbering system.

A total of 212 staff members participated in the study. Table 4-1 displays the demographics. Over half (59.0%) of the participants were women. Ages ranged between 18 and 33 years, with a mean of 20.42 years, and a standard deviation of 1.92 years. Most of the participants (86.3%) were resident assistants (RAs), and 13.7% were graduate hall directors (GHDs), who serve in a supervisory role for the RAs. Table 4-2 shows the remainder of the descriptive statistics for selected variables. Although also demographic in nature for the purposes of this study, the number of months as a staff member and number of months of enrollment are reported here. The mean number of months as a staff member was 8.61 months with a standard deviation of 10.30 months, and the mean number of months of enrollment was 24.85 months with a standard deviation of 14.36 months.
Table 4-1. Demographics of sample (N = 212)

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>87</td>
<td>41.0</td>
</tr>
<tr>
<td>Female</td>
<td>125</td>
<td>59.0</td>
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</table>

<table>
<thead>
<tr>
<th>Age a</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18 years</td>
<td>11</td>
<td>5.2</td>
</tr>
<tr>
<td>19 years</td>
<td>63</td>
<td>29.7</td>
</tr>
<tr>
<td>20 years</td>
<td>59</td>
<td>27.8</td>
</tr>
<tr>
<td>21 years</td>
<td>44</td>
<td>20.8</td>
</tr>
<tr>
<td>22–33 years</td>
<td>35</td>
<td>16.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role in Housing</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident assistant</td>
<td>183</td>
<td>86.3</td>
</tr>
<tr>
<td>Hall director</td>
<td>29</td>
<td>13.7</td>
</tr>
</tbody>
</table>

Table 4-2. Descriptive statistics for selected variables (N = 212)

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide Counseling Skill (SIRI-2)</td>
<td>77.24</td>
<td>22.79</td>
<td>30.44</td>
<td>145.44</td>
</tr>
<tr>
<td>IRI Empathic Concern (EC)</td>
<td>21.36</td>
<td>3.79</td>
<td>4.00</td>
<td>28.00</td>
</tr>
<tr>
<td>IRI Perspective Taking (PT)</td>
<td>19.39</td>
<td>4.62</td>
<td>3.00</td>
<td>28.00</td>
</tr>
<tr>
<td>IRI (EM = EC + PT) Level of Empathy</td>
<td>40.76</td>
<td>6.97</td>
<td>7.00</td>
<td>54.00</td>
</tr>
<tr>
<td>Personal Suicide Behaviors</td>
<td>1.75</td>
<td>2.13</td>
<td>0.00</td>
<td>11.00</td>
</tr>
<tr>
<td>LEP Cognitive Complexity Index</td>
<td>342.53</td>
<td>48.83</td>
<td>213.00</td>
<td>433.00</td>
</tr>
<tr>
<td>LEP Percentage of Dualism</td>
<td>22.17</td>
<td>19.31</td>
<td>0.00</td>
<td>90.00</td>
</tr>
<tr>
<td>Counseling training (hours)</td>
<td>20.33</td>
<td>36.97</td>
<td>0.00</td>
<td>370.00</td>
</tr>
<tr>
<td>Suicide intervention Training (hours)</td>
<td>3.59</td>
<td>6.64</td>
<td>0.00</td>
<td>75.00</td>
</tr>
<tr>
<td>Suicide interventions</td>
<td>1.58</td>
<td>3.61</td>
<td>0.00</td>
<td>40.00</td>
</tr>
<tr>
<td>Months of enrollment</td>
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<td>14.36</td>
<td>8.00</td>
<td>96.00</td>
</tr>
<tr>
<td>Months as staff member</td>
<td>8.61</td>
<td>10.30</td>
<td>0.00</td>
<td>48.00</td>
</tr>
<tr>
<td>Age</td>
<td>20.42</td>
<td>1.92</td>
<td>18.00</td>
<td>33.00</td>
</tr>
</tbody>
</table>

Data Analyses and Results

The data for this study were initially tabulated and summarized using standard summary statistics. Then, bivariate statistical analyses were performed using Pearson Product Moment correlations. The primary analysis tool used to address research questions was multiple regression. For the fourth research question, a backward elimination regression model was also used to identify statistically significant predictors. The alpha level was p = .05 for statistical analyses. Missing data were sporadic, with
none of the 12 cases containing missing data missing more than two independent
variables and with no cases missing the dependent variable. Therefore, to avoid losing
valuable information, means and modes were used as substitutions. Mean scores were
used to replace missing continuous variables, and modal scores were used to replace
missing dichotomous variables.

Hypothesis 1

H 1: There is no significant relationship between suicide counseling skill and gender.

Hypothesis 1 examined the relationship between suicide counseling skill and
gender. Table 4-3 displays the Pearson product-moment correlations between the SIRI
score and the gender of the respondent. A lower SIRI-2 score reflected better suicide
counseling skill. Women had significantly better SIRI-2 scores ($r = -.28$); therefore, the
null hypothesis was rejected.

Table 4-3. Correlations of selected variables with SIRI-2 score (N = 212)

<table>
<thead>
<tr>
<th>Variable</th>
<th>SIRI-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender a</td>
<td>-.28****</td>
</tr>
<tr>
<td>Age</td>
<td>-.27****</td>
</tr>
<tr>
<td>Months of enrollment</td>
<td>-.29****</td>
</tr>
<tr>
<td>Months as staff member</td>
<td>-.26****</td>
</tr>
<tr>
<td>Counseling training</td>
<td>-.01</td>
</tr>
<tr>
<td>Suicide training</td>
<td>-.21***</td>
</tr>
<tr>
<td>Suicide intervention</td>
<td>-.07</td>
</tr>
<tr>
<td>IRI (EM) level of empathy</td>
<td>-.04</td>
</tr>
<tr>
<td>LEP (CCI) cognitive development</td>
<td>-.10</td>
</tr>
<tr>
<td>LEP (percentage dualism)</td>
<td>.11</td>
</tr>
<tr>
<td>Personal suicidal behaviors</td>
<td>-.05</td>
</tr>
<tr>
<td>Role in housing a</td>
<td>-.27****</td>
</tr>
</tbody>
</table>

* $p = .05$. ** $p = .01$. *** $p = .005$. **** $p = .001$.

Note. Lower score on SIRI-2 reflects more suicide counseling skill.

a Gender: 1 = Male  2 = Female

Role: 1 = Resident assistant  2 = Hall director
Hypothesis 2

H 2: There is no significant relationship between suicide counseling skill and age.

Hypothesis 2 examined the relationship between suicide counseling skill and age. Older participants had significantly better SIRI-2 scores ($r = -.26$); therefore, the null hypothesis was rejected.

Hypothesis 3

H 3: There is no significant relationship between suicide counseling skill and number of months in college.

Hypothesis 3 examined the relationship between suicide counseling skill and the number of months in college. Students who had been in college longer had significantly better SIRI-2 scores ($r = -.29$); therefore, the null hypothesis was rejected.

Hypothesis 4

H 4: There is no significant relationship between suicide counseling skill and number of months as a residence hall staff member.

Hypothesis 4 stated there would not be a relationship between suicide counseling skill and the number of months as a residence hall staff member. There was a significant correlation ($r = -.26$); therefore, the null hypothesis was rejected.

Hypothesis 5

H 5: There is no significant relationship between suicide counseling skill and counseling training.

Hypothesis 5 examined the relationship between the suicide counseling skill and counseling training. No significant relationship was found ($r = -.01$). The null hypothesis was accepted.

Hypothesis 6

H 6: There is no significant relationship between suicide counseling skill and suicide intervention training.
Hypothesis 6 examined the relationship between suicide counseling skill and suicide intervention training. Those respondents who had more suicide intervention training had significantly better SIRI-2 scores ($r = -.21$); therefore, the null hypothesis was rejected. Because one participant reported 75 hours of suicide intervention training, which was an anomaly in the data, that specific case was eliminated and the correlation rerun. The relationship between SIRI-2 scores and suicide intervention training was still significant ($r = -.18$).

**Hypothesis 7**

**H 7:** There is no significant relationship between suicide counseling skill and suicide intervention experience.

Hypothesis 7 examined the relationship between suicide counseling skill and suicide intervention experience; no significant relationship was found ($r = -.07$). The null hypothesis was accepted.

**Hypothesis 8**

**H 8:** There is no significant relationship between suicide counseling skill and empathy.

Hypothesis 8 examined the relationship between suicide counseling skill and empathy; no significant relationship was found ($r = -.04$). The null hypothesis was accepted.

