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CONCEPTUALIZING DOCTORAL STUDENT MENTORING

by

Flint L. Brent

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

August 2014

ABSTRACT

CONCEPTUALIZING DOCTORAL STUDENT MENTORING

by Flint L. Brent

August 2014

In this study, there was a convenience sample of 145 doctoral students from 35 states and the District of Columbia. The demographic breakdown of the participants was 101 females and 44 males, with an age range of 22 through 68 years of age, and there were 98 Caucasian and 23 African American participants. The modal doctoral student was 36 years old, heterosexual, Caucasian, and female in the dissertation phase of pursuing a PhD. In this study, the modal doctoral student defined an ideal mentor as someone who functions as a role model, and demonstrated integrity, provided guidance, and developed a professional relationship with the doctoral student, yet the doctoral student did not indicate the need for a personal relationship with his or her mentor. The modal doctoral student described the most important characteristics in a mentor as one who exhibits traits of academic honesty, is involved in the student's decision process, has belief in the student and the student's potential, is generous with time, and someone who was happy and emotionally stable. The modal doctoral student described his/her current mentor as accomplished, academically honest, possessing belief in the student, providing clear focus, and who brainstormed solutions to research issues. In this study, the modal doctoral student did not distinguish between an actual mentor and an ideal mentor on two of the IMS subscales, Integrity and Relationship. In the IMS Guidance subscale, the modal doctoral student scored the current mentor significantly lower than an ideal mentor, suggesting the need for improvement in that area. The modal doctoral

student described the advisor as showing belief in the student, showing kindness,

encouragement, respect, productiveness, generosity with time, and being someone to

emulate. In this study, the modal doctoral student did not indicate many differences

between an advisor and a mentor, suggesting that the same person may fill both roles.

The University of Southern Mississippi

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Flint L. Brent

A Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
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for the Degree of Doctor of Philosophy

Approved:

Kyna Shelley_____
Committee Chair

Richard Mohn_____

Thomas Lipscomb_____

James T. Johnson_____

Maureen Ryan_____
Dean of the Graduate School

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CHAPTER I

INTRODUCTION

Lightfoot (2007) describes the doctoral degree as the pinnacle of educational pursuits to which no other degree can compare. The degree confers upon the individual a certain amount of prestige and indicates mastery of a subject. Completion of the degree requires a commitment and investment by the student and the graduate program that develops human capital. Therefore, the loss of a potential doctoral candidate is more than just a mere statistic. It can represent an immeasurable loss of human capital to the student, the university, and society (Lightfoot, 2007). A doctoral student, who leaves a program, realizes a minimum return on his or her investment in the area of human capital development.

Many researchers have contributed to the wealth of scholarship describing the undergraduate experience, beginning with the studies of McNeely (1937) and Summerskill (1962). They were followed by Astin (1970, 1985), Bean (1980, 1983), Bean and Metzner (1985), Girves and Wemmerus (1988), Nerad, Cerny, and Network (1991), and Seidman (2005a, 2005b), Spady (1970), and Tinto (1975a, 1987, 1993). In addition, Pascarella and Terenzini (1991) expanded the understanding of the undergraduate experience by separating previous studies into two different groups: student-centered developmental models and college impact models. Tinto (1993), following his work on undergraduate retention and attrition (1975a, 1975b, 1982, 1987, 1988), suggested that the doctoral student experience should be researched within a theoretical framework. Tinto proposed a three-stage model (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation) of doctoral persistence to address development throughout the stages. Tinto hypothesized that mentoring doctoral students

in the Transition and Adjustment stage is more beneficial than in the latter stages due to the importance of guidance, advising, and having an advocate within the department. Tinto stated the second stage, Attaining Candidacy, is important based on the relationship between the mentor and student that leads to completion of the dissertation. The third stage, Completing the Dissertation, is described as a period of pronounced struggle for the doctoral student. This stage requires that the doctoral student works independently and is self-motivated, yet needs mentoring to complete. Tinto's (1993) role is important, as he was the first to suggest the importance of mentoring for doctoral students of all ages.

Levinson, Darrow, Klein, Levinson, and McKee's (1978) qualitative study of 40 men, aged 35 to 45 years, led to the development of an age-linked multi-phase theory of adult development focusing on periods of the life structure. Levinson et al. identified three main periods: Early Adulthood (age 17 to 40 years), Middle Adulthood (age 40 to 60 years), and Late Adulthood (> 60 years). Levinson et al. (1978) divided each period into four stages that are defined by certain developmental tasks. Levinson et al. (1978) described the first three phases of the Early Adulthood era as being the phases when "the mentor relationship is one of the most complex, and developmentally important, a man can have in early adulthood" (p. 97). In the fourth phase, Age 30 Transition, mentoring needs decrease. Levinson et al.'s (1978) work is critical as they were one of the first to connect mentoring to adult development.

Several empirical studies have examined the institutional and departmental factors associated with the doctoral student experience. A four-year qualitative study by Austin (2002) focused on the institutional and departmental factors related to the graduate student socialization process. Austin found themes of insufficient mentoring regarding

career choices and an insufficient amount of guidance from faculty. Golde (2005) followed Austin with a qualitative study of 58 doctoral students that focused on the concept of integration into academia. Golde found three major themes associated with doctoral student attrition, student mismatch with discipline, mismatch with career objectives, and mismatch with department. Lovitts and Nelson (2000) studied the difference in attrition across nine departments at two universities (one rural and one urban), using data collected from 816 doctoral students. Lovitts and Nelson (2000) found a high correlation between the culture of the department and attrition of doctoral students. Specifically, departments without a structured format for planning degree programs and choosing advisors have a higher rate of attrition. De Valero (2001) used a mixed-method approach to study a cohort class of 876 doctoral students to demonstrate that 53% had graduated within a 5-to 9-year timeframe. De Valero (2001) focused the qualitative study on departmental factors that positively relate to student retention. The factors included "financial support, department orientation and advising, relationship between course work and research skills, requiring significant results in the dissertation, student-committee relationship, student-advisor relationship, attitudes toward students, student participation and peer support" (de Valero, 2001, p. 356).

Bowen, Rudenstine, and Sosa (1992) examined advisement as a factor in doctoral student retention. Bowen et al. (1992) noted that allowing students to work at their own tempo without explicit expectations led to increased levels of isolation from the department. Continued integration in the department after becoming ABD (all but dissertation) was the focus of Monsour and Corman (1991). Their qualitative study found the lack of support from a mentor or advisor related to the feeling of isolation and increased the stress to complete the dissertation. De Valero's (2001) qualitative study

found that doctoral student success was promoted when there was a good student-advisor relationship. Girves and Wemmerus (1988) found that students' positive opinions of the faculty improved degree progress and students' level of involvement was the most important variable related to degree progress.

<div align="center">Statement of the Problem</div>

In 1991, an estimated 50% of doctoral students never complete their degree (Dorn & Papalewis, 1997; Golde & Walker, 2006; Kerlin, 1995; Tinto, 1993). The Council of Graduate Schools (Sowell, 2008) estimated the rate of doctoral student attrition had decreased to an estimated 43%. The attrition rate for doctoral students varies among fields of study, race/ethnic background, gender, and nationality. International engineering doctoral students have the highest 10-year completion rate at 70% (Sowell, 2008).

Since 2007 several studies have explored the internal and external factors that influence doctoral student attrition (Ampaw & Jaeger, 2011; Gururaj, Heilig, & Somers, 2010; Ivankova & Stick, 2007; Sweitzer, 2009; Tierney & Hentschke, 2007). Of those studies, none have explored whether there is a significant difference between undergraduate and doctoral student definition of mentoring. Jacobi (1991) found 15 separate definitions regarding mentoring in undergraduate education. No consensus in the definition of mentoring leads to problems when comparing research results (Hall, 2003; Merriam, 1983). Levinson (1997) and Levinson et al. (1978) have described mentoring as most sought after between the ages of 17-33 years of age. Levinson et al (1978) proposed that the Age 30 Transition stage (28-33 years of age) is when mentoring needs cease. According to Levinson et al. (1978) and Levinson (1997) this may suggest doctoral students over 33 years of age require minimal mentoring. The National Center

of Education Statistics (NCES) (2000) states that the average age of doctoral students is

33 years, and this indicates, per Levinson's model, 50% of doctoral students require

minimal mentoring. In the education discipline, the average age is 41.5 years while

doctoral students' average age is 31.6 years outside the education discipline. There has

been an extensive number of studies in the literature which define mentoring for

undergraduates, under the age of 28 years, but little or no research exists that define what

mentoring is for doctoral students.

Purpose of the Study

This study had three purposes. The first was to test Levinson et al.'s (1978) and

Levinson's (1997) suggestion that the need for mentoring decreases for doctoral students

after 33 years of age. The second purpose was to test for significant differences among

Tinto's (1993) three stages of persistence for a doctoral student's desired characteristics

in a mentor. The third purpose was to test for significant differences between doctoral

students preferences of an ideal mentor and their actual mentor. The results of these tests

may assist faculty/mentors on how better to mentor doctoral students.

Research Hypotheses

The research hypotheses for this study were as follows:

1. There is a significant difference in Rose's (2000) Ideal Mentor Scale

   (Integrity, Guidance, and Relationship) and Schlosser and Gelso's Advisory

   Working Alliance Inventory-Student Version (Rapport, Apprenticeship, and

   Identification-Individuation) between the two age groups (22-33, 34 years of

   age and over).

2. There is a significant difference in Rose's (2000) Ideal Mentor Scale

(Integrity, Guidance, and Relationship) and Schlosser and Gelso's Advisory Working Alliance Inventory-Student Version (Rapport, Apprenticeship, and Identification-Individuation) among doctoral students in Tinto's three stages (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation).

3. There is a significant difference between the preferred mentor and actual mentor using Rose's (2000) Ideal Mentor Scale (Integrity, Guidance, and Relationship) among doctoral students in Tinto's three stages (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation).

Definitions

The following terms were defined for the purpose of this study:

Actual mentor: The participant's rating of his or her doctoral program mentor attributes or function.

Ideal mentor: The participant's desired characteristics in a mentor.

Delimitations

1. The study was delimited to current doctoral students from the United States.

2. The study was delimited only to quantitative aspects that were derived from the self-reported questionnaire.

3. The study was delimited to the student-faculty mentorship.

4. This study was delimited by convenience sampling.

Justification

The justification for this study results from the vagueness of what a mentor is to doctoral students (Rose, 2000). Based on the work of Levinson et al. (1978), it was found that mentoring was most sought between the ages of 17 and 33 years and decreases

as people age. As Rose (2000) stated, "On the basis of age, one might argue that mentors are not relevant to older students, since Levinson's model suggests that mentor relationships wane in importance after Age 30" (p. 8). Rose (2000) developed the Ideal Mentor Scale initially to define what characteristics or qualifications doctoral students preferred in an ideal mentor. This study used Rose's inventory to define the modal doctoral student's characteristics of the ideal mentor by contrasting the doctoral students' preferred mentor with the actual mentor.

CHAPTER II

LITERATURE REVIEW

Pascarella and Terenzini (2005) categorize the theories of college student change in two different groups: student-centered developmental models and college impact models. Student-centered developmental models focus on the "nature, structure, and processes of individual human growth" (p. 18), whereas college impact models focused on the source of change. These changes are assumed to be associated with between-college effects, institutional characteristics, or within-college effects from the collegiate experience. Pascarella and Terenzini (2005) stated that the primary difference between these two groups of theories was the extent of focus placed on the actual changes in college students versus how the changes occur.

A review of the literature on doctoral student retention provided many studies on these two different groups of theories. College impact theorists and the corresponding theories included Astin (1970) and his I-E-O Model, Pascarella's (1985) General Model for Assessing Change, and Weidman's (1982) Model of Undergraduate Socialization, Tinto's (1975a, 1987, 1993) Theory of Student Departure. Knefelkamp, Widick, and Parker (1978), later modified by Rodgers (1990), enhanced the organization of student-centered developmental models into a four-category structure: psychosocial development, cognitive-structural theories, typological models, and person-environment interaction theories and models.

Typological models have three common features: first, personality traits developed at a young age; second, though behavior may have varied, thoughts were usually consistent, and third, typological models described communalities of traits with other people. Notable theorists in this area included Kolb (1976) and Briggs-Myers and

Myers (1980). Person-environment interaction theories and models focused on how the surroundings influenced behavior (Pascarella & Terenzini, 2005).

Strange and Banning (2001) categorized the person-environment interaction theories and modeled them into four categories: physical models, human aggregate models, organizational environment models, and constructed environments. Physical models center on the actual surroundings that promoted or inhibit behaviors. Human aggregate models focused on the environment and the influence on the total person. Organizational environment models focus on the surroundings of the organization and the effect of the surroundings. Constructed environment is defined by an individual's perception of the surroundings.

Many models of student retention illustrate the ebb and flow of students through postsecondary education. Two of the leading models are Tinto's (1975a) Student Integration Model and Bean and Eaton's (2000) Psychological Model. Other models that have helped frame the issue of student retention include Cabrera and La Nasa (2000), Cabrera, Nora, and Castaneda (1993), Lenning, Sauer, and Beal (1980), Pantages and Creedon (1978), and Tierney (1992). Tinto's (1975a) Student Integration Model is the foundation of undergraduate student retention and provides one of the foundations of this study.

Tinto's Student Integration Model

Durkheim's (1897/1982) Theory of Suicide has influenced many theorists such as Spady (1970) and Tinto (1975a). Durkheim's study of historical documents suggests that social control of groups has an effect on suicide rates among Protestants, Catholics, and Jews. Durkheim's study illustrated that the social control of Catholics and Jews resulted in lower suicide rates than for Protestants. Following Durkheim's study, Spady (1970)

suggests that suicide rates increase in a society where individuals lack integration into the formal societal structure. Spady extended his findings to student retention and further theorized the more a student is integrated into shared group values, academic performance, and group support, the greater the likelihood of student retention. Spady (1970) found that normative congruence affects other independent variables (i.e., friendship support, grade performance, and intellectual development) that prompt the level of social integration into college. The level of social integration has a direct positive relationship with satisfaction of college life and integration into college life. Tinto (1975b) expanded Spady's theory by meta-analyzing previous research to include the student's process of integration into higher education. Tinto suggested the level of commitment by the student is an interchange of commitment to the institution and to degree completion. Tinto (1975b) further stated that incongruences with institutional fit or social integration influence the decision to stay or leave the institution.

Tinto (1975b) synthesized the data from studies performed by other researchers to develop six characteristics of the Student Integration Model and analyze the interchange of the commitment between the student and the institution and specifically students' commitment to completing a program. The first characteristic, Pre-Entry Attributes, occurs before postsecondary education commences. Tinto proposed that certain attributes evolve from family background and educational skills. These skills help to determine the second characteristic, Goals, concerning education, work, and social placement. Institutional Experiences, the third characteristic, includes the formal and informal experiences in academic systems and social systems that influence the level of integration into college. The fourth characteristic, Integration, is how well the student integrates into the academic and social systems. The fifth characteristic, Commitments,

uses the level of integration to show the commitment to stay or leave college. The sixth and last characteristic, Outcome, is the match between the student and college that determines persistence (Tinto, 1975b).

