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Ethical and Legal Knowledge, Cognitive Complexity, and Moral Reasoning in Counseling Students

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ETHICAL AND LEGAL KNOWLEDGE, COGNITIVE COMPLEXITY, AND MORAL REASONING IN COUNSELING STUDENTS

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ABSTRACT

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Accrediting, credentialing, and counseling association bodies require counselors to possess ethical and legal knowledge and an understanding of applying ethical and legal standards to effectively serve clients. Prior to the creation of an ethical and legal knowledge instrument, scholars had theorized a relationship among ethical and legal knowledge, cognitive development, and ethical decision-making in counseling. With the creation of a new instrument for ethical and legal knowledge, ethical and legal knowledge could be assessed with extensively used constructs such as moral reasoning for ethical decision-making and cognitive complexity for cognitive development. This study investigated ethical and legal knowledge and cognitive complexity as predictors of moral reasoning. From eight institutions, 65 counseling students completed the three instruments through an online survey. Higher ethical and legal knowledge was a predictor of higher levels of moral reasoning in counseling students. Inferences for counselor educators, counselors, and future research were discussed.

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CHAPTER ONE: INTRODUCTION

The knowledge of ethics and ethical decision-making is necessary for counseling students' growth and development as professional counselors. The Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2009) asserts that a student needs an understanding of "ethical standards of professional organizations and credentialing bodies and applications of ethical and legal considerations in the counseling profession" *(Standard, II.G.1.j.)*. Counselor educators have to concentrate on two distinct areas in educating counseling students concerning ethical and legal standards. These two areas are (1) knowledge of ethical and legal standards and (2) application of ethical and legal standards to a variety of situations. Bernard and Goodyear (2009) have noted students may gain ethical and legal knowledge fairly quickly. However, the application of ethical and legal knowledge may develop more slowly. One contributing variable to ethical decision-making could be cognitive development.

Welfel (2009) has concluded that counselors with higher levels of moral and cognitive development tend to apply ethical and legal knowledge according to standards. Further, Dufrene (2000) has also correlated ethical reasoning with higher cognitive development. Even though cognitive development, ethical and legal knowledge, and the application of ethical and legal standards (i.e. ethical decision-making) are quite important for counseling students, there have not been many studies investigating the relationship among these three constructs. One barrier to the investigation of ethical and legal knowledge was the lack of a known quantitative instrument for assessment.

Recently, two instruments have been developed to measure ethical and legal knowledge, the Ethical and Legal Issues in Counseling Questionnaire (ELICQ; Lambie, Hagedorn, & Ieva, 2008) and the updated Ethical and Legal Issues in Counseling Assessment-Revised (ELICA-R; Lambie, Ieva, & Hagedorn, 2009). Two studies were conducted which explored the relationship of the three constructs of ethical and legal knowledge, social-cognitive development, and ethical decision-making in counseling students (Lambie, Hagedorn, & Ieva, 2010; Lambie, Ieva, & Ohrt, 2012). These studies demonstrated that counseling students' ethical and legal knowledge increased significantly after the intervention of an ethics course (Lambie et al., 2010; Lambie et al., 2012). In contrast to CACREP assumptions, ethical decision-making was not found to be a predictor of ethical and legal knowledge in counseling students or practicing school counselors (Lambie et al., 2010; Lambie, Ieva, Mullen, & Hayes, 2011; Lambie et al., 2012). Their findings did support that students with higher cognitive development acquired significantly more ethical and legal knowledge than students with lower social-cognitive development (Lambie et al., 2010; Lambie et al., 2012). In addition practicing school counselors with higher cognitive development achieved higher ethical and legal knowledge scores (Lambie et al., 2011). Lambie et al. (2011) did not find a relationship between social-cognitive development and ethical decision-making. This finding did not support Welfel's (2009) assertion of cognitive development being related to ethical decision-making.

Since the ELICA-R was a fairly new instrument, studies needed to be conducted assessing its relationship to constructs measuring ethical decision-making such as moral reasoning and other cognitive development constructs such as cognitive complexity. In a

myriad of studies, moral reasoning has been employed to measure judgments of right and wrong involving ethical dilemmas with counseling students, military personnel, nursing students, and pharmacy students (Halverson, Miars, & Livneh, 2006; Kim, Park, Son, & Han, 2004; Latif, 2002; Williams, 2010). Even though the previous studies (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012) did not demonstrate a relationship among ethical decision-making and the other constructs of cognitive development and ethical and legal knowledge, this study used moral reasoning because it has been utilized extensively to measure thoughts and actions based on moral principles (Halverson et al., 2006; Kim et al., 2004; Latif, 2002; Williams, 2010). Further, moral reasoning was used for ethical decision-making because the instrument which was used to measure ethical decision-making was based on Kohlbergian principles through the Van Hoose and Paradise ethical orientation model (Dufrene & Glosoff, 2004).