**Hypothesis 9**

**H 9:** There is no significant relationship between suicide counseling skill and level of cognitive development.

Hypothesis 9 examined the relationship between suicide counseling skill and cognitive development. Suicide counseling skill was not significantly related to either the Cognitive Complexity Index ($r = -.10$) or the percentage of dualism ($r = .11$). The null hypothesis was accepted.
**Hypothesis 10**

H 10: There is no significant relationship between suicide counseling skill and personal suicide behaviors.

Hypothesis 10 examined the relationship between suicide counseling skill and personal suicide behaviors. No significant relationship was found between the two variables ($r = -.05$). The null hypothesis was accepted.

**Correlations**

Tables 4-4, 4-5, and 4-6 present the correlations of all variables. All correlations involving suicide counseling ability (SIRI-2) are addressed above as they were included in the hypotheses. However, some correlations of the independent variables were significant. Significant positive correlations were found between level of empathy and gender ($r = .17$, $p<.05$) and level of empathy and role in housing ($r = .15$, $p<.05$). Level of cognitive development using the Cognitive Complexity Index (CCI) was positively correlated with level of empathy ($r = .27$, $p<.01$) and role in housing ($r = .20$, $p<.01$). The number of hours of suicide intervention training was significantly correlated with months of enrollment ($r = .33$, $p<.01$), months as a staff member ($r = .25$, $p<.01$), age ($r = .24$, $p<.01$), number of suicide interventions ($r = .59$, $p<.01$), and number of hours of counseling training ($r = .44$, $p<.01$). The number of suicide interventions was significantly correlated with personal suicide behaviors ($r = .15$, $p<.05$). Months of enrollment were significantly correlated with number of hours of suicide intervention training ($r = .33$, $p<.01$), number of months as a staff member ($r = .68$, $p<.01$), age ($r = .76$, $p<.01$), and role in housing ($r = .65$, $p<.01$). Months as a staff member was correlated with age ($r = .52$, $p<.01$), number of hours of suicide training ($r = .25$, $p<.01$), and role in housing ($r = .59$, $p<.01$). Lastly, age was correlated with role in housing ($r = .73$, $p<.01$).
There were also some negative correlations. Cognitive development, as measured
by the percentage of dualism score (a high percentage of dualism score suggests a lower
level of cognitive development), was negatively correlated with the number of suicide
interventions ($r = -0.14$, $p < 0.05$), the level of cognitive complexity ($r = -0.91$, $p < 0.01$), role in
housing ($r = -0.20$, $p < 0.01$), and empathy ($r = -0.30$, $p < 0.01$).

Table 4-4. Correlations regarding internal variables (N = 212)

<table>
<thead>
<tr>
<th></th>
<th>SIRI-2</th>
<th>IRI EM</th>
<th>Suicide Behaviors</th>
<th>LEP CCI</th>
<th>LEP % Dualism</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIRI-2</td>
<td>--</td>
<td>-0.041</td>
<td>-0.054</td>
<td>-0.100</td>
<td>0.109</td>
</tr>
<tr>
<td>IRI EM</td>
<td></td>
<td>--</td>
<td>-0.008</td>
<td>0.272**</td>
<td>-0.300**</td>
</tr>
<tr>
<td>Suicide behaviors</td>
<td></td>
<td></td>
<td>--</td>
<td>0.081</td>
<td>-0.048</td>
</tr>
<tr>
<td>LEP (CCI)</td>
<td></td>
<td></td>
<td></td>
<td>--</td>
<td>-0.913**</td>
</tr>
<tr>
<td>LEP (% Dualism)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counseling training</td>
<td>-0.011</td>
<td>-0.004</td>
<td>0.056</td>
<td>-0.066</td>
<td>0.120</td>
</tr>
<tr>
<td>Suicide training</td>
<td>-0.205**</td>
<td>-0.038</td>
<td>0.083</td>
<td>0.005</td>
<td>-0.004</td>
</tr>
<tr>
<td>Suicide interventions</td>
<td>-0.065</td>
<td>0.081</td>
<td>0.152*</td>
<td>0.117</td>
<td>-0.144*</td>
</tr>
<tr>
<td>Months of enrollment</td>
<td>-0.294**</td>
<td>0.034</td>
<td>0.065</td>
<td>0.115</td>
<td>-0.108</td>
</tr>
<tr>
<td>Months as staff</td>
<td>0.255**</td>
<td>-0.008</td>
<td>-0.037</td>
<td>0.049</td>
<td>-0.027</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.277</td>
<td>0.174*</td>
<td>-0.094</td>
<td>0.094</td>
<td>-0.091</td>
</tr>
<tr>
<td>Age</td>
<td>-0.265**</td>
<td>0.070</td>
<td>0.070</td>
<td>0.073</td>
<td>-0.089</td>
</tr>
<tr>
<td>Role in Housing</td>
<td>-0.266**</td>
<td>0.146*</td>
<td>-0.006</td>
<td>0.199**</td>
<td>-0.202**</td>
</tr>
</tbody>
</table>

* $p < 0.05$    **$p < 0.01$

Table 4-5. Correlations regarding external variables (N = 212)

<table>
<thead>
<tr>
<th></th>
<th>Counseling training</th>
<th>Suicide training</th>
<th>Suicide interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIRI-2</td>
<td>-0.011</td>
<td>-0.205**</td>
<td>-0.065</td>
</tr>
<tr>
<td>IRI EM</td>
<td>-0.004</td>
<td>-0.038</td>
<td>-0.081</td>
</tr>
<tr>
<td>Suicide behaviors</td>
<td>0.056</td>
<td>0.083</td>
<td>0.152*</td>
</tr>
<tr>
<td>LEP (CCI)</td>
<td>-0.006</td>
<td>0.005</td>
<td>0.117</td>
</tr>
<tr>
<td>LEP (% dualism)</td>
<td>0.120</td>
<td>-0.004</td>
<td>-0.144*</td>
</tr>
<tr>
<td>Counseling training</td>
<td>--</td>
<td>0.444**</td>
<td>0.114</td>
</tr>
<tr>
<td>Suicide training</td>
<td>--</td>
<td>--</td>
<td>0.591**</td>
</tr>
<tr>
<td>Suicide interventions</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Months of enrollment</td>
<td>0.101</td>
<td>0.331**</td>
<td>0.123</td>
</tr>
<tr>
<td>Months as staff</td>
<td>0.117</td>
<td>0.250**</td>
<td>0.010</td>
</tr>
<tr>
<td>Gender</td>
<td>0.052</td>
<td>0.015</td>
<td>0.013</td>
</tr>
<tr>
<td>Age</td>
<td>0.089</td>
<td>0.235**</td>
<td>-0.014</td>
</tr>
<tr>
<td>Role in housing</td>
<td>0.022</td>
<td>0.074</td>
<td>-0.004</td>
</tr>
</tbody>
</table>

* $p < 0.05$    **$p < 0.01$
Table 4-6. Correlations regarding demographic variables (N = 212)

<table>
<thead>
<tr>
<th></th>
<th>Months of enrollment</th>
<th>Months as staff member</th>
<th>Gender</th>
<th>Age</th>
<th>Role in housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIRI-2</td>
<td>-.294**</td>
<td>-.255**</td>
<td>-.277**</td>
<td>-.265**</td>
<td>-.266**</td>
</tr>
<tr>
<td>IRI EM</td>
<td>.034</td>
<td>-.008</td>
<td>.174*</td>
<td>.070</td>
<td>.146*</td>
</tr>
<tr>
<td>Suicide behaviors</td>
<td>.065</td>
<td>-.037</td>
<td>-.094</td>
<td>.070</td>
<td>-.006</td>
</tr>
<tr>
<td>LEP (CCI)</td>
<td>.115</td>
<td>.049</td>
<td>.094</td>
<td>.073</td>
<td>.199**</td>
</tr>
<tr>
<td>LEP (% dualism)</td>
<td>-.108</td>
<td>-.027</td>
<td>-.091</td>
<td>-.089</td>
<td>-.202**</td>
</tr>
<tr>
<td>Counseling training</td>
<td>.101</td>
<td>.117</td>
<td>.052</td>
<td>.089</td>
<td>.022</td>
</tr>
<tr>
<td>Suicide training</td>
<td>.331**</td>
<td>.250**</td>
<td>.015</td>
<td>.235**</td>
<td>.074</td>
</tr>
<tr>
<td>Suicide Intervention</td>
<td>.123</td>
<td>.010</td>
<td>.013</td>
<td>-.014</td>
<td>-.004</td>
</tr>
<tr>
<td>Months of Enrollment</td>
<td>--</td>
<td>.677**</td>
<td>.041</td>
<td>.763**</td>
<td>.649**</td>
</tr>
<tr>
<td>Months as staff</td>
<td>--</td>
<td>--</td>
<td>.014</td>
<td>.520**</td>
<td>.593**</td>
</tr>
<tr>
<td>Gender</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>-.009</td>
<td>.109</td>
</tr>
<tr>
<td>Age</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.732**</td>
</tr>
<tr>
<td>Role in Housing</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

* p<.05    **p<.01

**Research Question 1**

Research Question 1 asked, “To what extent is the suicide counseling skill of residence hall staff members related to demographic variables?” The demographic variables were gender, age, number of months in college, and number of months as a residence hall staff member. Given the significant relationship between the participant’s role in housing and SIRI-2 score ($r = -.27$, Table 4-6), the role in housing was also included in this model.