Bean (1980) suggested that Tinto's (1975b) work lacked sufficient theoretical background based on Durkheim's (1961) theory of suicide to properly define the variables for path analysis. Bean (1980) modeled his theory on Price's (1977) Organizational Process Model of Turnover by emphasizing behavioral intention, in comparison to Tinto's (1975b) sociological approach. To investigate student attrition, Bean developed the causal model of student attrition. He administered questionnaires to 1,171 university freshmen. The variables, institutional commitment, satisfaction, routinization, practical value, institutional quality, integration, university GPA, goal commitment, communication requirements, communication rule, distributive justice, and centralization accounted for 36% of variation for men and 27% of the variation for women.

Bean and Eaton's (2000) Psychological Model of College Student Retention study was compared to Tinto's (1975b) sociological work with similar findings to Tinto's meta-analyzed work. Bean and Eaton's (2000) empirical study revealed two major findings. Their model accounted for 21% of the variation in female dropouts and 15% of the variation in male dropouts. The study found that men and women leave universities for different reasons. According to the model and similar to Tinto's (1975b) findings, the sum of previous experiences influences students' level of persistence. Bean and Eaton (2000) concluded there was a strong correlation between attitudes and intentions concerning persistence in college.

Though differing somewhat from Tinto's (1975b) work, Cabrera, Castaneda, Nora, and Hengstler (1992) suggested that Bean's (1982) study was similar to theirs. For example, Cabrera et al. (1992) contended that one similarity was that precollege characteristics influence behaviors and intentions, and both models suggest a match between the student and the institution. Their work sought to "examine, empirically, the convergent and discriminant validity between the two theories" (p. 143). Cabrera et al.'s (1992) findings indicated that Bean (1982) and Tinto (1975b) were accurate in concluding that college persistence was a function of institutional and personal factors. The authors found that 70% of Tinto's (1975) model was confirmed, while only 40% of Bean's model was confirmed. Bean's model accounted for 60.3% of variance compared to Tinto's (1975) model of 36% when testing for Intent to Persist. The results reflected the two models were complementary to each other and they contained a significant amount of overlap.

Tinto (1982) explained that his original Student Integration Model (Tinto, 1975a) incorporated student characteristics and experiences but pointed out that its shortcoming lacked acknowledgment of students' off-campus support systems. Tinto (1975a) stated students from lower-to-middle class socioeconomic status who attend junior colleges rarely attended a four-year institution. Tinto (1982) acknowledged that outside college factors influenced students' decisions to persist or leave. The details and level of impact by external college factors, such as long- and short-term effects of finances, often cause students to re-evaluate their level of commitment.

Tinto (1988) revised his views of student dropouts by adapting van Gennep's (1909/1960) Social Anthropology Theory to expand the study of student attrition. Van Gennep's theory was a divided into three phases: preliminary, liminality and post-

liminality. Tinto drew parallels to van Gennep's three phases of how tribesman moved from one tribal village to another to refer to how students move from home to college. Tinto developed three stages: Separation, Transition, and Incorporation. The Separation stage is the period of transition from living at home to one of independence and incorporation of college culture. The Transition stage is a period of stress when incorporating the new culture and relinquishing the familiar. The Incorporation stage reflects the level of acceptance of the new culture. If the student has assimilated into the new culture, a new attitude reflects the commitment to persist. However, if a student fails to assimilate into the college culture and fails to separate from the familiar, the student's risk of dropping out will be higher.

Tinto (1993) revised his model once more to incorporate doctoral student retention. Most of Tinto's work had focused on undergraduate student retention and attrition issues. As an extension of the undergraduate model, Tinto (1993) book includes an appendix entitled "Toward a Theory of Doctoral Persistence." The model of Doctoral Persistence examines the nature of persistence and work necessary to complete the doctorate. The model acknowledges the diversity of doctoral students in race/ethnicities and motivations. Tinto (1993) addressed the changing needs and motivations in the model with three distinct stages of the doctoral process: Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation.

Transition and Adjustment occurs during the first year of the doctoral program in which the student evaluates the culture of the university. This stage involves a series of personal questions and answers resulting in a cost-benefit analysis. During the evaluation process, the student chooses whether the norms are within acceptable limits and decides if the doctoral program matches his or her life goals.

After the doctoral student has chosen to persist to the second stage, Attaining Candidacy, the student has passed all qualifying and comprehensive examinations to attain candidacy. In this stage, the student has acquired the knowledge and competencies needed for doctoral work. Bowen et al. (1992) found 80% of students who persist beyond the comprehensive examinations stage go on to complete the dissertation. The third stage, Completing the Dissertation, ends with the student defending the dissertation. Tinto (1993) stated this stage reflects the "nature of individual abilities and the specific relationship between student and primary advisor or committee" (p. 15). Tinto further discussed the attrition rate in relation to the environment of the program rather than that of the institution.

There have been limited empirical studies using Tinto's three stages of persistence. Rose (2000) used Tinto's (1993) three stages toward persistence as a basis to develop her Ideal Mentor Scale (IMS). Rose's (2000) study revealed that for the Iowa Sample, the Relationship subscale was more important to doctoral students in the Transition and Adjustment stage than to doctoral students in the Completing the Dissertation, but important only to males in the Attaining Candidacy stage but not in the Completing the Dissertation stage. Rose stated the lack of similarities among the participants in the three stages resulted in a lack of support for the Tinto's (1993) three stages of persistence. Rose (2005) found that the field of study and Tinto's (1993) three stages are not significantly related. Chapter III contains more details of this instrument.

Tinto (2006) assessed his work as expanding the student retention body of literature from the early 1970s to the 21st century. The expanded body of work has given depth to the understanding, the process, and the complexity of student retention. The expanded body of work incorporates students from a cross-cultural background of

American economics and social conditions that shape a student's perspective. Tinto studied how the process of education is influenced by the variables of setting, social, economic, and cultural decisions the student has to make to persist in college. Tinto found these variables influence the student's decision-making on whether to live at home, on campus, off-campus, or to attend a two-year college, a four-year college, a university, or any of the other varied ways in which a student can participate in post-secondary education. Tinto stated that student retention theory was historically influenced by psychology, but through the years the complexity of the issue has extended past psychology to include models influenced by sociology and economics.

Although many have hailed Tinto's body of work as revolutionary in student retention, many have taken issue with its shortcomings. For example, Rendon, Jalomo, and Nora (2000) and Tierney (1992) questioned the accuracy of the Separation stage of Tinto's (1988) model in which he adapted van Gennep's (1909/1960) Social Anthropology theory. Tinto's (1988) Separation stage suggests the students must leave their former communities. According to Rendon et al. (2000) and Tierney (1992), the application of this concept to students of color and nontraditional students is inappropriate. These students' lives have multifaceted dimensions and asking them to forego their culture, their belief systems, and their familial support is untenable. Rendon et al. (2000) and Tierney (1992) suggested these students should forego the new identity development stage and develop a dual identity. Developing a new identity would cause the students to lead a bicultural lifestyle and be competent in their own culture and the institution's culture.

Student-centered Developmental Models--Cognitive-Structural Theories

Development theories began with Freud (1949) in the late 19th and early 20th century, and his thoughts about how personality developed over time. Horney (1937), Murray (1938), Sullivan (1938), and Erikson (1950) continued to expand upon Frued's (1949) work and expanded the theoretical knowledge in adult and personality development in clinical psychology. Harlow (1969) was one of the first to carry out empirical research, albeit on rhesus monkeys, to test personality development. Other empiricists followed him in studying personality development and include Block (2001), Costa and McCrae (1985), Elder (1980), Helson and Moane (1987), and Kagan (1971) who contributed to the body of work in adult and personality development.

During the 1990s, Baltes (1997) and Heckhausen (1997) forged new theories focusing on the cognitive and motivational factors used as coping mechanisms in aging. McCrae and Costa (1999) focused on personality traits developed from genetics rather than experience in their Five Factor Model. However, traditional theories of adult development focus on the social structures of life to explain why people change with age. For example, Levinson et al. (1978) produced *The Seasons of a Man's Life*, and Levinson (1997) wrote *The Seasons of a Woman's Life*. These researchers used social structures such as career, marriage, and family to define the eras of an adult's life.

Levinson's Life Cycle Theory

Levinson (1997) and Levinson et al. (1978) credit Freud (1949), Jung (1971), and Erikson (1950, 1963) as influences for their historical and groundbreaking work in personality and adult development theories. Levinson (1978) stated that Erikson (1950) was the theorists most influential on his work. Erikson studied human development utilizing a historical-social-psychological approach. Erikson conceived eight ego stages

focusing on the specific age range within the life cycle. The first five stages were an overarching explanation of infancy to teenage years. The last three stages were an overarching explanation of adulthood, broken down into Intimacy vs. Isolation, Integrity vs. Despair, and Generativity vs. Stagnation. Levinson et al. (1978) and Levinson (1997) expanded Erikson's (1950) three ego stages of adulthood by responding to three major considerations: Evolution of the Life Cycle, Conception of the Life Cycle, and How Adults Develop Throughout the Life Cycle.

Levinson et al. (1978) and Levinson (1997) utilized a biographical method to reconstruct the life stories of 40 men (1978) and 45 women (1997) to find answers to their three major considerations in adult development. Levinson employed various demographic characteristics in both studies to ensure a cross-cultural representation of adults. The samples were all American born and of different races, educational attainment, social classes, marital statuses, and religions. The findings in the men and the women studies showed no variation in age range corresponding to the eras of the human life cycle.

In contrast to other stage theories, such as Erikson's (1963) theory on human development that proposed eight ego stages, Levinson (1997) and Levinson et al. (1978) studied the life cycles and human development that resulted in four eras: Childhood and Adolescence (0–22), Early Adulthood (17–45), Middle Adulthood (40– 65), and Late Adulthood (60+). Erickson's (1963) five stages focused on childhood and adolescence compared to Levinson's (1978) eras of adult development. Erikson (1963) and Levinson et al. (1978) described adult development in three stages or eras with approximately the same number of age groupings. The difference between Erickson and Levinson's work was that Levinson's work purposed four sub-phases within each adulthood era.

Levinson et al. (1978) wrote that at the end of the Adolescence era and the beginning of the Early Adulthood era, the Early Adult Transition (ages 17-22 years) phase begins with the separation of men and women from their families and with them developing into adults. The next sub-phase, Entering the Adult World (ages 22-28 years) (1978) or Entry Life Structure for Early Adulthood (Levinson, 1997), is described as the structure building era, where choices are made regarding love, marriage, or lifestyle. The Age 30 Transition (ages 28-33 years) phase provides a period of reflection and developmental difficulty for men and women. The Settling Down (ages 34-39) (Levinson et al., 1978) or Culminating Life Structure for Early Adulthood (Levinson, 1997) is the phase in which security is developed and involves transition to a more senior position in the world.

Levinson et al. (1978) wrote that the Novice Phase incorporates the first three phases of the Early Adulthood era, as being the phase when "the mentor relationship [was] one of the most complex, and developmentally important a man [could] have in early adulthood" (p. 97). Though Levinson et al. (1978) did not specifically define the characteristics of a mentor, they described a mentor as a more senior male who helps the male mentee realize his occupational dream. Levinson (1997) found this to be different for women. He and others (Roberts & Newton, 1987) concluded that women are less likely than their male counterparts to have an occupational-related dream. Levinson (1997) stated this is partially due to the lack of exposure females have to mentors during this period.

The women in Levinson's (1997) study, conducted in the early 1990s, ranged in ages from 35-45 years. According to Levinson (1997), the participants of the study entered the age of mentoring (17-33 years of age) between the years of 1964 and 1974

and exited the mentoring stage between 1980 and 1990. Mentoring of women was not as important in the middle 1970s based on the conclusions of Levinson (1997) and Roberts and Newton (1987). As previously stated, Levinson (1997) suggested this was partially due to lack of exposure females had to mentors during this period Therefore, the results of Levinson (1997) may be different for women in the 21st century, as mentoring is an important concept for males and females in today's educational setting. Contrary to Levinson (1997) and Levinson et al. (1978), Maton et al. (2011) found mentoring to be the strongest indicator of satisfaction for both males and females. Again, Levinson (1997), and Roberts and Newton (1997) concluded that women were less likely to have occupational dreams and rarely had a mentor. Kelly and Schweitzer (1999) stated that the sex of the professor or the student did not matter in mentoring, but the benefit was better advancement and grades for those students with a mentor compared to those who did not have a mentor.

Levinson et al. (1978) stated there was variability in the level of mentoring that occurred in the mentor-mentee relationship that lacked in consistency across all demographic characteristics of the participants. Emotions from the mentor can be inhibitive to the mentee if the mentor feared the mentee would surpass them. Like any other relationships, many mentor-mentee relationships ended with acrimonious feelings between the two individuals.

Following an era when mentoring is most important is an era when men and women are more settled and do not require interaction with a mentor (Levinson, 1997; Levinson et al., 1978). The Middle Adult Era begins with the Mid-Life Transition (ages 40-45 years). The Mid-Life Transition incorporates the realization of new inner needs. The next phase, Entering Middle Adulthood (ages 45-50 years) (Levinson et al., 1978) or

Entry Life Structure for Middle Adulthood (Levinson, 1997), is the phase in which relationships become the central components of life. The Age 50 Transition is a more reflective stage with introspection. It is a stage of how one views one's self and the world and reflects on how things have turned out. Culmination of Middle Adulthood (ages 55-60 years) (Levinson et al., 1978) or Culminating Life Structure (Levinson, 1997) for Middle Adulthood represents the completion and success of the Middle Adulthood Era. The final transition is the Late Adult Transition (ages 60-65 years). In this phase men and women reflected on accomplishments, contemplated mortality, and built the bridge to Late Adult Era (age 65+ years) (Levinson et al., 1978) or Entry Life Structure for Late Adulthood (Levinson, 1997). This era is the final stage and marks the completion of the life cycle.

Swanson (1992) claimed there had been little empirical research on Levinson's theory and, as Ornstein and Isabella (1990) stated, there lacked a link between identifiable age groups and attitudes, as suggested by Levinson et al. (1978) and Levinson (1997). Ornstein and Isabella (1990) suggested the failure for the link was the age of the individual and their attitudes when compared to attitudes of their peers in the age group. Cleveland and Shore (1992) reported inconsistent age effects when testing Levinson et al.'s (1978) and Levinson's (1997) theory. Cleveland and Shore (1992) suggested that Levinson failed to account for the interaction of age and work.

Many writers have reviewed Levinson's (1997) and Levinson et al.'s (1978) books over the years with various interpretations. Criticisms of Levinson (1997) and Levinson et al. (1978) have included the delimitation of the study with regard to sample size and age range as well as conceptual and stylistic concerns. Hughes (1996) wrote that *Seasons of a Woman's Life* (Levinson, 1997) lacked supportive information for a

qualitative study that suggested that women constantly redefine their place in the world. Richardson (1979) analyzed Levinson et al.'s (1978) work as having shortcomings in conceptual framework and style. Richardson (1979) stated Levinson's writing style is metaphorical and does nothing to advance standardization of terminology. Allen (1978) characterized Levinson et al.'s (1978) work as nothing short of contributing to a hedonistic, narcissistic, and fatalistic culture of the modern 20th century, a "Cult of Development" (p. 546). Allen suggested the life cycle theory views the modern person as narcissistic, shallow, and without commitment at the loss of personal integrity and strength.

Many reviewers have positively evaluated Levinson's (1997) and Levinson et al.'s (1978) works over the years. Hughes (1996) proclaimed Levinson et al.'s (1978) book was profoundly remarkable with impact in the world of adult development. Richardson (1979) extoled Levinson et al.'s (1978) work as a provocative piece that inspires more hypotheses and research. Allen (1978) concurred with Richardson (1978) that the book is ingenious with its intricate details and work. Though reviewers provide mixed reviews, it does not diminish the contribution Levinson (1997) and Levinson et al. (1978) have made to the field of adult development.

<div align="center">Mentoring</div>

Mentoring is a concept and practice nearly as old as the written word. It appears in Homer's (Finely, trans. 1978) poem, *The Odyssey*. In Homer's poem, the goddess Athena disguised as Mentor guides Telemachus on a mission for his father. In the end, mentoring was a transformative process in which Telemachus developed a new and fuller identity of his own. Historically speaking, mentoring has been about developing a new identity for the protégé. Speizer (1981) stated the term sponsor, instead of mentor, was

widely used in literature until 1970, but then mentor re-entered the educational lexicon during the 1970s. Levinson et al.'s (1978) limited description of a mentor was not much different from Homer's description, with the exception that the mentor was male in his earlier work.

The current description of a mentor has many facets. Anderson and Shannon (1988) defined five functions of mentoring that help facilitate identity development: teaching, sponsoring, encouraging, counseling, and befriending. In Levinson (1997) and Levinson et al. (1978), stage theory of adult development, the era of Early Adulthood (ages 17-33 years), is the phase when mentoring is most important. The inference from Levinson's stage theory suggests the exclusion of those over 33 years of age from mentoring, and considering the average age of a doctoral student is 33 years of age (National Center of Education Statistics, 2000), this excluded 50% of all doctoral students from needing a mentor. The needs of a doctoral student over 33 years of age may be different from a 17- to 33-year-old and may require a modified definition of mentoring to show that the need for mentoring extends beyond Levinson et al.'s (1978) Age 30 Transition.

<center>Definitions of Mentoring</center>

Merriam (1983) suggested that the clear lack of conceptualization for mentoring leads to a state of confusion about what a mentor is and what role he/she plays in student development. To substantiate this point, Jacobi (1991) found 15 definitions of mentoring, of which 13 are listed (Blackwell, 1989; Ferguson, 1989; Kram, 1985; Lester & Johnson, 1981; Levinson et al., 1978; Moore & Amey, 1988; Moses, 1989; Phillip-Jones, 1982; Roche, 1978; Schmidt & Wolfe, 1980; Shadley, 1989; Speitzer, 1981; Zey, 1984, as cited in Jacobi, 1991). Mertz (2004) identified four additional definitions of

mentoring (Fagenson, 1989; Gaskill, 1991; Kanter, 1977; Ragins & Cotton, 1991, all

cited in Mertz, 2004). More recently, Bozeman and Feeney (2007) identified more

definitions of mentoring (Bozionelos, 2004; Eby & Allen, 2004; McManus & Russell,

1997; Noe, 1988; Ragins, 1997; Ragins & Scandura, 2000; Scaundra & Schriesheim,

1994; Tepper, 1995; Young & Perrewe, 2000, all cited in Bozeman & Feeney, 2007).

The previously listed definitions contain some variation in their meaning of the word

mentoring. Johnson, Rose, and Schlosser (2007) studied many of these variations and

identified nine common components of the mentoring construct:

> a) mentorships are enduring personal relationships, b) mentorships are
>
> increasingly reciprocal and mutual, c) compared to protégés, mentors
>
> demonstrate greater achievement and experience, d) mentors provide
>
> direct career assistance, e) mentors provide social and emotional support,
>
> f) mentors serve as models, g) mentoring results in an identity
>
> transformation in the protégé, h) mentorships offer a safe environment for
>
> self-exploration, i) mentorships generally produce positive career and
>
> personal outcomes. (pp. 51-52)

Johnson (2002) and Johnson and Ridley (2008) separated mentoring definitions

into formal versus informal mentoring. Johnson (2002) described informal mentoring as

spontaneous and gradually building into a more stable relationship, whereas Johnson and

Ridley (2008) defined formal mentorship as a structured, institutionalized, and sanctioned

relationship. Nettles and Millet (2006) defined mentoring as involving an intimate

relationship and contributing to the socialization process of the student. Anderson and

Shannon (1988) defined mentoring as follows:

Mentoring can be defined as a nurturing process in which a more skilled or more experience person, serving as a role model, teaches, sponsors, encourages, counsels and befriends a less skilled or less experienced person for the purpose of promoting the latter's professional and/or personal development. Mentoring functions are carried out within the context of an ongoing, caring relationship between the mentor and protégé. (p. 40)

Theoretical Background of Mentoring

Johnson et al. (2007) reviewed the five most influential theoretical student-faculty mentoring models (Levinson et al., 1978; Kram, 1985; Hunt & Michael, 1983; O'Neil & Wrightsman, 2001). Johnson et al. (2007) stated that Levinson et al. (1978) inspired qualitative studies of adults as the justification for researching mentoring relationships. Kram (1985) updated the concepts of mentor roles and behaviors. Kram (1985) suggested that the two constructs of mentoring are career and psychosocial. In the career construct, the mentor helps the protégé develop the characteristics needed for career development. The mentor serves as a support system for the protégé in the psychosocial construct. Tenenbaum, Crosby, and Gliner (2001) verified Kram's (1985) model with 189 graduate students. Tenenbaum et al. (2001) verified the two proposed constructs and found another that they labeled networking. Hunt and Michael (1983) suggested that mentoring is a reciprocal relationship across five factors: environmental, mentor characteristics, protégé characteristics, stage, and duration of mentorship that benefits both parties. O'Neil and Wrightsman (2001) proposed the Sources of Variance Model that included four factors: mentor, personality, environmental, and diversity. They suggested that the mentor has specific role functions: stimulating ideas, giving information, and helping mentee define the new emerging self.

Tenenbaum et al. (2001) surveyed 198 graduate students using a psychosocial scale, a scale to measure their satisfaction with their advisor, a scale to measure the working relationship with their advisor, and the last scale about scholarly productivity. The authors extracted three factors from a principal component analysis and reported these three factors accounted for 63% of the variance. Tenenbaum et al.'s (2001) study showed a significant chi-square that revealed men were more likely to have male advisors than were women. Their study showed a significant difference between female advisors who provided more psychosocial support than did male advisors.

Maton et al. (2011) studied 1222 African American, Latino/Hispanic, Asian American and Caucasian doctoral psychology students, and found mentoring to be the strongest indicator of satisfaction across the group. The authors found that the diverse population had both similarities and differences in experiences and perspectives. One of the similarities was the doctoral students' integration into the university, through connections with their peers, advisors, professors, and departmental staff. Maton et al. (2011) found the access to mentoring served the functions of guidance, emotional support, network opportunities, and information. Cronan-Hillix, Gensheimer, Cronan-Hillix, and Davidson (1986) surveyed 90 graduate students, 50% who had a mentor, to ascertain the students' description of a good mentor. The authors found that the mentor needed to be supportive, competent, empathic, and compassionate.

Straus, Johnson, Marquez, and Feldman (2013) interviewed 54 professors at the University of Toronto Faculty of Medicine and the University California at San Francisco, School of Medicine to study their role as a mentor in mentoring, failed mentoring, and their experiences as a mentor. One identified characteristic of mentoring was altruism, as the authors stated, "The mentor not prioritizing the mentee's best

interests can lead to a failed mentoring relationship..." (p. 22). Other characteristics identified were honesty, active listening, an experience, professional accomplishment, and being a good advisor. In the same study, Straus et al. (2013) focused on the mentor-mentee dyad by asking mentors for characteristics of what makes a good mentee. The mentors stated that a good mentee takes responsibility for "driving the relationship," is respectful of time by attending meetings prepared, being an active listener, and willing to take advice. Straus et al. (2013) stated that an effective mentor takes several key actions: "providing career guidance, offering emotional support, and focusing one work/life balance" (p. 32).

Further, Straus et al. (2013) identified five characteristics of a "successful mentoring relationship: reciprocity, mutual respect, clear expectations, personal connection, and shared values" (p. 41). The authors identified six factors that contribute to an ineffective mentoring relationship. An ineffective mentoring relationship began with an inexperienced mentor, "conflicts of interest, lack of commitment, lack of communication, personality differences, perceived (or real) competition" (p. 42).

In his study of African Americans and mentoring, Thomas (2001) found that African Americans were more likely to search outside their corporate departments for mentors. Thompson's (2005) qualitative study of African Americans found the relationship with the faculty was the largest reported factor for their persistence to complete. Johnson-Bailey and Cervero (2004) found mistrust as the greatest factor in preventing cross-race advising, as well as the effects of unacknowledged racism incidents by faculty. Johnson-Bailey and Cervero (2004) found that power differentials amplified cross-racial relationships issues when compared to same race mentor-mentee relationships. Sedlacek, Benjamin, Schlosser, and Sheu (2007) found African American

doctoral students believed that African American professors were more culturally competent than Caucasians.

According to Liang, Tracy, Kauh, Taylor and Williams (2006), cross-race advising was an issues with Asian American students. The authors stated that research was lacking regarding Asian American mentoring, and the studies that had been performed suggested that Asian American students were more likely to seek out vocational types of mentors instead of academic mentors. Liang et al.'s (2006) qualitative study found that Asian American females were less likely than their Caucasian counterparts to seek out a mentor. Liang et al. asserted that cross-cultural barriers may prohibit Caucasian professors from recognizing Asian American students' interests in a mentor-mentee relationship. Liangs' et al. study showed that 42.6% of Asian Americans compared to 27.8% of Caucasians did not have a mentor.

Castellano and Jones (2003) stated the mentor should understand the cross-cultural differences of the Hispanic culture and Caucasian culture. Poock (1999) suggested the challenge for Hispanic students was finding mentors who were, in cultural terms, aware and considerate of their background. Gloria and Castellanos (2006) found Latina/Latino doctoral students "[had] substantially negative training experiences and struggles beyond those common to doctoral training …" (p. 179). Ibarra (2001) stated that Hispanic students often have some degree of contact, though not comparable to Caucasian students.

Jacobi (1991) found that for females, mentoring provided emotional support, but Bogat and Redner (1985) found women doctoral students received fewer benefits, fellowships, or publishing opportunities from their mentors than did men doctoral students. Ragins and Scandura (1997) used a "match-pair design to control for structural

artifacts and [provided] pure estimates of gender effects" and found that males and females reported no difference in business mentor relationships (p. 951). O'Neil and Wrightsman (2001) found that "gender role and sexism" to be restrictive of the female potential. Clarke, Harden, and Johnson (2000) found that 11% of women reported concerns with mentors regarding their gender.

Russell and Horne's (2009) qualitative study about Lesbian, Gay, Bisexual, and Transgender (LGBT) individuals found that "persistent stigma associated with LGBT identities and the pervasive prejudice and frequent discrimination that accompany this stigma" (p. 195). Lark and Croteau (1998) qualitative study of LGBT doctoral students found that LGBT issues were often treated as "nonissues," and one participant regarded the city, where the university was, as "you don't realize what an oppressive environment it [was]…" (p. 762). Lark and Croteau (1998) stated that mentors should avoid exclusive language and understand boundaries in relation to the mentees' sexual orientations. Lark and Croteau reported all 14 participants entered their program expecting mentoring.

<p style="text-align:center">Findings Regarding Undergraduate Mentoring</p>

White (2013) studied eight African American males in a qualitative study to document their collegiate experience and their access to mentoring. White found all eight had participated in a mentoring program and found that an effective mentor was described as someone who understood first-hand the struggles of minority students. White's findings echoed the results of doctoral student mentoring for African Americans from other researchers (Thompson, 2005; Johnson-Bailey & Cervero, 2004; Sedlacek, Benjamin et al., 2007; Thomas, 2001).

Hoyt's (2013) qualitative study of eight African American females from low socio-economic backgrounds found they were able to break the "glass ceiling" of

education with the help of a mentor of similar background. Cross and Lincoln (2005) found the issue of finding an African American female mentor was hard due to retention and the hiring of minorities. Johnson-Bailey and Cervero (2002) stated the issue lies in a lack of cross-cultural mentoring due to a historical basis and latent hostilities. Foucault (1980) stated that African Americans' inability to reconcile the two cultural issues originated from the enslavement of their ancestors. Galbraith and Cohen (1995) found first generation African American students often had problems reconciling differences between higher education culture and the student's own culture, but with a mentor to help explore the differences in cultural experiences, from each point of view, the student developed a better way to reconcile the expectations of each point of view.

Crisp (2011) performed a quantitative study of 278 participants, Caucasian ($n = 139$) and Hispanic ($n = 139$) students, to discern the degree of mentoring received. Caucasian and Hispanic undergraduate students reported a similar degree of mentoring. Caucasian and Hispanic students reported similar psychological support, as well the existence of a role model, Caucasians and Hispanic. Caucasian students reported their mentor had a higher academic subject knowledge support compared to how Hispanic students scored their mentors. Hispanic students reported higher degree and career support than Caucasian students. The author performed a structural equation model and found that students' age was a negative influence, and mentoring had a significant direct effect on undergraduate persistence.

Rice and Brown (1990) surveyed 144 undergraduates to investigate the relationship between developmental status and readiness to be a mentee. The authors found students who were receptive to new relationships were more interested in pursuing mentoring, but that they may ironically, need mentoring less than other students.

Students, who the authors described as reticent, often needed the mentoring more but were less likely to pursue it than other students.

Sambunjak, Straus, and Marusic (2010) performed a methodical review of nine articles, out of 3,431 potential articles, for "qualitative research on the meaning and characteristics of mentoring in academic medicine" (p. 1). The authors found 10 desired characteristics of a mentor: altruistic, understanding, patient, honest, responsive, trustworthy, nonjudgmental, reliable, an active listener, and a motivator. The mentor should also be accessible, dedicated to developing an important relationship with the mentee, and have the mentee's best interest at the center of the relationship. The mentor should be a senior in the field, knowledgeable, and experienced.

Theories regarding mentoring are abundant. Similarly, there is no shortage of empirical studies regarding mentoring of undergraduates. There is a general lack of research about doctoral student mentoring, which may be a function of the assumption promoted by Levinson et al. (1978) that the need for mentoring decreases with age. Given that, doctoral students have an average age of 33 years (NCES, 2000). It may be important to investigate if that assumption holds true in an educational setting with doctoral students

CHAPTER III

METHODOLOGY

The purpose of this study was to clarify doctoral students' desired characteristics in a mentor based on age groups suggested by Levinson et al.'s (1978) and Tinto's (1993) three stages of persistence (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation). The purpose of this chapter is to describe the participants and explain the instrument, methodology, and procedures used to assess the mentoring characteristics desired by doctoral students.

Participants

The population for this project consisted of doctoral students enrolled in any degree institution within the United States, were citizens of the United States, and over the age of 22.

Procedure

The Institutional Review Board (IRB) at The University of Southern Mississippi granted permission to progress with the study (see Appendix A). The researcher sent invitations containing the Qualtrics link to participate in the study via electronic means (see Appendix B) on Facebook, LinkedIn, and email. The researcher posted the IRB approval form, the demographic survey (see Appendix C), the Ideal Mentor Scale (IMS) (see Appendix D), and the Advisory Working Alliance Inventory-Student Version (AWAI-S) (see Appendix E) on Qualtrics. The researcher joined 35 Facebook pages, such as AERA, Black & Brown @ AERA, Latina/o Studies Initiative, The National Association for Multicultural Education, Queer Ph.D. Network, American Sociological Association, National Alliance of Black School Educators, Group of the American Educational Research Association, Latina/o Studies Association, and Queer Studies SIG

among others. The researcher joined 15 LinkedIn pages for The University of Southern Mississippi, The University of Mississippi, Mississippi State University, and William Carey University among others. The study was also placed on Twitter, but to the researcher's knowledge there was no response from that venue. These sites were re-visited three times during the seven-week collection period to raise awareness among their members to participate in the study. This resulted in 256 people starting the survey and 145 completions.