Table 4-7 displays the prediction of suicide counseling skill based on the demographic variables. The five independent variable model was statistically significant ($p = .001$), accounting for 17.0% of the variance in the respondent’s SIRI-2 score. Inspection of the beta weights found that only one of the variables (gender) was significant. Specifically, female respondents had more favorable SIRI-2 scores ($p = .001$).
Table 4-7. Prediction of suicide counseling skill based on demographic variables (N = 212)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>p</th>
<th>sr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender a</td>
<td>-12.46</td>
<td>3.00</td>
<td>-.27</td>
<td>.001</td>
<td>-.27</td>
</tr>
<tr>
<td>Age</td>
<td>-1.32</td>
<td>1.36</td>
<td>-.11</td>
<td>.332</td>
<td>-.06</td>
</tr>
<tr>
<td>Months of enrollment</td>
<td>-0.18</td>
<td>0.18</td>
<td>-.12</td>
<td>.307</td>
<td>-.07</td>
</tr>
<tr>
<td>Months as staff member</td>
<td>-0.23</td>
<td>0.20</td>
<td>-.11</td>
<td>.244</td>
<td>-.07</td>
</tr>
<tr>
<td>Role in housing b</td>
<td>-1.16</td>
<td>6.73</td>
<td>-.02</td>
<td>.863</td>
<td>-.01</td>
</tr>
</tbody>
</table>

Note. Lower score on SIRI-2 reflects more suicide counseling skill.
Full Model: $F(5, 206) = 8.42, p = .001, R^2 = .170.$

Research Question 2

Research Question 2 asked, “To what extent is the suicide counseling skill of residence hall staff members related to external variables?” The three external variables were counseling training, suicide intervention training, and suicide intervention experience. This three independent variable model was statistically significant ($p = .006$), accounting for 5.8% of the variance in SIRI-2 score (Table 4-8). Inspection of the beta weights found that students who had more suicide intervention training had significantly better SIRI-2 scores ($p = .001$).

Table 4-8. Prediction of suicide counseling skill based on external variables (N = 212)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>p</th>
<th>sr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling training (hours)</td>
<td>0.08</td>
<td>0.05</td>
<td>.12</td>
<td>.116</td>
<td>.11</td>
</tr>
<tr>
<td>Suicide intervention training (hours)</td>
<td>-1.12</td>
<td>0.32</td>
<td>-.33</td>
<td>.001</td>
<td>-.23</td>
</tr>
<tr>
<td>Suicide interventions</td>
<td>0.72</td>
<td>0.54</td>
<td>.12</td>
<td>.180</td>
<td>.09</td>
</tr>
</tbody>
</table>

Note. Lower score on SIRI-2 reflects more suicide counseling skill.
Full Model: $F(3, 208) = 4.30, p = .006, R^2 = .058.$

Research Question 3

Research Question 3 asked, “To what extent is the suicide counseling skill of residence hall staff members related to internal variables. The four internal variables for this model were level of empathy, cognitive development, percentage of dualism, and...
personal suicide behaviors. Inspection of Table 4-9 found that the four independent variable model was not statistically significant ($p = .56$), accounting for only 1.4% of the variance in SIRI-2 score.

Table 4-9. Prediction of suicide counseling skill, based on internal variables ($N = 212$)

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>$SE$</th>
<th>$\beta$</th>
<th>$p$</th>
<th>$sr$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of empathy</td>
<td>-0.03</td>
<td>0.24</td>
<td>-.01</td>
<td>.887</td>
<td>-.01</td>
</tr>
<tr>
<td>Cognitive complexity index</td>
<td>0.01</td>
<td>0.08</td>
<td>.01</td>
<td>.958</td>
<td>.01</td>
</tr>
<tr>
<td>Percentage of dualism</td>
<td>0.13</td>
<td>0.20</td>
<td>.11</td>
<td>.514</td>
<td>.05</td>
</tr>
<tr>
<td>Personal suicide behaviors</td>
<td>-0.53</td>
<td>0.74</td>
<td>-.05</td>
<td>.478</td>
<td>-.05</td>
</tr>
</tbody>
</table>

*Note.* Lower score on SIRI-2 reflects more suicide counseling skill.

Full Model: $F(4, 207) = 0.75, p = .56$. $R^2 = .014$.

Research Question 4

Research Question 4 asked, “To what extent is the suicide counseling skill of residence hall staff members related to a combination of demographic, external, and internal variables?” This question was addressed using Hypothesis 11.

H 11: Gender, age, number of months in college, residence hall staff experience, personal suicide behaviors, counseling training, suicide intervention training, suicide intervention experience, empathy, and cognitive development do not significantly predict the suicide counseling ability of residence hall staff members.

Table 4-10 displays the 12-variable multiple regression model, predicting SIRI-2 score. The overall model was statistically significant ($p = .001$), accounting for 20.5% of the variance in the SIRI-2 score. Inspection of the beta weights found that better SIRI-2 scores were achieved by female participants ($p = .001$), and those with more suicide intervention training ($p = .018$).

Table 4-11 displays the prediction of suicide counseling skill, based on selected variables. This model used a backward elimination regression. Originally, the 12 candidate variables from Table 4-10 were used. The final model in Table 4-11 had four independent variables, which were statistically significant ($p = .001$). This model
accounted for 18.1% of the variance in SIRI-2 score. Inspection of the beta weights found that the SIRI-2 score was better for female respondents \((p = .001\)  ), older respondents \((p = .024\) ), those who had been residence hall staff members for a longer time \((p = .080\) ), and for participants who had more suicide intervention training \((p = .051\) ) (Table 4-11).

Table 4-10. Prediction of suicide counseling skill, based on a combination of variables (N = 212)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>p</th>
<th>sr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (^a)</td>
<td>-12.75</td>
<td>3.03</td>
<td>-.28</td>
<td>.001</td>
<td>-.27</td>
</tr>
<tr>
<td>Age</td>
<td>-0.80</td>
<td>1.42</td>
<td>-.07</td>
<td>.574</td>
<td>-.04</td>
</tr>
<tr>
<td>Months of enrollment</td>
<td>-0.09</td>
<td>0.19</td>
<td>-.06</td>
<td>.624</td>
<td>-.03</td>
</tr>
<tr>
<td>Months as staff member</td>
<td>-0.21</td>
<td>0.21</td>
<td>-.09</td>
<td>.320</td>
<td>-.06</td>
</tr>
<tr>
<td>Role in housing (^b)</td>
<td>-4.81</td>
<td>7.17</td>
<td>-.07</td>
<td>.503</td>
<td>-.04</td>
</tr>
<tr>
<td>Counseling training (hours)</td>
<td>0.07</td>
<td>0.05</td>
<td>.12</td>
<td>.113</td>
<td>.10</td>
</tr>
<tr>
<td>Suicide intervention training (hours)</td>
<td>-0.81</td>
<td>0.34</td>
<td>-.24</td>
<td>.018</td>
<td>-.15</td>
</tr>
<tr>
<td>Suicide interventions</td>
<td>0.56</td>
<td>0.55</td>
<td>.09</td>
<td>.303</td>
<td>.07</td>
</tr>
<tr>
<td>Level of empathy</td>
<td>0.08</td>
<td>0.22</td>
<td>.03</td>
<td>.713</td>
<td>.02</td>
</tr>
<tr>
<td>Cognitive complexity index</td>
<td>0.02</td>
<td>0.07</td>
<td>.04</td>
<td>.804</td>
<td>.02</td>
</tr>
<tr>
<td>Percentage of dualism</td>
<td>0.11</td>
<td>0.19</td>
<td>.09</td>
<td>.557</td>
<td>.04</td>
</tr>
<tr>
<td>Personal suicide behaviors</td>
<td>-0.79</td>
<td>0.70</td>
<td>-.07</td>
<td>.259</td>
<td>-.07</td>
</tr>
</tbody>
</table>

*Note.* Lower score on SIRI-2 reflects more suicide counseling skill.