<div align="center">Instruments</div>

Ideal Mentor Scale

Rose (2000) developed the Ideal Mentor Scale to determine which functions and characteristics best defines a mentor. The 34-item inventory, on a five-point scale, has three subscales: Integrity, Guidance, and Relationship. The Integrity subscale consists of 14 items and purports to measure whether a mentor has principles and virtues that should be emulated. The Guidance subscale consists of 10 items that purport to measure mentoring styles; high scores indicate a mentor who is helpful. The Relationship subscale consists of 10 items that purport to measure the level of relationship the mentee would like to have with a mentor; high scores indicates a mentee who desires a strong personal relationship with a mentor.

Individual results can be used to indicate a level of personal preferences for desired characteristics in a mentor that would allow universities or departments to better match a mentor with a mentee. The ratings range from one through five. One is interpreted as not at all important, a rating of three is interpreted as moderately important, and a rating of five indicates a characteristic that is extremely important to the doctoral student. In this study, the means are calculated for each item, and then for each subscale

for comparison between the two age groups. Interpretations of each item's mean scores are similar to the individual interpretation. The item's mean scores still relate the importance of a particular characteristic, but it is interpreted for the group. The subscale mean scores are calculated for two different interpretations. The first interpretation is the comparison between the two age groups. The interpretation of the compared mean scores is to test for significant differences between the age groups. The second interpretation of the subscale mean scores is to identify the importance of the subscale to doctoral students. Subscales with a high mean score indicates overall characteristics that the groups finds important, whereas subscales with lower mean scores would indicate less important characteristics.

Rose has analyzed the IMS three times (2000, 2003, 2005), establishing cross-validation of the scale. Content validation was performed prior to the 2000 administration with kappa coefficients ranging from .65 to .85. Rose (2000) administered the IMS to doctoral students at The University of Iowa and Indiana University to examine its connection to gender and Tinto's three stages of persistence. Both samples showed significant differences for the subscales using one-way analyses of variance (ANOVA) repeated measures tests, respectively: Iowa, $F(2, 498) = 859.6$, $p < .001$; Indiana, $F(2, 758) = 1727.6$, $p < .001$). The contrast from the analyses revealed that Integrity, based on the F-statistic, was significant but somewhat different than Guidance (Iowa, $F(1, 249) = 30.9$, $p < .001$; Indiana, $F(1, 379) = 100.6$, $p < .001$) and Relationship (Iowa, $F(1, 249) = 1394.7$, $p < .001$; Indiana, $F(1, 379) = 3140.9$, $p < .001$). The contrast from the analyses also revealed that Guidance, based on the F-statistic, was different than Relationship (Iowa, $F(1, 249) = 888.6$, $p < .001$; Indiana, $F(1, 379) = 1705.4$, $p < .001$).

Rose performed a 2 x 3 factorial multivariate analyses of variance (MANOVAs) on each sample. Both samples (Iowa, n= 250, Indiana, n = 380) showed significant main effects for sex (Iowa: $\Lambda = .88$, $F(3, 372) = 5.61$, $p < .001$; Indiana: $\Lambda = .96$, $F(3, 372) = 5.61$, $p = .001$). Rose also compared Tinto's three stages and found a significant MANOVA in the Iowa sample ($\Lambda = .97$, $F(6, 480) = 1.34$, $p = .024$). The Integrity subscale was significant in Iowa, $F(1, 242) = 11.89$, $p = .001$), and in Indiana, $F(1, 374) = 12.17$, $p = .001$). The Guidance subscale was not significant in Iowa, $F(1, 242) = .72$, $p = .490$), and Indiana, $F(1, 374) = .48$, $p = .617$). The Relationship subscale was significant in the Iowa sample, $F(2, 242) = 3.25$, $p = .041$), as well as in Indiana, $F(2, 374) = 3.65$, $p = .027$). Rose (2000) reported Cronbach's alpha for the three subscales: Integrity = .84, Guidance = .83, and Relationship = .77.

The primary goal of Rose's (2003) study was to "create a psychometrically sound measure of the mentoring preferences of doctoral students" (p. 476). Rose performed principal factor analysis on the three IMS subscales: Integrity, Guidance, and Relationship. The analysis revealed significant intercorrelation "(e.g., from sample 2 data: Integrity and Guidance, .55; Integrity and Relationship, .33; Guidance and Relationship, .29; from sample 3 data: Integrity and Guidance, .52; Integrity and Relationship, .40; Guidance and Relationship, .36)" (p.484). The three factor-based subscales had alpha reliability coefficients that varied between .77 and .87 (sample 2) and from .77 to .84 (sample 3) and were similar to Rose's (2000) study.

Rose (2005) tested the following:

. . . . five academic and demographic variables on students' scores on the IMS, an overall four-way multivariate analysis of covariance (MANCOVA) was performed with gender, citizenship, field of study, and stage of persistence as

independent variables, age as a covariate, and the three factor-based IMS scales as

dependent variables. (p. 71)

The four-way multivariate analysis of covariance (MANCOVA) returned

significant differences for demographics, "but not academic variables: women scored

higher than men on Integrity, international students scored higher than domestic on

Relationship, and age was inversely related to Relationship scores. [There were] no

group differences found on the Guidance scale" (p. 53). The analysis revealed no

significant two-way multivariate interaction for any of the six interactions. The

multivariate main effects for gender were significant ($\Lambda = .97$, $F(3, 514) = 5.62$, $p < .01$)

as well as the multivariate main effects for citizenship ($\Lambda = .94$, $F(3, 514) = 11.70$, $p <$

.01). Field of study and stage of persistence had no significant multivariate main effects.

Rose (2005) reported Cronbach's alpha for the three subscales: Guidance = .88,

Relationship = .81, and Integrity = .90.

Bell-Ellison and Dedrick's (2008) study was an effort to establish construct

validity from Rose's (2003) IMS and test whether males and females have different

expectations of their mentor. These authors used confirmatory factor analysis using

robust weighted least squares (WLS) to examine the scores from a sample of 224 doctoral

students. The results did not show a good fit for the three subscales (CFI = .838, SRMR

= .096, RMSEA = .102). Bell-Ellison and Dedrick stated that the results "should be

viewed as preliminary given the size of the sample and the fact that students came from

one university and were not randomly selected" (p. 565). Bell-Ellison and Dedrick's

(2008) reported Cronbach's alphas for the three subscales of Guidance = .79,

Relationship = .79, and Integrity = .87.

The present study reported two sets of Cronbach's alphas: Ideal and Actual. The Cronbach's alphas for the IMS-Ideal were Guidance = .81, Relationship = .83, and Integrity = .82 were consistent with Rose (2000, 2005) and Bell-Ellison and Dedrick's (2008). The Cronbach's alphas for the IMS-Actual were Guidance = .92, Relationship = .81, and Integrity = .93, which were higher than Rose (2000, 2005) and Bell-Ellison and Dedrick's (2008). The Relationship subscale was constant with the previous studies of Rose (2000, 2005) and Bell-Ellison and Dedrick's (2008) (see Table 1).

Table 1

Cronbach's Alpha for the IMS for Guidance, Relationship, and Integrity Subscale According to Year of Study

Variable	Guidance	Relationship	Integrity
Year of Study			
2000 (Rose)	.83	.77	.84
2005 (Rose)	.88	.81	.90
2008 (Bell- Ellison)	.79	.79	.87
2014[a] (Brent)	.81	.83	.82
2014[b] (Brent)	.92	.81	.93

[a]Ideal. [b]Actual.

Advisory Working Alliance Inventory-Student Version

Schlosser and Gelso (2001) developed The Advisory Working Alliance Inventory-Student Version (AWAI-S) (Appendix F) to evaluate the relationship between the advisor and advisee. The AWAI-S is a 30-item self-report inventory with three

subscales: Rapport, Apprenticeship, and Identification-Individuation. The inventory

uses a 5-point Likert scale. The rapport subscale consists of 11 items and purport to

measure the relationship between the advisor and advisee, or a mentor and a mentee.

High scores indicate a positive relationship, and conversely low scores indicate a

negative relationship. The 14-item Apprenticeship construct assesses the influence an

advisor has on an advisee's professional development. High scores indicate a positive

influence; conversely, low scores indicate a negative influence. The Identification-

Individuation subscale is limited to five items and measures the level to which a

participant wants to identify with the advisor. This subscale is entirely reverse scored.

The reversed high scores from the participants indicate a positive identification with the

advisor; conversely, low scores indicate a negative participant to advisor identification.

Schlosser and Gelso (2001) stated:

> It appears that an advisory working alliance characterized by high scores on all
>
> three AWAI subscales may be characteristic of a mentoring relationship.
>
> Conversely, advisees who consistently rate their advisory working alliance poorly
>
> are likely not in a mentoring relationship with that advisor. (p. 165)

Schlosser and Gelso (2001) "reported an alpha of .90 to .95 for the total scale, .84

to .93 for Rapport, .85 to.92 for Apprenticeship, and .57 to .77 for Identification-

Individuation" (p. 161) . Convergent validity was reported as high due to the correlations

between the AWAI and the Counselor Rating Form ($r = .80$, $p < .001$) and the subscales

for the AWAI-S: Rapport ($r = .76$, $p < .001$), Apprenticeship ($r = .71$, $p < .001$), and

Identification ($r = .65$, $p < .001$). The AWAI-S was developed as a complementary scale

to the Advisor Working Alliance Inventory-Advisor. Schlosser and Gelso (2005)

reported internal consistency (Cronbach's α between .88 and .90 for the total scale and

for the subscales Rapport = .90, Apprenticeship = .72, Identification = .62) and the 2-week test- retest reliability (*r* between .78 and .88). Schlosser and Gelso (2005) reported that the "AWAI-A did not significantly correlate with the extraversion measure (*r* = -.11) providing evidence of discriminant validity" (p. 653). The authors reported coefficient alpha of .89 for the total AWAI-A, and the subscales had coefficient alphas of .89 (Rapport), .74 (Apprenticeship), and .71 (Task Focus). This study supported the previous Cronbach's alpha findings of the AWAI-S subscales (Apprenticeship = .93, Rapport = .94, and Identification = .73). Item 15 was removed from this study (see Table 2).

This present study reported the subscale Identification-Individuation originally had a Cronbach's alpha = .68 with the inclusion of Item 15, "I feel like my advisor expects too much from me." A crosstabs was performed on the reverse coded Identification -Individuation subscale, and Item 15 did not correlate with the other items in the subscale. The responses for the other items were scored mostly in the "Disagree" and "Strongly Disagree." Item 15 responses were nearly equally distributed across the "Strongly Agree to Strongly Disagree." Item 15, "I feel like my advisor expects too much from me," is not a negatively worded question, but in this researchers view is an evaluation by the participant of the workload assigned by the mentor (see Table 2).

Table 2

Cronbach's Alpha for the AWAI-S for Apprenticeship, Rapport, and Individuation-

Identification Subscale by Year of Study

Variable	Apprenticeship	Rapport	Identification
Year of Study			
2001 (Schlosser)	.85	.84	.57
2001 (Schlosser)	.92	.93	.77
2005 (Schlosser)	.72	.90	.62
2014 (Brent)	.93	.94	.68
2014* (Brent)	.93	.94	.73

*Excludes Item 15 in the Identification subscale.

Analysis of Data

This study examined doctoral students' desired characteristics of mentoring

based on two age groups (22-33 years and 34 years and over). This study examined

Tinto's (1993) three stages of persistence, and if there were any relationships among the

AWAI-S and the IMS subscales. Cronbach's alpha was used to assess the reliability for

each factor. The first two research questions were analyzed by using a MANOVA to test

for group differences. The third research question was analyzed using a mix-model

MANOVA to analyze. The within-subjects variables were Integrity ideal mentor,

Integrity actual mentor, Guidance ideal mentor, Guidance actual mentor, Relationship

ideal mentor, and Relationship actual mentor with the between-groups factor being

Tinto's (1993) three stages of persistence (Transition and Adjustment, Attaining

Candidacy, and Completing the Dissertation).

CHAPTER IV

ANALYSIS OF DATA

Participants

There was a convenience sample of one hundred forty-five doctoral students who completed the survey, the sample consisting of 101 females and 44 males. The participants were from 35 states and the District of Columbia. The majority of participants were Caucasians (67.6%), African Americans (15.9%), or Latino/Hispanic (7.6%). The participants self-identified as heterosexual (82.8%) and LGBTQI (16.6%), and one participant who did not respond. The participants averaged 36 years of age, and the ages ranged from 22 to 68 years. The modal doctoral student was pursuing a Ph.D. was a Caucasian heterosexual female with an average age of 36 years (see Table 3 and Appendix H and I).

Table 3

Frequencies and Percentages of Demographic Variables

Variable	f	%
Sex		
Female	101	69.7
Male	44	30.3
Total	145	100.0
Race/Ethnicity		
African American	23	15.9
Afro-Caribbean	2	1.4

Table 3 (continued).

Variable	f	%
Asian Pacific Islander	2	1.4
Asian East Islander	1	0.7
Asian East Indian	1	0.7
Latino/Hispanic	11	7.6
Native American/Alaskan Inuit	5	3.4
Caucasian	98	67.6
Other	2	1.4
Total	145	100.0
Sexual Orientation		
Heterosexual	120	82.8
LGBTQI	24	16.6
No Response	1	0.7
Total	145	100.0

The doctoral student participants in this study were from different educational degree programs, Ph.D., Ed.D., J.D./M.D./D.O./Professional designations, and other doctoral degree programs. Following Tinto's (1993) suggested stages of doctoral student degree progress, the participants selected their stage of completion. The first stage (0 to 24 hours) had 33 participants, and the second stage (25 hours through comprehensive

exams) had 34 participants. The final stage (All But Dissertation [ABD] through

completion of dissertation) had 78 participants (see Table 4).

Table 4

Frequencies and Percentages of Education Variables

Variable	*f*	%
Degree Pursuing		
Ph.D.	122	84.1
Ed.D.	15	10.3
J.D./M.D./D.O./Professional		
designations	5	3.4
Other	3	2.1
Total	145	100.0
Stage of Degree Program		
0 - 24 hours	33	22.8
25 hours through comprehensive		
examinations	34	23.4
Comprehensive examinations		
ABD (All-but-dissertation) through		
completion of dissertation	78	53.8
Total	145	100.0

In this study, participants provided details regarding their mentor status, mentor assignment, and if they chose their mentor. Of the participants, 87.6% ($n = 127$) reported having a mentor, and 12.4% ($n = 18$) reported not having a mentor. Over 40% ($n = 59$) stated that their department assigned their mentor, 49% ($n = 71$) stated their mentor was not assigned, and 10.3% ($n = 15$) did not respond. Approximately 57% ($n = 82$) of respondents stated they chose their mentor, 33.1% ($n = 48$) stated they did not choose their mentor, and 10.3% ($n = 15$) did not respond. Participants selected the following functions that their mentors perform for them: Course Advisor ($n = 85$), Graduate School Advising ($n = 91$), and Dissertation Advising ($n = 103$) (see Table 5).

Table 5

Frequencies and Percentages of Mentoring Variables

Variable	f	%
Do you have a mentor?		
Yes	127	87.6
No	18	12.4
Total	145	100.0
Department assigned?		
Yes	59	40.7
No	71	49.0
No response	15	10.3
Total	145	100.0

Table 5 (continued).

Variable	*f*	%
Did you choose your mentor?		
Yes	82	56.6
No	48	33.1
No response	15	10.3
What functions does your mentor serve?		
Course advisor	85	57.0
Graduate school advising	91	61.1
Dissertation advising	103	69.1

Rose's (1999) Ideal Mentor Scale was designed to measure doctoral students'
desired characteristics in their mentor. This researcher modified the scale by adding
another column to it in order to compare the means between their ideal mentor and their
actual mentor. The scale was organized by the subscales (Integrity, Guidance, and
Relationship), and the columns were separated into ideal mentor and actual mentor. Rose
(1999) suggested scoring the scales by adding the total scores from each subscale and
dividing by the number of items on the subscale.

The first subscale, Integrity, consists of 14 items about the mentor's sincerity and
truthfulness. The mean of this scale was 4.50 on the Ideal-Integrity subscale indicating a
strong preference for a mentor who provides positive feedback, empowerment, respect,
and is someone worthy as a role model. The Actual Mentor-Integrity subscale mean
score of 4.15 was less than the Ideal Mentor-Integrity mean score. The effect size for this

analysis (d = .48) was found to be less than Cohen's (1988) coefficient for large effect (d = .80), which indicates the participants experienced less than ideal characteristics with their actual mentor. The participants consistently rated their ideal mentor higher than their current mentor on 13 of the 14 items. The single item for which the actual mentor (M = 4.36) outscored the ideal mentor (M = 4.18) was Item32, "My mentor works hard to accomplish his/her goals." This finding suggests the participants found it an important characteristic in an ideal mentor, but the actual mentor's ability to accomplish personal goals is more impressive. Item 26, "My mentor believes in me," had the highest mean (M = 4.76, SD = 0.55) in the Ideal Mentor-Integrity subscale. On the Actual Mentor-Integrity subscale, the mean (M = 4 .34, SD = 0.97) for Item26 had the highest mean for an Integrity characteristic.

The second subscale, Guidance, consists of seven items about the mentor's leadership ability and supervisory skills to assist doctoral students through the graduate school process. The mean of this scale was 4.30 indicating a preference for a mentor who provides insight and assisted with assignments emblematic of graduate school. The Actual Mentor-Guidance subscale mean score of 3.65 was less than the Ideal Mentor-Guidance mean score. The effect size for this analysis (d = .80) was found to be equal to Cohen's (1988) coefficient for large effect (d = .80). This score indicates a significant difference between the participants' ideal characteristics of a mentor and with their actual mentor. The participants consistently rated their ideal mentor higher than their current mentor on all seven items. Item six, "My mentor helps me to maintain a clear focus on my research objectives," had the highest mean (M = 4.65, SD = 0.52) on the Ideal Mentor-Guidance, and the Actual Mentor-Guidance scored (M = 3.96, SD = 1.11). The high mean score of 4.63 indicated that the insight and guidance a mentor gives to the

participant is the most important Guidance characteristic, but the actual mentor score was less than the ideal mentor. The difference indicating a less than satisfactory guidance relationship for doctoral students. The lowest mean scoring Current Mentor-Guidance ($M = 3.84$, $SD = 1.00$) was "My Mentor helps me plan the outline for a presentation of my research," and Actual Mentor-Guidance has a mean ($M = 3.33$, $SD = 1.30$).

The third subscale, Relationship, consists of 13 items about the rapport between the participant and the mentor. Doctoral students indicated a preference that was moderately important with a mean score of 2.98 for a mentor who bonds with his or her student through sharing views of life and personal concerns. The neutral mean score indicated this was not as important an issue for doctoral students as Integrity and Guidance subscales. The Actual Mentor-Relationship subscale mean score of 2.95 was less than the Ideal Mentor-Relationship mean score. The effect size for this analysis ($d = .02$) was found to be less than Cohen's (1988) coefficient for large effect ($d = .80$). This indicated that the participants experienced similar desired characteristics between their ideal and their actual mentor. The Relationship subscale had the lowest mean score ($M = 2.98$) of the three subscales, and the mean score was considered less than moderately important on the Likert style scale regarding the characteristics of a mentor. The ideal mentor item with the lowest mean was Item20, "My Mentor talks to me about his or her personal problems" ($M = 1.89$, $SD = 1.20$) with the actual mentor item having a slightly higher mean ($M = 2.10$, $SD = 1.32$). The ideal mentor item with the highest mean was Item30, "My Mentor helps me to realize my life vision" ($M = 4.07$, $SD = 0.99$), and the actual mentor results were $M = 3.61$, $SD = 1.23$ (see Appendices J and K).

The AWAI-S consists of three subscales, Rapport, Apprenticeship, and Identification-Individuation that purport to measure the relationship between the advisor

and advisee. The calculated mean scores of the scale indicated a positive relationship when the mean scores are high, and lower scores indicated a negative relationship. The Rapport subscale consisted of 11 items that purport to measure the relationship between the advisor and the advisee. The Relationship subscales had a reverse-coded mean score of 4.06. Schlosser and Gelso (2001) stated that this indicated positive relationship between the advisor and the doctoral student.

The second subscale, Apprenticeship, had a reverse-coded mean score of 3.50, which indicated a moderate influence of the advisor with the participants and the participants' professional development. The final subscale, Identification-Individuation (including Item 15), had a mean score of 3.47. According to Schlosser and Gelso (2001), the mean score of 3.47 indicates a moderate influence of the advisor as a role model. Identification-Individuation without Item 15 had a lower reverse-coded mean score and an elevated standard deviation ($M = 3.38$, $SD = .80$) compared with Item 15 ($M = 3.47$, $SD = .72$), "I feel like my advisor expects too much from me," from Schlosser and Gelso's (2001) Advisory Working Alliance Inventory-Student Version. A crosstabs was performed on the reverse coded Identification-Individuation subscale, and Item 15 did not correlate with the other items in the subscale. The responses for the other items were primarily "Disagree" and "Strongly Disagree." Item 15 responses were nearly equally distributed across the "Strongly Agree to Strongly Disagree" categories. Item 15, "I feel like my advisor expects too much from me," was not, in this researchers' view, a negatively worded question, but an evaluation of the workload assigned by the mentor (see Appendices L and M).

Hypotheses

Hypothesis 1

There is a significant difference in Rose's Ideal Mentor Scale (Integrity, Guidance, and Relationship) and Schlosser and Gelso's Advisory Working Alliance Inventory-Student Version (Rapport, Apprenticeship, and Identification-Individuation) between the two age groups.

With a medium posited effect size and an α equal to .05, 124 participants were necessary to perform an analysis with 90% power (Cohen, 1992). This hypothesis covered the issue of whether there were any significant differences in Rose's (1999) Ideal Mentor Scale (Integrity, Guidance, and Relationship) and Schlosser and Gelso's (2001) Advisory Working Alliance Inventory-Student Version (Rapport, Apprenticeship, and Identification-Individuation) between the two age groups. Using MANOVA, the overall model was statistically significant, $F(6, 130) = 2.297$, $p = .039$, $\eta_p^2 = 0.096$. This indicates there is a difference between the two age groups (22–33 and 34 years of age and older) regarding the desired characteristics of a mentor and an advisor. There were also several significant univariate findings.   There was a significant difference between the age groups on the AWAI-S Identification-Individuation subscale, $F(1, 135) = 4.464$, $p = .036$, $\eta_p^2 = 0.032$. This indicates a difference in the level to which the age groups want to identify with the advisor. Age group 34 years of age and over ($M = 3.52$) indicated a higher level of identification with the mentor than the age group 22-33 years of age ($M = 3.26$). There were no significant differences in the univariate test results for the other subscales: Integrity $F(1, 135) = 0.143$, $p = .706$, $\eta_p^2 = 0.001$, Guidance $F(1, 135) = 1.388$, $p = .241$, $\eta_p^2 = 0.010$, Relationship $F(1, 135) = 2.776$, $p = .098$, $\eta_p^2 = 0.020$, Rapport $F(1, 135) = 3.036$, $p = .084$, $\eta_p^2 = 0.022$, and Apprenticeship $F(1, 135) = 0.353$,

$p = .553$, $\eta_p^2 = 0.003$. The lack of significant differences in the other subscales indicates

the two age groups are more similar in the desired characteristics of a mentor or advisor

than different (see Appendix N).

Hypothesis 2

 There is a significant difference in Rose's Ideal Mentor Scale (Integrity,

Guidance, and Relationship) and Schlosser and Gelso's Advisory Working Alliance

Inventory-Student Version (Rapport, Apprenticeship, and Identification-Individuation)

among Tinto's three stages (Transition and Adjustment, Attaining Candidacy, and

Completing the Dissertation).

This research question investigated whether there were any significant differences

in Rose's Ideal Mentor Scale (Integrity, Guidance, and Relationship) and Schlosser and

Gelso's Advisory Working Alliance Inventory-Student Version (Rapport,

Apprenticeship, and Identification-Individuation) among Tinto's three stages (Transition

and Adjustment, Attaining Candidacy, and Completing the Dissertation).   A MANOVA

was performed to test for significant difference among the three stages. The results were

significant, $F(12, 260) = 2.727$, $p = .002$, $\eta_p^2 = 0.112$. The Ideal Mentor Scale Integrity

subscale was significant, $F(2, 134) = 4.364$, $p = .015$, $\eta_p^2 = 0.061$. There were no

significant differences in the univariate test results for the other subscales: Guidance, $F(2,$

$134) = 2.495$, $p = .086$, $\eta_p^2 = 0.036$, Relationship, $F(2, 134) = 1.261$, $p = .287$, $\eta_p^2 =$

0.018, Rapport, $F(1, 135) = 0.011$, $p = .989$, $\eta_p^2 = 0.000$, Apprenticeship, $F(2, 134) =$

1.385, $p = .397$, $\eta_p^2 = 0.020$, and Identification-Individuation , $F(2, 134) = 0.930$, $p =$

$.397$, $\eta_p^2 = 0.014$. A Tukey post hoc was performed to identify the significant differences

among the three stages. There was a significant difference on the IMS-Integrity subscale

between the Attaining Candidacy ($M = 4.37$) and Completing the Dissertation ($M = 4.59$)

stages, $p = .040$. There were no other significant difference found on any other subscales among the stages. The lack of significant differences in the other subscales indicates that doctoral students at each stage of persistence are more similar in the desired characteristics of a mentor than different (see Appendix O).

Hypothesis 3

There is a significant difference in the means between the Ideal Mentor and Actual Mentor using Rose's Ideal Mentor Scale (Integrity, Guidance, and Relationship) among Tinto's three stages (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation).

This study investigated whether there were significant differences between the ideal mentor and the actual mentor subscale (Ideal versus Actual) among Tinto's three stages (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation). The Mixed Model-MANOVA results were significant, $F(3, 117) = 21.727$, $p < .001$, between the ideal mentor and the actual mentor of the participants. There were no significant differences for Tinto's three stages, $F(6, 236) = 0.410$, $p = .872$, nor for the interaction, $F(6, 117) = 1.297$, $p = .259$. The univariate analyses revealed there was a significant difference between the ideal mentor and the participant's actual mentor in the Integrity subscale, $F(1, 119) = 25.955$, $p < .001$, and for the Guidance subscale, $F(1, 119) = 55.166$, $p < .001$. The results for the Relationship subscale was not significant $F(1, 119) = 3.306$, $p = .072$. There were no significant interactions between the IMS ideal and actual mentor and Tinto's (1993) three stages: Integrity $F(1, 119) = 0.432$, $p = .650$, Guidance, $F(1, 119) = 0.341$, $p = .711$, and Relationship $F(1, 119) = 0.028$, $p = .973$ (see Appendix P).

Ancillary Findings

Rose's (2000) original IMS Relationship subscale consisted of 10 items, but due to dichotomy of participants' responses in this study the researcher split the subscale into two different types of characteristics: personal and professional. The purpose of parsing out the items into personal relationship and a professional relationship was to better define the type of relationship doctoral students may desire with their mentor. Mentoring characteristics that dealt with personal issues of the professor or close bonding between professor and student defined the Personal Relationship subscale (items 4, 11, 20, 24, 28). Mentoring characteristics that dealt with professional demeanor of the professor and the guidance toward completing goals defined the Professional subscale (items 15, 18, 22, 25, 30).

Wunch (1994) proposed that a mentoring relationship should be determined by the goals, actual activities, and outcomes. In this study, the Ideal Mentor-Relationship Personal subscale had a Cronbach's $\alpha = 0.81$ with a mean score ($M = 2.52$, $SD = 0.98$), and the Professional subscale had a Cronbach's $\alpha = 0.70$ with a mean score ($M = 3.43$, $SD = 0.81$). The effect size for this analysis ($d = 1.01$) was found to be larger than Cohen's (1988) coefficient for large effect ($d = .80$). In this study, the participants indicated the need for a professional relationship with the mentor more so than a personal relationship. In comparing the Ideal Mentor Relationship Personal subscale ($M = 2.52$, $SD = 0.98$) to the Current Mentor Relationship Personal subscale ($M = 2.42$, $SD = 0.97$) and a Cronbach's $\alpha = .76$, the effect size for this analysis ($d = .10$) was found to be less than Cohen's (1988) coefficient for large effect ($d = .80$). This suggested that the participants judged the ideal characteristics to be similar to that of the actual mentor in a personal relationship (see Appendix Q).

The Personal Relationship subscale had the lowest mean score ($M = 2.34$, $SD = 0.94$) of all the subscales. This value corresponded roughly to a mean score that was not important on the Likert style scale for the characteristics of a mentor. Comparing the Ideal Mentor Relationship Professional mean score of 3.43 to the Current Mentor Relationship Professional ($M = 3.47$, $SD = 0.85$), with a Cronbach's $\alpha = .69$, indicated a mean difference of 0.04 between the ideal mentor and the current mentor. The effect size for this analysis ($d = .05$) was found to be less than Cohen's (1988) coefficient for a large effect ($d = .80$), which indicated that the participants experienced similar ideal characteristics as compared with the actual mentor characteristics. The Ideal Professional Relationship subscale had a mean score of 3.43, closer to the Guidance ($M = 4.30$) and Integrity ($M = 4.50$) than the Personal Relationship ($M = 2.34$). The IMS Relationship Professional mean score ($M = 3.43$) was closer to the AWAI-S Rapport subscale mean score ($M = 4.06$). The effect size for this analysis ($d = 0.36$) was found to be smaller than Cohen's (1988) coefficient for large effect ($d = .80$). This indicated that the type of relationship doctoral student desired was more professional and advisory in nature. Rose's (2000) IMS Relationship Personal mean score ($M = 2.34$) suggested that it was not very important to a modal doctoral student, whereas Schlosser and Gelso (2001) AWAI-S Rapport subscale mean score ($M = 4.06$) suggested that the modal doctoral student agreed about the characteristics of an advisor. The effect size for this analysis ($d = 0.70$) was found to approach a large effect ($d = .80$) for a Cohen's coefficient (1988). This indicated that the type of relationship doctoral students desired was more professional and advisory in nature than of a personal nature (see Appendix Q).