Full Model: \(F (12, 199) = 4.27, p = .001\). \(R^2 = .205\).

\(^a\) Gender: 1 = Male  2 = Female  
\(^b\) Role: 1 = Resident advisor  2 = Hall director  
\(sr\) = Semipartial correlation

Table 4-11. Prediction of suicide counseling skill based on selected variables. Backward elimination regression model (N = 212)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>p</th>
<th>sr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (^a)</td>
<td>-12.67</td>
<td>2.91</td>
<td>-.27</td>
<td>.001</td>
<td>-.27</td>
</tr>
<tr>
<td>Age</td>
<td>-2.01</td>
<td>0.88</td>
<td>-.17</td>
<td>.024</td>
<td>-.14</td>
</tr>
<tr>
<td>Months as staff member</td>
<td>-0.29</td>
<td>0.17</td>
<td>-.13</td>
<td>.080</td>
<td>-.11</td>
</tr>
<tr>
<td>Suicide training (hours)</td>
<td>-0.44</td>
<td>0.23</td>
<td>-.13</td>
<td>.051</td>
<td>-.12</td>
</tr>
</tbody>
</table>

*Note.* Lower score on SIRI-2 reflects more suicide counseling skill.

Full Model: \(F (4, 207) = 11.40, p = .001\). \(R^2 = .181\).

\(^a\) Gender: 1 = Male  2 = Female  
\(sr\) = Semipartial correlation

This chapter reviewed the study design and data collection procedures. The results were presented in relation to each research question and hypothesis. Chapter 5
summarizes the study and present conclusions. Limitations of the current research are acknowledged, and implications of the findings are discussed. Recommendations for methodological enhancements, future research, and practice are offered.
CHAPTER 5
DISCUSSION

This chapter reviews the study and provides an in-depth discussion of the major findings and the implications of these findings. This discussion is followed by the acknowledgment of the limitations of the study and recommendations for future research and practice. Finally, the findings and implications are briefly summarized.

Overview of the Study

The purpose of this study was to expand the search for factors that relate to the ability of paraprofessionals to make effective verbal responses to someone who is considering suicide. The previous literature suggested that external variables such as training and experience were important factors in determining suicide counseling ability; however, some individuals seemed better able to benefit from these outside experiences because of some preexisting internal variables. This survey research was designed to examine how the suicide counseling skill of paraprofessional residence hall staff was related to demographic variables, internal variables, external variables and a combination of demographic, internal, and external variables.

The demographic variables in this study were gender, age, number of months of enrollment in college, and number of months as a residence hall staff member. After initial analysis showed a significant difference between the scores of resident assistants (RAs) and graduate hall directors (GHDs) on the Suicide Intervention Response Inventory-II (SIRI-2), role in housing was added as a demographic variable. Each
participant in the study was either a resident assistant or a graduate hall director. All of the demographic variables were self reported.

The internal variables explored in the study were level of empathy, cognitive development, and personal suicide behaviors. Empathy was measured using the Interpersonal Reactivity Index (IRI). The Perspective Taking scale and the Empathic Concern scale of the IRI were added to create a total score for empathy. Cognitive development was measured using the Learning Environment Preferences (LEP) instrument, or more specifically, the Cognitive Complexity Index (CCI) and the percentage of dualism score resulting from the LEP. The Cognitive Complexity Index was used as a general measure of cognitive complexity, while the percentage of dualism score indicated what percentage of the questions were answered in a dualistic manner. Using this additional scale provided one other way to examine the level of cognitive development. Instead of an overall score of complexity, this score focused on the lowest level of cognitive development. So, whereas a high CCI score suggested a higher level of cognitive development, a lower percentage of dualism score suggested a higher level of cognitive development. The level of personal suicide ideation and behaviors of each staff member was measured using the Suicidal Behaviors Questionnaire (SBQ). This measure produced scores ranging from 0 to 16 with 0 indicating no suicide ideation or behavior and 16 indicating severe suicide ideation and behaviors.

The external variables explored in this study were number of hours of counseling training, number of hours of suicide intervention training, and number of suicide interventions in which the staff member had participated. These were all numbers over a lifetime and were all self-reported.
All of the research questions were answered using multiple regression analysis, while individual hypotheses were examined using Pearson product-moment correlations. Hypothesis 11, the crux of the study, was explored using two regression models.

**Findings and Discussion**

The presentation of findings and the discussion are arranged according to the research questions presented in Chapter 1. The variables and related hypotheses included in each research question are discussed first, followed by a discussion of the research question as a whole.

**Gender**

The relationship of gender and suicide counseling skill has received little attention in the literature. A study of the suicide counseling skill in medical students found that women scored significantly higher (p<.0025) on the SIRI than did men (Neimeyer & Diamond, 1983). Although not investigating suicide counseling ability, one study also found that female high school teachers had significantly more knowledge about adolescent suicide than male teachers did (King et al., 1999a). However, a later study, using the SIRI-2 specifically, found that scores on this instrument were not related to gender (Neimeyer & Bonnelle, 1997). The authors acknowledged that females had obtained slightly higher scores than men on the SIRI in previous studies. Most recently, using a population of undergraduate students, Brown & Range (2005) did not find a significant difference in SIRI-2 scores according to gender. The question was addressed in this study with Hypothesis 1:

H 1: There is no significant relationship between suicide counseling skill and gender.

The present research found that female residence hall staff members had significantly better suicide counseling skills than male staff members. Previous research
regarding the relationship of gender to suicide counseling skill has produced mixed results; however, anytime a difference was found, it was in favor of women. The finding that gender is significantly related to suicide counseling skill is one of the most significant findings of the current study and will be addressed in more detail in other sections of this chapter.

Age

In past research, age has been included in demographic variables but has received limited attention. Research that has explored the role of age in relation to suicide counseling skill has also produced mixed results. Neimeyer and Bonnelle (1997) found age (M = 30) insignificant in relation to suicide counseling skill as measured by the SIRI and SIRI-2, Neimeyer et al. (2001) found that age (M = 32.5) was not significantly related to suicide counseling skill as measured by the SIRI, and Murphy (2004) found that age (M = 28.7) was not significantly related to suicide counseling skill as measured by the SIRI-2. However, Brown and Range (2005) found a significant relationship between age (M = 20.44) and suicide counseling skill as measured by the SIRI-2. The question of the relationship of age to suicide counseling skill was addressed in this study by Hypothesis 2:

H 2: There is no significant relationship between suicide counseling skill and age.

This study found a significant relationship between age and suicide counseling skill. One possible reason for this finding could be that the population of interest was college students, and the mean age of the sample was 20.42 years. The Brown and Range (2005) study, which also found a significant relationship between age and suicide counseling skill, had a similar mean age (M = 20.44). The present study and the Brown
and Range study differ from other research that has examined the role of age in suicide counseling ability by mean age of participants. The mean age of the participants in the other studies was higher by 8 to 10 years. Brown and Range (2005) suggested that the difference in suicide counseling skill according to age might be attributed to fact that older students have had more time to experience crises and their successful resolution.

Alternatively, this difference could be indicative of the fact that students of traditional college age experience rapid development. A difference of 2 years in age in this demographic represents a larger developmental difference than a difference of two years might in an older population.

**Number of Months of College Enrollment**

Based on previous research, it was hard to determine the impact that the number of months of college enrollment might have on the suicide counseling skill of residence hall staff members. It has been suggested that older college students tend to have higher levels of empathy (Mueller & Waas, 2002) and cognitive development (Kohlberg, 1984; Loevinger, 1976; Perry, 1970); therefore, since the present researcher was hypothesizing that higher levels of empathy and cognitive development might predict better skill in suicide intervention, it was expected that this study would find a relationship between months of college enrollment and suicide counseling ability. This question was addressed by Hypothesis 3:

H 3: There is no significant relationship between suicide counseling skill and number of months in college.