There were several other ancillary findings noted in this study. The first investigated whether there were any significant differences in Rose's Ideal Mentor Scale

(Integrity, Guidance, and Relationship) and Schlosser and Gelso's Advisory Working Alliance Inventory-Student Version (Rapport, Apprenticeship, and Identification-Individuation) between the sexes using a MANOVA. There was a significant difference between sexes, $F(6, 134) = 5.269$, $p < .001$ for the overall model. The Integrity subscale was found significantly different between the sexes $F(6, 134) = 14.155$, $p < .001$. Females ($M = 4.58$, $SD = .04$) were more likely to prefer mentors to have integrity than were males ($M = 4.30$, $SD = .07$).

There were significant differences, $F(3, 123) = 3.434$, $p = .019$, when examining the differences between the sexes on the actual mentor responses. The univariate test revealed no significant differences on any of the IMS subscales between sexes, Integrity-Actual, $F(3, 125) = 3.319$, $p = .071$; Guidance Actual, $F(3, 125) = .013$, $p = .910$; and Relationship, $F(3, 125) = .136$, $p = .713$. There were no significant differences, $F(3, 122) = 1.701$, $p = .170$, when examining the differences between Heterosexuals and LGBTQI participants on the actual mentor responses. The univariate test revealed no significant differences on any of the IMS subscales between sexes, Integrity-Actual, $F(3, 124) = 1.301$, $p = .256$; Guidance Actual, $F(3, 124) = .000$, $p = .988$; and Relationship, $F(3, 124) = .266$, $p = .607$. The means were similar to each other in each subscale that indicated that the participants in this study both groups assigned the same level of importance to the three subscales (see Appendix R).

There were 22 African American participants in this study, 73% ($n = 16$) reported having a mentor and 27 % ($n = 5$) reported not having a mentor. Native American/Alaskan Inuit reported 60% ($n = 3$) having a mentor and 40% ($n = 2$) not having a mentor. In contrast, 90.3% ($n = 84$) of Caucasians reported having a mentor, while 9.7% ($n = 9$) did not have a mentor. In this study, 100% of all other participating

racial and ethnic groups reported having a mentor. Contrary to the findings of this study, Liang et al.'s (2006) study showed that 42.6% of Asian Americans compared to 27.8% of Caucasians did not have a mentor.

This study showed the sexual orientation of the doctoral student had little bearing on whether or not the person had a mentor. In this study, 87.1% ($n = 101$) of heterosexual participants reported having a mentor, while 12.9% ($n = 15$) did not have a mentor. Among the LBTQI participants, 95.5% ($n = 21$), reported having a mentor and 4.5% ($n = 1$) did not have a mentor. Of the various doctoral students identified in this study, 88.9% ($n = 104$) Ph.D. students reported having a mentor, and 11.1% ($n = 13$) reported not having a mentor. Doctoral students in education disciplines reported similar mentoring rates, with 85.7% ($n = 12$) having a mentor and 14.3% ($n = 2$) not having a mentor. Of the professional doctoral designations, 100% ($n = 5$) indicated having a mentor of those reporting. Among other doctoral designations, 33.3% ($n = 1$) reported having a mentor and 66.7% ($n = 2$) not having a mentor.

In this study, 58.7% ($n = 54$) of females reported having a mentor of the same sex and 41.3% ($n = 38$) of females had one of the opposite sex. Males ($n = 24$) reported a higher percentage (64.9%) of having a mentor of the same sex than females (58.7%), while 35.1% of males ($n = 13$) reported having a mentor of the opposite sex. There were no significant differences, $F(3, 120) = 1.069$, $p = .365$, when comparing doctoral students with a mentor of the same sex and doctoral students with a mentor of the opposite sex on the IMS-Actual Mentor. The univariate tests revealed no significant differences for any of the three subscales, Integrity-Actual $F(1, 122) = 2.699$, $p = .103$, Guidance-Actual $F(1, 122) = .523$, $p = .471$, and Relationship-Actual $F(1, 122) = .683$, $p = .410$.

CHAPTER V

SUMMARY OF THE STUDY

The purpose of this study was to clarify doctoral students' desired characteristics in a mentor based on age groups suggested by Levinson et al.'s (1978), Levinson's (1997), and Tinto's (1993) three stages of persistence (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation). Levinson (1997) and Levinson et al. (1978) found a person's need for mentoring decreased during the era of the "30 Transition." However, a subsequent study by Aguilar-Gaxiola, Norris, and Carter (1984) found the mentor relationship did not wane until after 41 years of age. Another subsequent study by Rose (2000) found mentoring needs may regress back to age 33 years because of returning to school later in life, thus delaying moving forward into a different era. This study used two scales to address these goals, Rose's (2000) Ideal Mentor Scale (IMS) and Schlosser and Gelso's (2001) The Advisory Working Alliance Inventory-Student Version (AWAI-S). Further, the addition of an actual mentor scale to the IMS allowed a test for differences between the ideal mentor and actual mentor.

Discussion of the Results

The results of this study were based on the conclusions reached by a convenience sample of doctoral students. One hundred forty-five doctoral students completed the survey, which provided the researcher with a better understanding of their desired characteristics of a mentor. The modal doctoral student was a Caucasian female, who was heterosexual with an average age of 36 years and was an ABD Ph.D. student. Tinto's (1993) third stage, Completing the Dissertation, had a higher number of students in it than in the other two stages combined. More respondents chose their mentor rather than having a mentor assigned by the department. More respondents reported their

mentor as being the same gender and race or ethnicity. A high proportion of participants reported that their mentor provided course advising, graduate school advising, and dissertation advising.

The first hypothesis stated that there would be a significant difference in Rose's (2000) Ideal Mentor Scale (Integrity, Guidance, and Relationship) and Schlosser and Gelso's (2001) Advisory Working Alliance Inventory-Student Version (Rapport, Apprenticeship, and Identification-Individuation) between the two age groups. There were significant differences between the age groups on the IMS and AWAI-S scales, and there was a significant difference between the age groups on the AWAI-S Identification-Individuation subscale. The doctoral student age group 34 years of age and older had a higher level of identification with their mentor than the doctoral students in the group 22-33 years of age. The other five subscales had no significant differences between the age groups on the IMS and the AWAI-S. The lack of significant differences in the five subscales indicates the characteristics of mentoring or advising cannot likely be differentiated based on age. Levinson et al. (1978) and Levinson (1997) found that mentoring ceases after the Age 30 Transition, but the findings of this study suggest that doctoral students from the 34 years of age and older had mentors. The doctoral students 34 years of age and older desired characteristics of a mentor that were not different from doctoral students in Levinson et al.'s (1978) and Levinson (1997) Age 30 Transition (22-33 years of age) for mentoring. Schlosser and Gelso (2001) stated that the AWAI-S high scores indicated characteristics of a mentoring relationship. These findings substantiate Ornstein and Isabella's (1990) findings that there lacked a link between an age groups and attitudes.

The second hypothesis stated that there would be a significant difference in Rose's (2000) Ideal Mentor Scale (Integrity, Guidance, and Relationship) and Schlosser and Gelso's (2001)Advisory Working Alliance Inventory-Student Version (Rapport, Apprenticeship, and Identification-Individuation) among Tinto's three stages (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation). The results were significant for differences among Tinto's (1993) three stages. The Ideal Mentor Scale Integrity subscale was significant for the first and third stages, and there were significant differences between the second stage and the third stage, but there was no significant difference between the first and second stage. The other five subscales were not significantly different, but in the IMS Relationship subscale, in the Transition and Adjustment stage, had a slightly higher mean for a relationship with their mentor than the two other stages. This would support Tinto's (1993) hypothesis that doctoral students in Transition and Adjustment stage need more guidance and mentoring than the other two stages.

The third hypothesis stated there would be a significant difference between the ideal mentor and actual mentor using Rose's Ideal Mentor Scale (Integrity, Guidance, and Relationship) among Tinto's three stages (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation). There was a significant difference between the ideal mentor and the participants' actual mentor for the Integrity subscale in which the ideal mentor rated higher than the actual mentor. Participants' mean scores for their ideal mentor were consistently higher than their actual mentor, which indicates an area in which administration can work to improve the matching of mentor to mentee based on outcomes of this study. There were no significant interactions between the IMS ideal and actual mentor and Tinto's (1993) three stages.

In the ancillary findings, it was found that females preferred that their mentors have integrity more so than did males, but there were no differences between the sexes in any of the other subscales. There were no significant differences between heterosexual and LGBTQI doctoral students, which suggested that each group was receiving similar mentoring.

<div align="center">Relationship to Previous Research</div>

This study supported the earlier findings of Aguilar-Gaxiola et al. (1984) and Rose (2000), while contradicting the findings of Levinson (1997) and Levinson et al. (1978). The results of this study were different from Levinson et al. and Levinson's studies in which the sample of adults were between 35 and 45 years of age. In this study the sample ranged from 22 to 68 years of age and participants were pursuing doctoral degrees much later in life as compared to Levinson's sample of adults who were not pursuing post secondary degrees, but had careers, families, and had obtained life goals according to their eras. Based on the 145 participants in this study who were between the ages of 22 and 68 years, 131 reported having a mentor, which would suggest that mentoring of doctoral students is not limited by the age of the student in an educational setting.

Levinson et al. (1978) did not specifically define mentor. They described a mentor as a more senior male who helps the male realize his dream; Levinson (1997) found this to be different for women who lacked mentors in the academic environments. Tenenbaum et al.'s (2001) study showed a significant chi-square where men were more likely than women to have male advisors. In this study, however, the doctoral student's mentor was not always the same sex as the participant. The doctoral students did not report any significant differences between having a mentor of the same sex or one of the

opposite sex in the level of importance to the actual mentor. Kelly and Schweitzer's (1999) results supported these findings. Kelly and Schweitzer (1999) stated that the sex of the mentor did not matter, but the benefit was better advancement and grades for those students with a mentor compared to those who did not have a mentor.

Tinto (1993) suggested studying doctoral student progression in three stages (Transition and Adjustment, Attaining Candidacy, and Completing the Dissertation) to gain a better understanding of doctoral student development throughout the process. Tinto hypothesized that mentoring doctoral students in the Transition and Adjustment stage is more advantageous to the doctoral student than in the latter stages due to the importance of guidance and advising rather than simply having an advocate within the department. In this study, two-thirds of the participants in the Transition and Adjustment stage reported having a mentor who advised them and guided them through graduate school. Tinto stated the importance of the second stage, Attaining Candidacy, is due to the relationship between the mentor and the student and that is what leads to completion of the dissertation. In this study, 90% of the participants in this stage reported having a mentor who guided them through this stage. The third stage, Completing the Dissertation, is described as being a period of profound struggle for the doctoral student as it requires the ability to work independently, be self-motivated, yet still requires mentoring to complete the dissertation. In this study, 80% of the participants in this third stage reported having a mentor to guide and support them through the dissertation completion stage. Tinto (1993) stated this stage reflects the "nature of individual abilities and the specific relationship between student and primary advisor or committee" (p. 15). No significant differences were found in mentoring preferences among Tinto's (1993) three stages using the IMS. Rose's (2000) study found a significant difference between

males and females in the Relationship subscale, whereas this study did not find such a significant difference. However, this study found a significant difference between male and females in the Integrity subscale but not in the Guidance subscale. Rose's (2000) study found no significant differences for Tinto's (1993) three stages of persistence, consistent with what was found in this study. Rose (2000) suggested her findings were due to Tinto's unique definitions of the three stages, but the results were due to the broad interpretation by the participants. This study supported Tinto's (1993) hypothesis of doctoral students' desire for mentoring throughout the graduate school process regardless of age.

Nettles and Millet (2006) defined mentoring as involving an intimate relationship and contributing to the socialization process of the student. Contrary to Nettles and Millet (2006) findings, this study did not find the same results. Doctoral students indicated a need for a professional relationship, but not a personal one. The modal doctoral student did not indicate any importance for knowing the personal problems of a mentor or having coffee or lunch with a mentor. The modal doctoral student indicated the desire for a mentor who was emotionally stable and who assisted in obtaining the student's life vision.

Austin's (2002) qualitative study of 58 doctoral students found there to be insufficient guidance from faculty, but in this study there was not a significant difference between what doctoral students desired from their mentor and what they were receiving based on Tinto's three stages of persistence. Monsour and Corman's (1991) qualitative study found that lack of support from a mentor or advisor related to the feeling of isolation and increased the stress to complete the dissertation. In this study, doctoral students in Tinto's third stage of persistence reported no significant difference when

compared with doctoral students in the other two stages in the level of importance of mentoring they received from their actual mentor.

In this study, the findings did not support Russell and Horne's (2009) statement of "persistent stigma associated with LGBT identities and the pervasive prejudice and frequent discrimination that accompany this stigma" (p. 195). Nor did this study support Lark and Croteau's (1998), findings of dissatisfaction with their mentors. This study showed the IMS-Actual mentor for both heterosexual and LGBTQI students were not significantly different, as both groups rated the actual mentor about the same. This study supported the findings of Ragins and Scandura (1997), who found that males and females reported no difference in business mentor relationships, as this study found few differences between the sexes' descriptions of their mentors.

Johnson et al. (2007) identified nine common components of the mentoring construct. This study did not support all of their meta-analyzed findings. This study did not substantiate the construct for mentorship that was an enduring personal relationship. This study did support their findings on the other eight mentoring constructs: achievements, career assistance, emotional support, role models, identity transformation, safe environment, and obtain life vision.

<div align="center">Limitations of the Study</div>

Several limitations existed in this study. One limitation of this investigation was the internet only access to students; there were no paper copies available to participants. This may have hindered students without easy access to computers with internet access from participating in the study. The recruitment procedure, which produces a convenience sample may not have produced a nationally representative sample of doctoral students as it only sampled doctoral students who were on Facebook, LinkedIn,

or other social media services used in this study. The survey was only available in English. This may have limited the access for participants who were not English proficient.

Another limitation of the study was the delimitation of doctoral students born in the United States and attending universities within the United States. This limited the diversity of the sample both in terms of participants and cultural differences for comparison of the mentor-mentee relationship dynamics. Another limitation suggested by Lei and Wu (2007) was a limitation of most other studies as well and had to do with the possibility that other equivalent or nonequivalent models may fit the data better. Another limitation of the study was the lack of understanding of sexual identities, which included transgendered as a sexual preference, instead of a third sexual identity. There may have been the possibility of cultural insensitivity or biasness in the items or demographic questions in the study.

The exclusion of Item 15, "I feel like my advisor expects too much from me," from Schlosser and Gelso's (2001) Advisory Working Alliance Inventory-Student Version produced another limitation. A crosstabs was performed on the reverse coded Identification-Individuation subscale and Item 15 did not correlate with the other items in the subscale. The responses for the other items were scored mostly in the "Disagree" and "Strongly Disagree." Item 15 responses were nearly equally distributed across the "Strongly Agree" to "Strongly Disagree." Item 15, "I feel like my advisor expects too much from me," is not a negatively worded question, but in this researchers' view and evaluation of the workload assigned by the mentor. Finally, no attempt was made to assess the mentor's point-of-view regarding the status of mentor-mentee dyad.

Implications for Practice

This study provided a sample of the mentor-mentee relationship and areas in which the relationship may be improved. Matching the doctoral student's desired characteristics of mentoring with a mentor who closely matched those characteristics may improve the mentee-mentor relationship. This matching may create more positive relationships between mentor-mentee and can be beneficial for the mentor, mentee, and the department as a whole. Cronan-HiIIix et al. (1986) stated that a university or department that underscored the development of the mentor-mentee dyad by developing better mentoring techniques may benefit in two ways: the doctoral students would be more enculturated in the academic process, more involved in research, and more exposed to the higher education community through papers and presentations. The mentors may experience a sense of satisfaction, produce more publications, and gain status from mentees' accomplishments. Tenenbaum et al. (2001) stated mentors would benefit from elevated promotions and pay. Staus et al. (2013) suggested career success as an important benefit of the mentor-mentee dyad. Johnson (2007) stated mentors benefited from the creative synergy and status for talent development. Finally, Ellis (1992) similarly claimed universities valued research and academics and should be concerned with the development of the mentor-mentee dyad

Recommendations for Future Research

The items on the IMS Relationship subscale need additional research to address the type of relationship (professional or personal) the mentee desires with his or her mentor. A dichotomy in the subscale responses implies a strong like for some characteristics and an equally strong disregard for other characteristics. A revision of the

subscale would enhance the interpretation of the characteristics desired by doctoral students.

Schlosser and Gelso's (2001) Advisory Working Alliance Inventory-Student Version subscale Identification-Individuation needs to be studied to determine the effects of reverse-coding of Item 15. As Previously stated, responses to Item 15 were nearly equally distribute across the "Strongly Agree" to "Strongly Disagree" categories.

A study focusing on the mentor-mentee relationship from the mentor's point-of-view would greatly enhance our understanding of the dynamics of the relationship. A study focusing on the mentor point-of-view about what characteristics they believe is an ideal mentor could valuable. A mentor point-of-view about what characteristics make an ideal doctoral student could likewise be beneficial. Additional study could include a mentor's perspective study examining the time constraints of mentoring, the efficacy of mentoring for the mentor, and the cost-benefit analysis from the mentor's perspective regarding mentoring.

Conceptualizing Mentoring,

A Summary

In summary, the doctoral students in this study varied demographically by geography, age, race and ethnicity, type of doctoral degree sought, stage in their programs, the race and sex of their mentor, or whether they were heterosexual or LGBTQI. The common denominator among the doctoral students was their desire for characteristics in a mentor who was part advisor that not only provided graduate school counseling, but also provided professional development advice, and part seasoned academician who provided guidance in research topics, was generous with their time, and exemplified academic integrity. Whereas other researchers consider role modeling a

characteristic of mentoring, these results suggest that role modeling is a function of mentoring that encompasses and demonstrates the characteristics of mentoring. Overall, according to the doctoral students in this sample, the mentor needed to be a positive role model.

APPENDIX A

IRB APPROVAL TO CONDUCT STUDY

THE UNIVERSITY OF SOUTHERN MISSISSIPPI.

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.5997| Fax: 601.266.4377 | www.usm.edu/research/institutional-review-board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
  Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **14021901**
PROJECT TITLE: **Mentoring after the "Age 30 Transition"**
PROJECT TYPE: **New Project**
RESEARCHER(S): **Flint Brent**
COLLEGE/DIVISION: **Collge of Education and Psychology**
DEPARTMENT: **Educational Studies and Research**
FUNDING AGENCY/SPONSOR: **N/A**
IRB COMMITTEE ACTION: **Expedited Review Approval**
PERIOD OF APPROVAL: **02/20/2014 to 02/19/2015**

Lawrence A. Hosman, Ph.D.
Institutional Review Board

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI.

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
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- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
  Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **CH14021901**
PROJECT TITLE: **Mentoring after the "Age 30 Transition"**
PROJECT TYPE: **Change to a Previously Approved Project**
RESEARCHER(S): **Flint Brent**
COLLEGE/DIVISION: **Collge of Education and Psychology**
DEPARTMENT: **Educational Studies and Research**
FUNDING AGENCY/SPONSOR: **N/A**
IRB COMMITTEE ACTION: **Expedited Review Approval**
PERIOD OF APPROVAL: **04/15/2014 to 04/14/2015**

Lawrence A. Hosman, Ph.D.
Institutional Review Board

APPENDIX B

LETTER TO DOCTORAL STUDENTS FOR

PARTICIPATION IN STUDY

Fellow Doctoral Student,

I need the help of fellow doctoral students to complete my dissertation study. I am interested in your experiences with your mentor. I am looking for participants who are over the age of 22 years and enrolled in any doctoral program within the United States. The Institutional Review Board of The University of Southern Mississippi had approved conduction of this study.

If you have about 30 minutes, please fill out my survey. Also, I would greatly appreciate it if you would then pass it on to any other doctoral student(s) you know.

https://usmep.co1.qualtrics.com/SE/?SID=SV_8qRS8p1uGfHAETj

APPENDIX C

DEMOGRAPHIC INFORMATION

Please complete all the categories to best of your ability.

Are you over the age of 18 years? ____Yes ____No   IF NO, PLEASE EXIT THE SURVEY.

1. Sex: ___Male   ___Female

2. Age: ____

3. Race/Ethnicity
    a. ____ African American
    b. ____ Afro Caribbean
    c. ____ Asian Pacific Islander
    d. ____ Asian East Indian
    e. ____ Latino/Hispanic
    f. ____ Native American/Alaskan Intuit
    g. ____ Caucasian
    h. ____ Other (Specify)_____

4. Sexual Orientation: _____Heterosexual _____LGBTQI

5. Degree pursuing
    a. ____ Ph.D.
    b. ____ Ed.D
    c. ____ J.D./M.D./D.O./Professional designations
    d. ____ Other:_____

6. What point are you in your program:
    a. ____ 0-24 hours
    b. ____ 25 hours through Comprehensive Examinations
    c. ____ ABD (All-but-dissertation) Completing the Dissertation

7. As you've begun and progressed through your doctoral program, is there someone you regard as a mentor? ____ Yes _____No

8. Was your mentor assigned by the department? ____Yes ____No

9. Did your mentor choose you? ____Yes ____No

10. Did you choose your mentor? _____Yes ____No

11. Please check all the functions your Mentor provides:
    a. _____ Course Advisor
    b. _____ Graduate school advising
    c. _____ Dissertation advising

12. Is your mentor the same gender as you? ___Yes ___No

13. Is your mentor the race/ethnicity as you? ___Yes ____No

14. In what state do you attend the university?

APPENDIX D

IDEAL MENTOR SCALE

Research indicates strong agreement among Ph.D. candidates that the *ideal mentor* would exhibit the following attributes:

> Be experienced in his or her field.
> Have a lot of intellectual curiosity.
> Always be counted on to follow through when he or she makes a commitment.
> Treat research data in an ethical fashion.
> Communicate openly, clearly, and effectively.
> Be available to students to discuss academic problems.
> Challenge students to explore alternative approaches to a problem.
> Provide honest feedback (both good and bad) to students about their work.
> Express a belief in the student's capabilities.

While the above attributes are **central** to an *ideal mentoring relationship*, we know that often such relationships can encompass a wider variety of functions. Furthermore, there are individual differences among Ph.D. candidates with respect to the type of mentoring functions they prefer.

The Ideal Mentor Scale was written to help students identify the relative importance of several additional mentor functions and characteristics.

The Ideal Mentor Scale consists of 34 items that reflect aspects of a mentoring relationship that may or may not be important to you. Please rate each item according to how **important** that mentor attribute is to you now, at your current stage of your graduate program.

Please do not rate an <u>actual </u>person in your life (if you currently have a mentor). Rather, please indicate how important each attribute or function is to your definition of the **ideal** mentor.

In the CURRENT column please rate your CURRENT ADVISOR/MENTOR attributes or function.

In the IDEAL column please rate what your IDEAL ADVISOR/MENTOR attributes or functions would be.

Answer each item by circling a number 1-5 according to the following importance rating:

Not at all Important		Moderately important		Extremely important
1	2	3	4	5

		Ideal	**Current**
1.	. . . show me how to employ relevant research techniques.	1 2 3 4 5	1 2 3 4 5
2.	. . . give me specific assignments related to my research problem.	1 2 3 4 5	1 2 3 4 5
3.	. . . give proper credit to graduate students.	1 2 3 4 5	1 2 3 4 5
4.	. . . take me out for dinner and/or drink after work.	1 2 3 4 5	1 2 3 4 5
5.	. . . prefer to cooperate with others than compete with them.	1 2 3 4 5	1 2 3 4 5
6.	. . . help me to maintain a clear focus on my research objectives.	1 2 3 4 5	1 2 3 4 5
7.	. . . respect the intellectual property rights of others.	1 2 3 4 5	1 2 3 4 5
8.	. . . be a role model.	1 2 3 4 5	1 2 3 4 5
9.	. . . brainstorm solutions to a problem concerning my research project.	1 2 3 4 5	1 2 3 4 5
10.	. . . be calm and collected in times of stress.	1 2 3 4 5	1 2 3 4 5
11.	. . . be interested in speculating on the nature of the universe or the human condition.	1 2 3 4 5	1 2 3 4 5
12.	. . . treat me as an adult who has a right to be involved in decisions that affect me.	1 2 3 4 5	1 2 3 4 5
13.	. . . help me plan the outline for a presentation of my research.	1 2 3 4 5	1 2 3 4 5
14.	. . . inspire me by his or her example and words.	1 2 3 4 5	1 2 3 4 5
15.	. . . rarely feel fearful or anxious.	1 2 3 4 5	1 2 3 4 5
16.	. . . help me investigate a problem I am having with research design.	1 2 3 4 5	1 2 3 4 5
17.	. . . accept me as a junior colleague.	1 2 3 4 5	1 2 3 4 5
18.	. . . be seldom sad or depressed.	1 2 3 4 5	1 2 3 4 5
19.	. . . advocate for my needs and interests.	1 2 3 4 5	1 2 3 4 5
20.	. . . talk to me about his or her personal problems.	1 2 3 4 5	1 2 3 4 5
21.	. . . generally try to be thoughtful and considerate.	1 2 3 4 5	1 2 3 4 5
22.	. . . be a cheerful, high-spirited person.	1 2 3 4 5	1 2 3 4 5
23.	. . . value me as a person.	1 2 3 4 5	1 2 3 4 5
24.	. . . have coffee or lunch with me on occasion.	1 2 3 4 5	1 2 3 4 5
25.	. . . keep his or her workspace neat and clean.	1 2 3 4 5	1 2 3 4 5
26.	. . . believe in me.	1 2 3 4 5	1 2 3 4 5
27.	. . . meet with me on a regular basis.	1 2 3 4 5	1 2 3 4 5
28.	. . . relate to me as if he/she is a responsible, admirable older sibling.	1 2 3 4 5	1 2 3 4 5
29.	. . . recognize my potential.	1 2 3 4 5	1 2 3 4 5
30.	. . . help me to realize my life vision.	1 2 3 4 5	1 2 3 4 5
31.	. . . help me plan a timetable for my research.	1 2 3 4 5	1 2 3 4 5
32.	. . . work hard to accomplish his/her goals.	1 2 3 4 5	1 2 3 4 5
33.	. . . provide information to help me understand the subject matter I am researching.	1 2 3 4 5	1 2 3 4 5
34.	. . . be generous with time and other resources.	1 2 3 4 5	1 2 3 4 5

Ideal Mentor Scale Scoring Protocol

All items are to be scored on a 5-point rating scale ranging from:

1   Not at all important
2
3   Moderately important
4
5   Extremely important

To calculate the score for each scale, simply add the scores for each item on that scale and divide by the number of items.

Integrity item numbers (14 items): 3, 5, 7, 8, 10, 12, 14, 17, 19, 21, 23, 26, 29, 32

Guidance item numbers (10 items): 1, 2, 6, 9, 13, 16, 27, 31, 33, 34

Relationship item numbers (10 items): 4, 11, 15, 18, 20, 22, 24, 25, 28, 30

Interpretation

INTEGRITY:
High scores indicate a preference for a mentoring style characterized by respectfulness for self and others and empowerment of protégés to make deliberate, conscious choices about their lives. Students who score high on Integrity desire a mentor who exhibits virtue and principled action and can be emulated as a role model.

GUIDANCE:
High scores indicate a preference for a mentoring style characterized by helpfulness with the tasks and activities typical of graduate study.

RELATIONSHIP:
High scores indicate a preference for a mentoring style characterized by the formation of a personal relationship involving sharing such things as personal concerns, social activities, and life vision or worldview.

APPENDIX E

AWAI-S

<table>
<tr><td colspan="7">Advisory Working Alliance Inventory—
Student Version (AWAI-S)</td></tr>
<tr><td colspan="7">These 30 items pertain to your perceptions about your relationship with your advisor. For the purposes of this study, the term advisor is referring to the faculty member that has the greatest responsibility for helping guide you through your graduate program (e.g., advisor, major professor, committee chair, dissertation chair). Please respond to the items using the following scale:</td></tr>
<tr><td>#</td><td>Perceptions</td><td>Strongly Disagree</td><td></td><td>Neutral</td><td></td><td>Strongly Agree</td></tr>
<tr><td></td><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>1</td><td>I get the feeling that my advisory does <u>not</u> like me very much.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>2</td><td>My advisor introduces me to professional activities (e.g., conferences, submitting articles for journal publication).</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>3</td><td>I do <u>not</u> want to be like my advisor.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>4</td><td>My advisor welcomes my input into our discussions.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>5</td><td>My advisor helps me conduct my work within a plan.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>6</td><td>I tend to see things differently from my advisor.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>7</td><td>My advisor does <u>not</u> encourage my input into our discussions.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>8</td><td>My advisor has invited me to be a responsible collaborator in his/her own work.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>9</td><td>I do <u>not</u> want to feel similar to my advisor in the process of conducting work.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>10</td><td>My advisor is <u>not</u> kind when commenting about my work.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>11</td><td>My advisor helps me establish a timetable for the tasks of my graduate training.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>12</td><td>My advisor and I have different interests.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>13</td><td>I do <u>not</u> feel respected by my advisor in our work together.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>14</td><td>My advisor is available when I need her/him.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>15</td><td>I feel like my advisor expects too much from me.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>16</td><td>My advisor offers me encouragement for my accomplishments.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>17</td><td>Meetings with my advisor are unproductive.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>18</td><td>I do <u>not</u> think that my advisor believes in me.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>19</td><td>My advisor facilitates my professional development through networking.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>20</td><td>My advisor takes my ideas seriously.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>21</td><td>My advisor does <u>not</u> help me stay on track in our meetings.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>22</td><td>I do <u>not</u> think that my advisor has my best interests in mind.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>23</td><td>I learn from my advisor by watching her/him.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>24</td><td>I feel uncomfortable working with my advisor.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>25</td><td>I am an apprentice of my advisor.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>26</td><td>I am often intellectually "lost" during my meetings with my advisor.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>27</td><td>I consistently implement suggestions made by my advisor.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>28</td><td>My advisor strives to make program requirements as rewarding as possible.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>29</td><td>My advisor does not educate me about the process of graduate school.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>30</td><td>My advisor helps me recognize areas where I can improve.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
</table>

Advisory Working Alliance Inventory—Student Version

Rapport Subscale
* 1. I get the feeling that my advisor does <u>not</u> like me very much.
  4. My advisor welcomes my input into our discussions.
* 7. My advisor does <u>not</u> encourage my input into our discussions.
*10. My advisor is <u>not</u> kind when commenting about my work.
*13. I do <u>not</u> feel respected by my advisor in our work together.
 16. My advisor offers me encouragement for my accomplishments.
*18. I do <u>not</u> think that my advisor believes in me.
 20. My advisor takes my ideas seriously.
*22. I do <u>not</u> think that my advisor has my best interests in mind.
*24. I feel uncomfortable working with my advisor.
*26. I am often intellectually "lost" during meetings with my advisor.