This study did find that there was a significant positive relationship between months of college enrollment and suicide counseling ability; however, this difference was not attributable to differences in level of empathy or cognitive development as was
thought. Similar to the relationship of age to suicide counseling ability, this variable may be suggestive of increased maturity.

**Number of Months as a Housing Staff Member**

It was also difficult to predict the impact of the number of months of employment on staff members’ suicide counseling ability. Previous studies examining the role of experience in suicide knowledge have found mixed results (Holmes & Howard, 1980; Holmes & Wurtz, 1981). In the present study, it was predicted that staff members with more experience might have better suicide counseling skills but that this would primarily be a function of increased hours of training and higher levels of cognitive development. The relationship of suicide counseling skill to residence hall staff experience was addressed by Hypothesis 4:

H 4: There is no significant relationship between suicide counseling skill and number of months as a residence hall staff member.

The current study found that there was a significant positive relationship between experience level and suicide counseling ability. Staff members with more experience had better suicide counseling skills. It is possible that only staff members who perform consistently well in all aspects of their position are retained in the system. It is also likely that longer term staff members have been exposed to more counseling training, suicide intervention training, and suicide intervention opportunities, all of which could positively impact their performance in this area. Finally, age could reflect maturity level. More mature staff members may be better able to be open to and to think critically about difficult issues such as suicide.

However, after reexamining the correlation table for the current study, it was discovered that experience as a staff member was only significantly correlated with
suicide intervention training. Experience as a staff member was not related to suicide intervention experience or counseling training. There was also no significant relationship between staff experience and cognitive development, but there was a significant positive relationship between staff experience and age, suggesting that some level of maturity is important, but that this maturity is not related to level of cognitive development.

**Research Question 1**

- To what extent is the suicide counseling skill of paraprofessional residence hall staff members related to demographic variables (gender, age, number of months of enrollment, number of months as a staff member)?

Research Question 1 examined the impact of demographic variables as a whole on the suicide counseling skills of residence hall staff members. This question was answered using a regression analysis. Given the significant relationship between the participant’s role in housing and SIRI-2 score, the role in housing was also included in this model. This five independent variable model was statistically significant, accounting for 17.0% of the variance in suicide counseling ability. Gender, however, made most of the positive difference in suicide counseling ability. It was the only statistically significant predictor in the model.

**Counseling Training**

The literature reviewed suggests that counseling skill is an important predictor of suicide counseling skill (Neimeyer & Diamond, 1983; Neimeyer & MacInnes, 1981; Richards & Range, 2001). Counseling skill has been measured by a paper and pencil instrument (Neimeyer & MacInnes, 1981) and inferred from the amount of counseling training (Neimeyer & Diamond, 1983). Both methods suggest that counseling skill is an important component of suicide counseling skill but that is not equal to suicide counseling skill. Hypothesis 5 addressed this question in the current study:
H 5: There is no significant relationship between suicide counseling skill and counseling training.

No significant relationship was found between suicide counseling skill and counseling training in this research. This result supports the idea that suicide counseling skill encompasses more than basic counseling skill. The results from this study must be interpreted carefully since actual counseling skill was not measured. A self-report estimate of the amount of counseling training was used.

**Suicide Intervention Training**

With one exception (Murphy, 2004), all of the studies reviewed support the importance of suicide intervention training as a predictor of suicide counseling ability (Neimeyer & Diamond, 1983; Neimeyer et al., 2001; Neimeyer & MacInnes, 1981; Maine et al., 2001; Stuart et al., 2003). Accordingly, it was expected that there would be a significant positive relationship between suicide intervention training and suicide counseling skill in the present study. Hypothesis 6 addressed this question:

H 6: There is no significant relationship between suicide counseling skill and suicide intervention training.

There was a significant positive relationship between the two variables. As expected, the current research supports the importance of suicide intervention training in relation to suicide counseling skill.

**Suicide Intervention Experience**

Experience intervening with suicidal persons seems to be a reliable predictor of suicide counseling ability (Brown & Range, 2005; Neimeyer & Diamond, 1983; Neimeyer et al., 2001; Neimeyer & MacInnes, 1981). Again, only one study (Murphy, 2004) did not support the role of previous intervention experience; however, in that study, intervention experience was defined more broadly as crisis intervention.
experience. Neimeyer et al. (2001) found suicide intervention experience to be a strong predictor of suicide counseling skill. In fact, suicide intervention experience was retained in the final regression analysis as one of the most important predictors of this ability. The relationship of suicide intervention experience and suicide counseling skill in this study was addressed by Hypothesis 7:

**H 7:** There is no significant relationship between suicide counseling skill and suicide intervention experience.

The results, contrary to previous findings, showed no significant relationship between the number of suicide intervention experiences staff members had and their suicide counseling skill. The mean number of suicide interventions in this population, however, was only 1.58. It is possible that suicide intervention would have to occur at a higher rate to impact suicide counseling skill. An alternative explanation could be that suicide intervention, in the present study, was defined somewhat broadly. The definition was not limited to “counseling a suicidal person” as was the case in other studies, but was open enough to incorporate “listening to a suicidal person and referring a suicidal person.”

**Research Question 2**

- To what extent is the suicide counseling skill of paraprofessional residence hall staff members related to external variables (counseling training, suicide intervention training, and suicide intervention experience)?

Research Question 2 explored the ability of external variables to predict the suicide counseling skill of residence hall staff. This three independent variable model was statistically significant but accounted for only 5.8% of the variance in suicide counseling ability. Yet, the only significant variable was suicide intervention training. Staff members who had more suicide intervention training had better suicide counseling
skills. The review of literature implied that this model would have accounted for more of the variance in suicide counseling skill than it did in this study. However, the fact that suicide intervention training was the most significant predictor in the model was supported in the previous literature (Neimeyer & Diamond, 1983; Neimeyer et al., 2001; Neimeyer & MacInnes, 1981; Maine et al., 2001; Stuart et al., 2003).

**Empathy**

The importance of empathy in counseling has been well documented (Bohart & Greenberg, 1997; Goldstein & Michaels, 1985), and counseling skill is needed to respond appropriately to individuals who are suicidal (Neimeyer & Diamond, 1983; Neimeyer & Pfeiffer, 1994a). Yet, the literature has relatively ignored the role of empathy in suicide counseling skill. There is some evidence that high empathy students take the emotional difficulties of their peers more seriously, even when suicide isn’t mentioned directly, and that they are more likely to provide assistance to their peers experiencing difficulty. Mueller and Waas (2002) implied “that empathy may be a significant contributor to previously reported gender differences, and that increasing young adults’ empathy toward peers exhibiting early at-risk characteristics may be an important intervention objective for prevention programs” (p. 337). After reviewing the literature, it was expected that there would be a positive relationship between suicide counseling skill and empathy. The relationship of suicide counseling skill and empathy was addressed in this study by Hypothesis 8:

H 8: There is no significant relationship between suicide counseling skill and empathy.

The results did not indicate a significant relationship between suicide counseling skill and empathy. Perhaps this was because empathy, in this study, was defined and
measured as trait empathy which taps capacity to empathize but not necessarily willingness or ability to communicate this empathy. In other words, empathic thoughts and feelings were measured but not empathic behavior. Another reason for this finding could be that suicide counseling does in fact require more than accurate empathy. It also requires the ability to work under pressure and to speak and act assertively.

**Cognitive Development**

Research supports the idea that an individual’s stage of cognitive development is related to his/her ability to learn client-centered counseling techniques (Benack, 1988; Hatcher et al., 1994). The literature also suggests that level of cognitive development is related to level of empathy prior to counseling training (Benack, 1988). A logical conclusion is that level of cognitive development affects a person’s capacity for empathy.

Cognitive development was a new factor in the study of suicide counseling skill. No previous literature addressed this relationship; therefore, the prediction that cognitive development would be related to suicide counseling skill was based on theory and some indirectly related research. Previous research supported the hypothesis that cognitive development and empathy were related (Benack, 1988; Lovell, 1999); and the theoretical bases of both cognitive development and empathy also supported the relationship (Davis, 1996; Kohlberg, 1984; Loevinger, 1976; Perry, 1970). Moreover, research supported the fact that empathy and counseling skill were related (Bohart & Greenberg, 1997; Goldstein & Michaels, 1985) and that cognitive development and counseling skill were related (Benack, 1988; Hatcher et al., 1994). The other literature that connected cognitive development to suicide counseling skill was that on attitudes toward suicide (Domino & Swain, 1985; Inman et al., 1984; Neimeyer et al., 2001). Even though different studies defined attitude toward suicide differently, the one commonality among the studies was
that more open, less dualistic attitudes were positively associated with suicide knowledge and suicide counseling skill. There was also some support for the idea that more dogmatic beliefs were associated with less counseling skill (Carlozzi et al., 1978, 1982). It was from a synthesis of these ideas that the prediction was made that cognitive development would have a relationship with suicide counseling skill. The relationship of cognitive development and suicide counseling skill was addressed in this study by Hypothesis 9:

H 9: There is no significant relationship between suicide counseling skill and cognitive development position.

This research did not find a significant relationship between suicide counseling skill and level of cognitive development. This finding is noteworthy because of the novelty of the test of this particular relationship. One possible explanation for this finding is that much of this hypothesis was based on the assumption that empathy and suicide counseling skill were related. It was hypothesized that since empathy and counseling skill were related and counseling skill was a significant predictor of suicide counseling skill in other studies, that level of empathy would play a role in suicide counseling skill. There was no significant relationship, in this study, between suicide counseling skill and empathy.

In addition, age was found to be a significant predictor of suicide counseling skill in this study, indicating that maturity of some type is important in suicide counseling skill. However, this maturity is not related to cognitive development.

This finding also indicates that even though a level of openness regarding suicide and suicide intervention has been associated with better suicide counseling ability, a level of more general openness and more complex thinking is not associated with suicide
counseling skill. Lending support to the theory of Neimeyer et al. (2001) that it is personal and professional factors directly related to suicide and suicide intervention specifically that are the most important in determining suicide counseling skill.

**Personal Suicide Behaviors**

In a search for personal and professional factors that predict suicide counseling skill. Neimeyer and colleagues (2001) explored the role of personal suicide behavior and found it an important factor in predicting suicide counseling ability. More specifically, a personal history of suicide behavior was significantly negatively correlated with performance on the Suicide Intervention Response Inventory. This factor remained important in a regression model using the entire sample and became even more significant when the sample was narrowed to those participants with the most professional training. In a later study, researchers found that personal suicidality as measured by the SSI (Beck et al., 1988, as cited in Brown & Range, 2005) was not related to suicide counseling skill. However, participants who were suicidal at some point in their lives had significantly better suicide counseling skills as measured by the SIRI-2 than the students who were never suicidal (Brown & Range, 2005). The relationship between personal suicide behaviors and suicide counseling skill was addressed in this study by Hypothesis 10:

H 10: There is no significant relationship between suicide counseling skill and personal suicide behaviors.

The results of the present study indicated no significant relationship between suicide counseling skill and personal suicide behaviors. This variable was included in the present study because previous research found conflicting results. One difference in the studies that must be acknowledged is that the Neimeyer et al. study and the present study
both used the Suicidal Behaviors Questionnaire in which suicidality over a lifetime is explored. The Brown and Range study used a different measure of personal suicidality that only explored suicidality in the past week. Moreover, Brown and Range found that students who had ever been suicidal scored significantly better than students who had never been suicidal, which seems more similar to the findings of Neimeyer et al. Except, in the Brown and Range study, degree of suicidality is not known. So, the difference here could be a matter of degree. The differences in measure could account for some of the different findings.

It is notable, too, that the participants with the most experience in the Neimeyer et al. study, were the most negatively affected by personal suicide ideation in relation to their suicide counseling skill. Personal suicide behavior could be a variable that only affects those with a certain level of experience, or those with a certain commitment to the profession. Or, it could be that other factors become less important as experience, education, and training increase. The present study and the Brown and Range study both used only college students with limited counseling and suicide intervention training and found no association between personal suicidality and suicide counseling skill.

Lastly, it is important to point out that the mean Suicide Behaviors Questionnaire score in the present study was a 1.8 and the range of possible scores was 0-16. This indicates that the rate of suicide ideation and behaviors in this population was low. This could be an accurate indication of the rate of behavior which makes the possible significance of this variable less important. Or, this low average score could be a reflection of the reluctance of this population to disclose this type of information. The mean score on the Suicidal Behaviors Questionnaire was not reported in the Neimeyer et al. study to allow comparison.
Research Question 3

• To what extent is the suicide counseling skill of paraprofessional residence hall staff members related to internal variables (level of empathy, cognitive development, and personal suicide behaviors)?

Research Question 3 examined the extent to which the counseling skill of residence hall staff members was related to the internal variables of level of empathy, level of cognitive development, and personal suicide behaviors. This regression model was not statistically significant, accounting for only 1.4% of the variance in suicide counseling ability.

Although relationships were predicted between the internal variables and suicide counseling skills, the internal variables did represent the largest unknown in the current study. Research has produced conflicting findings regarding the role of personal suicide ideation, and the introduction of empathy and cognitive development in this research was exploratory in nature. Although the hypotheses regarding these two variables were based on previous literature and a theoretical base, the previous research and the theoretical bases were only indirectly related.

Notably, the present research did find that part of the theory base for the predictions about the internal variables was solid. There was a significant positive relationship between cognitive development, when measured using the Cognitive Complexity Index, and level of empathy. There was also a significant negative correlation between cognitive development, when measured using the percentage of dualism scale, and level of empathy. This does provide support for the theoretical position that level of cognitive development and level of empathy are positively related. The logic behind the hypotheses that empathy and cognitive development would be significantly related to suicide counseling skill was sound; however, empathy and
cognitive development, as defined in this study, were not related to suicide counseling skill.

Research Question 4

- To what extent is the suicide counseling skill of paraprofessional residence hall staff members related to a combination of demographic, external, and internal variables?

Research Question 4 examined the relationship of the suicide counseling skills of paraprofessional residence hall staff members and a combination of demographic, external, and internal variables. This question was addressed using Hypothesis 11.

H 11: Gender, age, number of months in college, residence hall staff experience, personal suicide behaviors, counseling training, suicide intervention training, suicide intervention experience, empathy, and cognitive development do not significantly predict the suicide counseling ability of residence hall staff members.

Two regression models were used to deal with this hypothesis. The first regression model used all 12 variables. This overall model was statistically significant, accounting for 20.5% of the variance in the suicide counseling skill of residence hall staff members. Further inspection of the results found that female staff members and staff members with more suicide intervention training had better suicide counseling skills.

The second regression model utilized a backward elimination regression which displayed the prediction of suicide counseling skill, based on selected variables. The final model resulted in four independent variables, which were statistically significant. This model accounted for 18.1% of the variance in suicide counseling skill. Further inspection of the results indicated that female staff members, older staff members, those staff members who had been employed for a longer time, and staff members who had more suicide intervention training had better suicide counseling skills.
The fact that gender had such a strong role in predicting suicide counseling skill was not expected. Previous literature implied that none of the demographic variables in this study would contribute significantly to the variance in suicide counseling skill. There was some evidence that females tended to perform better on measures of counseling skill and suicide counseling skill, but this difference in gender was rarely significant (Brown & Range, 2005; Neimeyer & Bonnelle, 1997; Neimeyer & Diamond, 1983). Why gender was the strongest predictor of suicide counseling skill in this study is not clear.

In fact, Mueller and Waas (2002) hypothesized that level of empathy was a significant contributor to previously reported gender differences in counseling skill. The results of the current study do not support this idea. While being female was significantly related to level of empathy, level of empathy was not significantly related to suicide counseling skill.

The finding that suicide intervention training was an important predictor of suicide counseling skill is consistent with previous research (Main et al., 2001; Neimeyer et al., 2001; Neimeyer & MacInnes, 2001; Stuart et al., 2003). The fact that suicide intervention training is important and counseling training is not lends support to the fact that the two competencies are not equal. Suicide intervention ability requires skills over and above those acquired in basic counseling skills training.

Residence hall staff experience is an important predictor of suicide counseling skill. This finding is less direct than some of the others. Residence hall staff experience is also significantly related to the amount of suicide intervention training. And age, which was also retained in the final regression analysis, is significantly related to residence hall staff experience.
Age was retained in the final regression analysis. It is, as mentioned above, also related to residence hall staff experience in this study. However, one other study (Brown & Range, 2005), using a similarly aged undergraduate student population, also found that older students had significantly better suicide counseling skills. Upon further examination of the variable of age in previous studies, it became apparent that only the studies using traditional aged undergraduate students found age to be a significant predictor of suicide counseling skill.