Apprenticeship Subscale
 2. My advisor introduces me to professional activities (e.g., conferences, submitting articles for journal publication).
 5. My advisor helps me conduct my work within a plan.
 8. My advisor has invited me to be a responsible collaborator in his/her own work.
 11. My advisor helps me establish a timetable for the tasks of my graduate training.
 14. My advisor is available when I need her/him.
*17. Meetings with my advisor are unproductive.
 19. My advisor facilitates my professional development through networking.
*21. My advisor does not help me stay on track in our meetings.
 23. I learn from my advisor by watching him/her.
 25. I am an apprentice of my advisor.
 27. I consistently implement suggestions made by my advisor.
 28. My advisor strives to make program requirements as rewarding as possible.
*29. My advisor does not educate me about the process of graduate school.
 30. My advisor helps me recognize areas where I can improve.

Identification-Individuation Subscale
* 3. I do not want to be like my advisor.
* 6. I tend to see things differently from my advisor.
* 9. I do not want to feel similar to my advisor in the process of conducting work.
*12. My advisor and I have different interests.
*15. I feel like my advisor expects too much from me.

Note:
* indicates negatively worded item; during analysis, should be reverse-scored.

APPENDIX F

IDEAL MENTOR SCALE PERMISSION

Rose, Gail L. <Gail.Rose@vtmednet.org>   12/10/12

to me

Hello Flint,

Thanks for sending me your modifications.

A couple of other people have modified the IMS into an "AMS" (actual mentor scale), but I'm not sure they've published it. You should check.

One of the researchers who modified the instrument (Tammy Allen) ended up with fewer items than the IMS – I'm not sure the process she used to narrow down the items, though.

Kim Dietrich used all of the items in the scale AND [after consulting with me] the core items from the instruction page. This is very important because those core items are what nearly all students endorse as important or ideal, but not all students actually receive those. If anything, those are the most important ones to ask about, in my opinion. I don't think Tammy considered those when she decided what items to include.

Anyway, I'm attaching Kim's version if you want to use that as an example. What she did is tack the core items on the end -- without changing the nouns to pronouns to make them consistent with the other items -- so I would recommend making that change and checking the grammar. Also, I would recommend interspersing the core items throughout the questionnaire instead of all appearing at the end.

Let me know if you have any questions.

Gail

APPENDIX G

PERMISSION TO USE ADVISORY WORKING ALLIANCE

INVENTORY (AWAI SURVEY)

From: "Lewis Z. Schlosser, PhD, ABPP" <lzsphd@aol.com>

Date: December 2, 2012, 5:02:13 PM EST

To: oavci@niu.edu

Subject: Re: AWAI Survey Measure

Sure thing. I'm attaching the student (AWAI-S) and advisor (AWAI-A) versions, along with documents to assist with subscale breakdowns and reverse scoring. Good luck with your research.

****

Lewis Z. Schlosser, PhD, ABPP
Board Certified in Counseling Psychology
Licensed Psychologist (NY, NJ)

APPENDIX H

FREQUENCIES AND PERCENTAGES OF PARTICIPANTS

BY STATE

Frequencies and Percentages of Participants by State

Variable	*n*	%
State		
Alabama	2	1.4
Alaska	1	0.7
Arizona	3	2.1
Arkansas	2	1.4
California	7	5.0
Colorado	3	2.1
Florida	8	5.7
Georgia	5	3.5
Illinois	2	1.4
Indiana	5	3.5
Iowa	4	2.8
Kansas	1	0.7
Louisiana	4	2.8
Maryland	1	0.7
Massachusetts	1	0.7

APPENDIX H (continued).

Variable	*n*	%
State		
Michigan	3	2.1
Minnesota	2	1.4
Mississippi	47	33.3
Missouri	3	2.1
Nevada	1	0.7
New Jersey	1	0.7
New York	4	2.8
North Carolina	2	1.4
Ohio	1	0.7
Oklahoma	2	1.4
Oregon	1	0.7
Pennsylvania	7	5.0
Rhode Island	1	0.7
Tennessee	4	2.8
Texas	4	2.8
Utah	2	1.4
Virginia	1	0.7
Washington	1	0.7

APPENDIX H (continued).

Variable	*n*	%
Washington, DC	1	0.7
Wisconsin	3	2.1
Total	145	100

APPENDIX I

FREQUENCIES AND PERCENTAGES OF

RACE/ETHNICITIES BY SEX

Frequencies and Percentages of Race/Ethnicities by Sex

Variable	Male f	Female f	$\sum$
Race/Ethnicity			
African American	4	19	23
Afro-Caribbean	0	2	2
Asian Pacific Islander	0	2	2
Asian East Islander	1	0	1
Asian East Indian	0	1	1
Latino/Hispanic	4	7	11
Native American/Alaskan Inuit	3	2	5
Caucasian	30	68	98
Other	2	0	2
Total	44	101	145

APPENDIX J

DESCRIPTIVE STATISTICS FOR THE

IMS IDEAL MENTOR AND ACTUAL MENTOR SUBSCALES

Descriptive Statistics for the Ideal Mentor Scale Ideal Mentor and Actual Mentor Subscales

Variable	*M*	*SD*
Ideal integrity	4.50	0.43
Actual integrity	4.15	0.81
Ideal guidance	4.30	0.53
Actual guidance	3.65	0.92
Ideal relationship	2.98	0.76
Actual relationship	2.95	0.78

APPENDIX K

DESCRIPTIVE STATISTICS FOR THE

IMS IDEAL MENTOR-ACTUAL MENTOR

Descriptive Statistics Ideal Mentor-Current Mentor

Variable	Ideal Mentor		Actual Mentor		
	M	*SD*	*M*	*SD*	*M* diff
My Mentor…					
Integrity subscale					
Proper Credit	4.58	0.73	4.17	1.14	0.41
Cooperates with others	4.21	1.07	3.84	1.30	0.37
Intellectual property	4.70	0.69	4.47	0.94	0.23
Role model	4.57	0.71	4.24	0.98	0.33
Calm and collected	4.45	0.73	4.20	1.08	0.25
Involved in decisions	4.67	0.69	4.28	1.05	0.39
Inspires	4.39	0.79	4.02	1.10	0.37
Junior colleague	4.19	0.92	3.61	1.32	0.58
Needs and interest	4.59	0.68	4.07	1.15	0.52
Thoughtful	4.41	0.70	4.10	1.04	0.31
Values me	4.63	0.68	4.21	1.08	0.42
Believes in me	4.76	0.55	4.34	0.97	0.42

APPENDIX K (continued).

Variable	Ideal Mentor		Actual Mentor		
	M	*SD*	*M*	*SD*	*M* diff
My potential	4.59	0.69	4.16	1.00	0.43
Accomplish	4.22	1.04	4.37	1.05	-0.15
Guidance subscale					
Research techniques	4.42	0.99	3.54	1.23	0.88
Specific assignments	3.95	1.23	3.21	1.41	0.74
Clear focus	4.65	0.52	3.96	1.11	0.75
Brainstorms solutions	4.40	0.89	3.83	1.23	0.57
Outline presentation	3.84	1.00	3.33	1.30	0.51
Investigate a problem	4.43	0.84	3.75	1.21	0.68
Meets with me	4.41	0.74	3.78	1.13	0.63
Timetable	4.23	0.93	3.53	1.24	0.70
Understand subject	4.24	0.84	3.74	1.17	0.50
Generous with time	4.33	0.75	3.79	1.12	0.54
Relationship subscale					
Out for dinner	2.02	1.25	1.95	1.22	0.03
Human condition	3.19	1.38	3.20	1.42	-0.01
Fearful and anxious	3.69	1.26	3.67	1.24	0.02
Sad and depressed	3.46	1.40	3.65	1.31	-0.19

APPENDIX K (continued).

Variable	Ideal Mentor		Actual Mentor		
	M	*SD*	*M*	*SD*	*M* diff
Personal problems	1.89	1.20	2.10	1.32	-0.21
High-spirited	3.59	1.09	3.54	1.10	0.05
Coffee or lunch	2.74	1.42	2.53	1.48	0.21
Work space	2.36	1.22	2.91	1.40	-0.55
Older sibling	2.60	1.34	2.29	1.34	0.21
Life vision	4.07	0.99	3.61	1.23	0.46

Note. 1 = Not at all important, 2 = Not important, 3 = Moderately important, 4 = Important, 5 = Extremely important.

APPENDIX L

DESCRIPTIVE STATISTICS FOR THE

AWAI-S SUBSCALES

Descriptive Statistics for the AWAI-S Subscales

Variable	*M*	*SD*
AWAI-S Rapport	4.06	0.84
AWAI-S Apprenticeship	3.50	0.85
AWAI-S Identification-Individuation	3.47	0.72

APPENDIX M

DESCRIPTIVE STATISTICS FOR THE

AWAI-S SUBSCALES

Descriptive Statistics Advisory Working Alliance Inventory-Student Version

Variable	Raw scores		Reversed scored	
	M	*SD*	*M*	*SD*
Rapport subscale				
Does not like me*	1.65	1.01	4.35	1.01
Welcomes my input	4.02	1.06		
Not kind*	1.88	0 .97	4.12	0.98
Do not feel respected*	1.89	1.16	4.11	1.16
Does not encourage*	1.84	0.97	4.16	0.98
Offers encouragement	3.83	1.06		
Believes in me*	1.97	1.12	4.03	1.13
Takes me seriously	3.94	0.93		
Best interest in mind*	1.90	1.18	4.10	1.18
Uncomfortable working*	2.11	1.22	3.89	1.22
Intellectually "lost"*	1.89	0.87	4.11	0.87
Apprenticeship subscale				
Professional Activities	3.39	1.36		
Work within a plan	3.55	1.08		
Collaborator	2.86	1.37		

APPENDIX M (continued).

Variable	Raw scores		Reversed scored	
	M	*SD*	*M*	*SD*
Establish timetable	3.38	1.20		
Available when I need	3.68	1.16		
Unproductive*	2.01	1.02	3.99	1.02
Professional development	3.06	1.32		
Does not help*	2.14	1.03	3.86	1.03
Learn from my advisor	3.61	1.19		
Apprentice of my advisor	2.94	1.29		
Implement suggestions	3.80	1.01		
Program requirements	3.50	1.20		
Process of graduate school*	2.42	1.28	3.58	1.28
I can improve	3.82	1.02		
Identification-Individuation subscale				
Not like my advisor*	2.15	1.20	3.85	1.20
See things differently*	2.94	1.02	3.06	1.02
Do not feel similar*	2.46	1.03	3.54	1.03
Different interests*	2.92	1.07	3.08	1.07
Expects too much*	2.15	1.09	3.85	1.09

Note. 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.
*Indicates negatively worded item; during analysis were reverse-scored and included Item 15.

APPENDIX N

DIFFERENCE BETWEEN AGE GROUPS

ON THE IMS AND AWAI-S SUBSCALES

Difference between Age Groups on the IMS and AWAI-S Subscales

Variable	Age-group (Years of age)	*n*	*M*	*SD*
IMS Integrity	22-33	65	4.48	0.40
	34-68	72	4.51	0.46
IMS Guidance	22-33	65	4.23	0.59
	34-68	72	4.34	0.47
IMS Relationship	22-33	65	3.08	0.82
	34-68	72	2.86	0.72
AWAI-S Rapport	22-33	65	3.91	0.85
	34-68	72	4.17	0.84
AWAI-S Apprent.	22-33	65	3.43	0.82
	34-68	72	3.52	0.91
AWAI-S Id-Ind	22-33	65	3.26	0.82
	34-68	72	3.52	0.82

Note, No response = 8

APPENDIX O

DIFFERENCE AMONG TINTO'S (1993)

THREE STAGES

ON THE IMS AND AWAI-S SUBSCALES

Difference Among Tinto's (1993) Three Stages on IMS and AWAI-S

Variable	Stage	*n*	*M*	*SD*
IMS Integrity	0-24 hours	31	4.39	0.60
	25-Comps	31	4.37	0.41
	ABD-Def	75	4.59	0.33
IMS Guidance	0-24 hours	31	4.41	0.62
	25-Comps	31	4.12	0.48
	ABD-Def	75	4.31	0.53
IMS Relationship	0-24 hours	31	3.14	1.04
	25-Comps	31	2.83	0.60
	ABD-Def	75	2.95	0.70
AWAI-S Rapport	0-24 hours	31	4.04	0.66
	25-Comps	31	4.07	0.91
	ABD-Def	75	4.04	0.91

APPENDIX O (continued).

Variable	Stage	*n*	*M*	*SD*
AWAI-S Apprent.	0-24 hours	31	3.70	0.73
	25-Comps	31	3.37	0.87
	ABD-Def	75	3.44	0.91
AWAI-S Ind-Ind	0-24 hours	31	3.28	0.62
	25-Comps	31	3.39	0.80
	ABD-Def	75	3.56	0.74

Note. No response = 8.

APPENDIX P

IDEAL MENTOR-CURRENT MENTOR

TINTO'S (1993) THREE STAGES

Ideal Mentor-Current Mentor by Tinto's (1993) Three Stages

Variable	Stage	Ideal Mentor		Current Mentor	
		M	*SD*	*M*	*SD*
Integrity	0-24 hours	4.45	0.48	4.15	0.77
	25-Comps	4.40	0.38	4.05	0.90
	ABD-Def	4.62	0.30	4.17	0.80
	Total	4.53	0.38	4.14	0.82
Guidance	0-24 hours	4.37	0.65	3.84	0.99
	25-Comps	4.14	0.49	3.48	0.98
	ABD-Def	4.35	0.49	3.64	0.87
	Total	4.30	0.53	3.65	0.93
Relationship	0-24 hours	3.18	0.97	3.06	0.96
	25-Comps	2.93	0.60	2.84	0.77
	ABD-Def	3.05	0.74	2.95	0.79
	Total	3.05	0.74	2.95	0.79

APPENDIX Q

REVISED RELATIONSHIP SUBSCALE

DESCRIPTIVE STATISTICS FOR THE

IDEAL MENTOR-CURRENT MENTOR

Revised Relationship Subscale Descriptive Statistics Ideal Mentor-Current Mentor

	Ideal Mentor		Current Mentor		
Variable	*M*	*SD*	*M*	*SD*	*M* diff
My Mentor . . .					
Personal					
Out for dinner	2.02	1.25	1.95	1.22	0.03
Human condition	3.19	1.38	3.20	1.42	-0.01
Personal problems	1.89	1.20	2.10	1.32	-0.21
Coffee or lunch	2.71	1.44	2.52	1.48	0.19
Older sibling	2.60	1.34	2.29	1.34	0.21
Professional					
Fearful or anxious	3.69	1.26	3.67	1.24	0.02
Sad or depressed	3.46	1.40	3.65	1.31	-0.19
Work space	2.74	1.42	2.53	1.48	0.21
High spirited	3.59	1.09	3.54	1.10	0.05
Life vision	4.07	0.99	3.61	1.23	0.46

Note. 1 = Not at all important, 2 = Not important, 3 = Moderately important, 4 = Important, 5 = Extremely important.

APPENDIX R

DESCRIPTIVE STATISTICS FOR THE

IMS-ACTUAL MENTOR SUBSCALES

BY SEXUAL PREFERENCES

Descriptive Statistics for the IMS-Actual Mentor Subscales by Sexual Preferences

Variable	*M*	*SD*
IMS Integrity		
Heterosexual	4.18	.81
LGBTQI	3.96	.82
IMS Guidance		
Heterosexual	3.64	.94
LGBTQI	3.63	.76
IMS Relationship		
Heterosexual	2.94	.77
LGBTQI	3.03	.87

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