The most important factor related to suicide counseling skill in residence hall staff was gender; however, amount of suicide intervention training, age, and residence all staff experience were also important. So, in the residence hall staff population, older women with the most residence hall staff experience and the most suicide intervention training had the best suicide counseling skills.

Overall, the results of this study do indicate that the majority of the variance in the suicide counseling skill of residence hall staff members is unaccounted for. With the two models used in this study, 18% to 20% of the variance in suicide counseling skill can be accounted for, which leaves 80% to 82% unknown. This finding is similar to the Neimeyer et al. (2001) findings in which a combination of personal and professional factors accounted for approximately 20% of the variance in suicide counseling skill.

**Implications of the Findings**

The most obvious and most compelling implication of this study is the finding regarding gender. Gender was not only significantly related to suicide counseling skill, but it was also retained in the final regression model, contributing the largest percentage of unique variance in suicide counseling skill. Gender is the most statistically significant predictor to emerge in this study. To get a clearer picture of practical significance,
separate male and female SIRI-2 mean scores were examined. The mean SIRI-2 score for males was 84.8 with a standard deviation of 20.6, and the mean score for females was 72.2 with a standard deviation of 22.8. The females, on average, scored about 12 points higher on the SIRI-2, which appears to have clinical as well as statistical significance. In the intercorrelations of independent variables, gender was only significantly correlated with empathy. Empathy is not correlated with suicide counseling skill. So, this evokes the question, “What is it about gender?” Do female staff members somehow benefit more from training? Is training that is usually presented by women or counseling professionals unintentionally biased toward a more feminine learning style? Do men come to residence hall staff positions with less skill in listening, in responding, or both? Are women more willing to express empathy and to respond to emotional situations? A strong implication of this finding is the need for more research. It would be difficult to hypothesize about the reasons for this unexpected result without going back to the literature on gender and possibly gender role orientation. For example, the studies that showed significant relationships between gender and suicide counseling skill used populations of undergraduate students. The majority of other studies used counseling or psychology students or practitioners, crisis interventionists, or other well-defined helping roles. Self-selection into these roles could moderate the effect of gender. When gender does emerge as a significant factor, this could be related to societal norms. For example, as Wellman and Wellman, 1986 suggest,

A number of males in our society have been taught to be independent, self-reliant, non-disclosing, and non-nurturing, leading to a lack of skill in dealing interpersonally with such topics as suicide. This training also tends to make these males more harsh in their attitudes toward suicidal people. (p. 376)

Lastly, this difference, seen most commonly in students, could be attributed to the variance in development seen in this age range. Notably, recent findings suggest that
there is a gender difference in the rate of psycho-social development. Women tend to
devote faster in the areas of mature interpersonal relationships and tolerance (Foubert,
Nixon, Sisson, & Barnes, 2005).

The importance of providing suicide intervention training in addition to
counseling training was reinforced by this study. It is not enough to train residence hall
staff in basic counseling skills, protocol, and referral and expect them to be able to
respond appropriately to a student who is suicidal.

This research also supports the idea that some type of maturity is related to the
suicide counseling skill of residence hall staff members. Also, the importance of age as a
factor in suicide counseling skills is only apparent in populations of traditional aged
undergraduate students. This maturity is not related to cognitive development, empathy,
or more experience with suicide intervention. It is something else. The most obvious
explanation is that traditional aged undergraduate students are undergoing a period of
rapid development. A difference of 2 years in students of traditional age means much
more developmentally than a difference of 2 years in a population of older students.
What is this development? Is it a type of psycho-social development? Or is it, as Brown
and Range (2005) suggest, that older students just have more time to experience the
crises of daily living and their resultant successful resolutions? Lastly, another more far-
reaching explanation could be that the youngest students represent some societal shift.
Maybe the two 2005 studies that found age to be significant are picking up a generational
change. It is possible that high schools have exposed their most recent graduates to less
suicide information or that the two 2005 studies have tapped a different generation than
the previous studies. There could be some generational differences in values or other
internal variables that age is highlighting.
Two tangential findings in this study have important practical implications. First, even though being a graduate hall director was positively correlated with suicide counseling skill, the importance of position fell away in the regression models. Gender, suicide intervention training, age, and staff experience were retained. This suggests that these variables were more important in determining suicide counseling skill than was position. It is not safe to assume that because staff members have a higher position in the department that they have better suicide counseling skills. The second finding of interest was the mean SIRI-2 score of the staff members. This mean score is only important in context. Lower scores on the SIRI-2 indicate better suicide counseling skills. The mean SIRI-2 score in this study was 77.24. The mean SIRI-2 score in a study using 279 undergraduate students was 100.09 (Brown & Range, 2005), and the mean score of undergraduate students in an introductory psychology class was 70.36 (Neimeyer & Bonnelle, 1997). However, the number of undergraduates used in the Neimeyer & Bonnelle study was low (N = 31). In other research using the SIRI-2, master’s level counseling students scored an average of 47.84 (Neimeyer & Bonnelle, 1997), and 46.25 (Murphy, 2004). First year graduate students in psychology scored on average 56.43 and graduate students in nursing scored on average 66.85 (Richards & Range, 2001). The residence hall staff, as trained paraprofessionals, scored about where they would be expected to score in relation to untrained undergraduates, graduate students in counseling and psychology, and other professionals. Of course, not all of the residence hall staff had received training, which might possibly speak to the importance of the selection process of residence hall staff, either the formal selection process or self-selection process. This range of scores across populations also offers some support for the validity of the SIRI-2.
Lastly, the main finding was that the models used in this study to predict suicide counseling skill only accounted for 18-20% of the variance in suicide counseling skill. Notably, although Neimeyer et al., (2001) used a different combination of personal and professional factors in their search for factors that predicted suicide counseling skill, the factors in their study also accounted for approximately 20% of the variance in suicide counseling skill. Most of what makes a difference in this skill is left unknown. The search for factors that contribute to suicide counseling skill in this population as well as others is still in the beginning stages.

Limitations of the Study

A major limitation of this study was that suicide counseling skill is a multi-faceted construct that was measured by a single paper-and-pencil instrument. The measurement of suicide intervention effectiveness entails a number of relevant processes and outcomes, ranging from the emotional nuances of intimate communication between a counselor and an individual in crisis to the broad social factors that are reflected in national suicide statistics. It therefore stands to reason that the measurement of these processes and outcomes needs to be similarly multi-faceted, with any given scale having a restricted range of convenience within which it can be applied. (Neimeyer & Pfeiffer, 1994, p. 151)

Although the Suicide Intervention Response Inventory-II is a sufficiently reliable and valid instrument, it remains that it represents only one method of measuring suicide counseling skill. In addition, there are limits to what a written test of suicide intervention skill can measure. The SIRI-2 measured the ability to identify the appropriateness of a verbal response to someone who was thinking about suicide. Identifying a response is easier than actually formulating a response of one’s own. Also, even if an individual can formulate a response, it is difficult to determine if that person can actually provide the
formulated response in a stressful intervention. In essence, doing requires more skill than knowing.

The purpose of this study was to expand the search for factors that relate to the ability of paraprofessionals to make effective verbal responses to someone who is considering suicide. As discussed above, this ability to make effective verbal responses is multi-faceted. Although this research attempted to search for factors that relate to suicide counseling skill, the researcher was limited in the factors that could be explored in one study. Although the factors in the study were chosen carefully, based on previous literature and theory, the results provide only a minute snapshot of the factors that could be important in predicting suicide counseling ability.

Many of the factors examined in this study were measured by self-report. Variables such as number of suicide interventions, number of hours of counseling training, number of hours of suicide intervention training, number of months of enrollment in college, and number of months of staff employment were single question estimates of time. This type of measurement relied heavily on the memory and honesty of the research participants.

Conversely, other variables such as cognitive development and suicide counseling skill were measured by instruments that were reliable and valid measure, yet they were lengthy and required quite a bit of thought. Although the measurement of these variables was enhanced by using objective instruments, their lengthiness combined with other measures in the survey, made the survey as a whole quite long. The survey took approximately 40 to 45 minutes to complete which could have negatively impacted the results because of respondent fatigue.
Lastly, the sample used in this study makes it difficult to generalize these results to other populations. The current research surveyed the residence hall staff members at one institution. The suicide counseling skill of residence hall staff has not been explored in the past, making residence hall staff a population of interest. The fact that the entire population of staff members from one institution was used limits the generalizability of the conclusions to other residence hall staff members. Also, the use of residence hall staff only limits the ability to generalize the results to other populations of suicide interventionists.

**Recommendations**

**Methodological Enhancements**

There are ways that the methodology of this study can be enhanced. It is possible to better measure the constructs and to alter the overall design in the presence of more time and funding.

The dependent variable of suicide counseling skill could be measured more accurately by using more than one method of measurement. The SIRI-2 provided an objective and sufficiently reliable and valid way to measure part of this skill. The part that it measured was the ability to recognize an effective response to someone who was suicidal. It did not, however, measure the ability to formulate an effective response or to provide that response under stressful conditions.

Some of the independent variables could also be measured differently and more accurately. Instead of measuring counseling training, it would be more accurate to measure counseling skill. This, however, presents some of the same challenges as does measuring suicide counseling skill. Researchers are left making a decision between an objective measure of knowledge and a subjective measure that more accurately reflects
skill. Other independent variables could also be measured differently, but this could require a different study design. For the purposes of this study, the researcher relied on participant self-report estimates of number of hours of counseling training, number of hours of suicide intervention training, number of months of college enrollment, number of months as a staff member, and number of suicide interventions. In an exploratory study such as this, this was sufficient; however, in a replication of the study it would be beneficial to find more objective ways to measure these variables.

Another way to approach a similar study would be to focus on the training itself. If a researcher were to begin with a group with no counseling skills training or suicide intervention training, it would be easy to manipulate these external variables. Using an experimental, pre and post design, a researcher could measure some independent variables of interest, such as age, gender, empathy, cognitive development, and suicide behaviors beforehand and then, measure how the same training affects groups with differing demographic and internal variables.

**Future Research**

The current study has provided the impetus for many future research questions. These questions involve the ongoing search for factors that predict suicide counseling ability, the selection of populations of interest, the significance of gender in predicting suicide counseling skill, and the suicide counseling ability of residence hall staff in particular.

One thing learned from this research is that level of cognitive development and level of empathy are not related to suicide counseling skill in this population, residence hall staff. This leads to two questions. First, would level of cognitive development and empathy have a role in predicting suicide counseling skill in a younger population? It is
possible that these two variables are significant at an age when these constructs are less
developed. Second, the search for factors that contribute to suicide counseling ability is
still ongoing. The factors of empathy and cognitive development were not supported as
predictors of suicide counseling skill in this study, but might they be in a general college
population that has not self-selected into a helping role?

With gender as a significant predictor, and empathy and cognitive development
not significant predictors, the question becomes what is it that makes gender so
important? One thing that might guide the search for an answer is another question. With
what items on the SIRI-2 did residence hall staff struggle? Did these items differ
according to gender? It would also be helpful to administer the same study to practicing
professionals. What would the differences be? Would the significance of gender and age
fall away? And, would experience with suicide intervention and personal suicide
behaviors increase in importance as research has suggested (Neimeyer et. al, 2001)?

At this point in the search for factors that predict suicide counseling skill, it would
be beneficial to revisit all literature on the topic. One confounding factor in this search is
that the research that has been done has consistently used different populations.
Researchers have used college students, teachers, medical students, mental health
professionals, experienced and inexperienced crisis interventionists, psychology and
counseling students, and now residence hall staff. It is possible that the factors that
predict suicide counseling skill are slightly different for each population.

It is recommended that future research using residence hall staff focus on the
importance of gender and the type and amount of suicide intervention training provided.
There is also evidence that a certain type of maturity plays a role for this population, but
this maturity cannot be defined as cognitive development as it was in the present study. It
would be worthwhile to examine the role of attitude toward suicide with this population. This has been found to be significant in other populations and the present researcher chose to look at “openness” in a broader scope through cognitive development. It is still possible that attitude toward suicide specifically plays an important role in suicide counseling skill in residence hall staff members. Also, the present researcher chose to explore the role of empathy in suicide counseling skill. Another variable that was considered and has some relation to empathy and gender is personality. Do residence hall staff members with certain personality types have better suicide counseling skills? Or are staff members with certain personality types better able to benefit from training?

Policy and Practice

There are four major topics that emerge from this study as important policy and practice considerations. These four topics are related to the gender, maturity level, position, and training needs of residence hall staff members.

First, gender matters. Even though it is not clear why this is yet, it is important to remember and to address. As mentioned earlier, more research needs to be done in this area. Yet, there are ways to pay more attention to the needs of male staff members during training. An attempt can be made to make training more applicable to the men by actively seeking their opinions and participation. Also, it could be beneficial to include a male, who is not a counselor, in part of the presentation.

Second, suicide intervention training is essential. This type of training should become standard practice for residence hall staff. Moreover, the amount of training is also important. One hour of training in a class for resident assistants may not be sufficient. There should be adequate time for presentation of facts, discussion of the topic, and for practice.
Third, maturity matters. Since returning staff members have better suicide counseling skills, it might be wise to use them in presentations regarding suicide. This would reinforce their own knowledge and help to demystify the topic and process of intervention for the newer staff members. The fact that maturity is important, also suggests that retaining residence hall staff should be a priority.

Fourth, training is important for all levels of staff. It is not accurate to assume that a graduate hall director has better skills than a resident assistant. Graduate staff should receive at least the same type and amount of suicide intervention training that the resident assistants receive. This training should be in addition to the advanced training in protocol and referral that they already receive.

Overall, the results of this study suggest some ways that housing administrators can reevaluate and update the present training efforts related to suicide intervention. Gender and maturity level of staff members, as well as the amount of training provided, are important factors to consider.

**Summary**

The purpose of this study was to expand the search for factors that relate to the ability of paraprofessionals to make effective verbal responses to someone who is considering suicide. The literature review suggested that external variables such as training and experience were important factors in determining suicide counseling ability; however, some individuals seemed better able to benefit from these outside experiences because of some preexisting internal variables. The search for factors that relate to the ability of paraprofessionals to make effective verbal responses to someone who is suicidal was expanded in this study by the inclusion of cognitive development level and level of empathy as variables. Neither level of cognitive development nor level of
empathy was found to have a significant relationship to suicide counseling skill. Even though previous literature suggested that all of the external variables would be significantly related to suicide counseling skill, only the amount of suicide intervention training was significantly related.

More specifically, this survey research was designed to examine how the suicide counseling skill of paraprofessional residence hall staff was related to demographic variables, internal variables, external variables and a combination of demographic, internal, and external variables. This was the first time that residence hall staff were used as a population of interest in the search for factors related to suicide counseling skill.

The results of the present research indicate that demographic variables are the most significant predictors of suicide counseling skill in residence hall staff, followed by external variables. Internal variables were not related to the suicide counseling skill of residence hall staff members. More specifically, it was found that staff members who were female, older, had more experience as a residence hall staff member, and had more hours of suicide intervention training were the most likely to have better suicide counseling skills.

These findings have implications in research as they have contributed to the ongoing empirical conversation regarding the search for factors that are related to suicide counseling skill. The results also have practical implications in that they suggest factors that are related to the suicide counseling skill of residence hall staff. This knowledge has the potential to improve selection and training efforts regarding residence hall staff and to increase care of and service to university students.
REFERENCES


BIOGRAPHICAL SKETCH

Kimberly Jacqueline Fugate was born November 21, 1969. After growing up in Lake Mary, Florida, she attended Stetson University where she was a resident assistant and hall director as well as a member of Zeta Tau Alpha. After receiving a degree in psychology from Stetson, Kim attended Appalachian State University in Boone, North Carolina. Here, she completed her M.A. in student development while serving as a graduate hall director for 2 years. After graduation, she spent 4 years working full time in university housing and residence life programs. One year she worked as an Area Coordinator at Murray State University, and for the remaining 3 years, she returned to Appalachian to work as an Area Coordinator. During this time, she became a National Certified Counselor.

Kim moved back to Florida in 1997 and worked as an instructor at Santa Fe Community College before leaving to serve as a Resident Director on the Spring 1998 voyage of Semester at Sea. She received her acceptance to the counselor education program at the University of Florida that semester while in South Africa.

Kim earned her Specialist in Education in mental health counseling at UF in 2000, and entered the doctoral program the same year. During her time as a full time student, she worked at various part-time positions for the Department of Housing and Residence Education at UF. While in the doctoral program, she also worked as a graduate assistant in counselor education teaching the undergraduate Stress and Anxiety Management and Career Development courses.
Kim is currently employed full time as a Residential Exploratory Advisor and Crisis Consultant at the University of Florida. In this role, she provides academic advising to first-year residence hall students and serves as a crisis intervention consultant for the Department of Housing and Residence Education.