The other construct utilized in this study was cognitive complexity. Cognitive complexity is the ability to acquire, synthesize, and apply multiple perspectives (Neukrug, 2014). The Perry model is a cognitive development theory which measures cognitive complexity (Granello, 2002). Since cognitive development was measured with the ethical decision-making instrument, this study sought to measure cognitive complexity with moral reasoning. Since the advent of the ethical and legal knowledge instrument, there have not been any known studies measuring cognitive complexity in relationship to ethical and legal knowledge and moral reasoning. In this study, the Perry model was used to measure cognitive complexity in counseling students.

Importance of the Study

The CACREP (2009) standards express the importance of counseling students understanding ethical and legal knowledge and applying ethical and legal knowledge (*Standard, II. G. 1.j.*). Students initiate their base of ethical and legal knowledge and application of ethics in their respective counseling programs (Lambie et al., 2010). After entering the work force as professional counselors, school counselors may face issues such as suicidal ideation in students and bullying, which can require higher level application of ethical and legal knowledge (Lambie et al., 2011). This study was important because it explored how moral reasoning might be affected by ethical and legal knowledge and cognitive complexity. This study investigated the variables which may contribute to higher level moral reasoning and also interventions which may be utilized to increase moral reasoning in counseling students.

Purpose of the Study

The purpose of this study was to investigate the relationship among ethical and legal knowledge, cognitive complexity, and moral reasoning. Moral reasoning is how an individual makes judgments about what is right and wrong. The theory behind moral reasoning is based on individuals possessing a cognitive schema and this schema will provide information when there is minimal data. The cognitive schemas are knowledge structures of individuals and how they manage new information. When minimal data is provided, such as with moral dilemmas, the individual demonstrates his or her moral developmental level by how they think about the moral dilemma. The Defining Issues Test or DIT (Rest, 1979) has been used extensively to measure moral development in

counselors. This study used the Defining Issues Test-2 (DIT-2; Rest, Narvaez, Thoma, & Bebeau, 1999) to assess moral reasoning in counseling students.

This study was the first of its kind to utilize the ELICA-R, Learning Environment Preferences (LEP; Moore, 1987), and DIT-2 together. Lambie et al. 2011 utilized a cognitive development instrument, the Washington University Sentence Completion Test (WUSCT; Hy & Loevinger, 1998) in relationship to the Ethical Decision Making Scale-Revised (EDMS-R; Dufrene, 2000) and the Ethical and Legal Issues in Counseling Questionnaire (ELICQ; Lambie et al, 2010). Dufrene (2004) constructed the EDMS-R because of a need to measure counselor decision-making as a separate construct. The difference in this study was that it utilized moral reasoning as the dependent variable.

Research Questions

The questions which this study sought to answer were (1) To what extent can ethical and legal knowledge predict moral reasoning; (2) To what extent can cognitive complexity predict moral reasoning; (3) To what extent can cognitive complexity and ethical and legal knowledge together predict moral reasoning?

Assumptions of the Study

One of the main premises of this study was that moral reasoning, cognitive complexity, and ethical and legal knowledge were necessary to thrive in counseling. The measurements of these three constructs proposed assumptions. One assumption was that the DIT-2 was the optimal instrument to measure moral reasoning. Another assumption was that the LEP was the ideal instrument to measure cognitive complexity. Further, the ELICA-R was a prime instrument to assess ethical and legal knowledge in counselors. Regarding the participants, it was assumed that students would complete the instruments.

Finally, a holistic assumption was that these instruments had sufficient validity and reliability to assess moral reasoning, cognitive complexity, and ethical and legal knowledge accurately.

Definition of Terms

Moral Reasoning	An individual's process of judging between right and wrong which controls the way a person thinks and behaves in moral dilemma.
Cognitive Complexity	The ability of a person to view a situation from multiple perspectives and to analyze and evaluate situations effectively.
Ethical and Legal Knowledge	The base of knowledge counselors possess in regard to the ethical codes and laws in their respective states.
Ethical Decision-Making	The ability of an individual to apply ethical and legal solutions to specific dilemmas.
Cognitive Development	The way in which an individual makes sense or meaning of emotions and experiences.

CHAPTER TWO: REVIEW OF LITERATURE

Chapter Two examines the literature associated with this study. The chapter is divided into the following sections: ethical and legal knowledge, cognitive complexity, moral reasoning, and an overall summary of the chapter.

Ethical and Legal Knowledge

The Council for Accreditation of Counseling and Related Educational Programs (CACREP; 2009) stated that counselor preparation programs, "have to provide an understanding of ethical standards of professional organizations and credentialing bodies and applications of ethical and legal considerations in professional counseling" (*Standard, II.G.1.j.*). Further the National Board of Certified Counselors (NBCC, 2012) stated that National Certified Counselors (NCCs) should adhere to legal standards and state licensing boards and abide by the directives in the NBCC *Code of Ethics*. Not only do the accrediting and credentialing bodies in counseling demand understanding of ethical and legal knowledge, but the state licensure boards "mandate that licensees demonstrate knowledge of professional orientation issues, which include legal and ethical issues" (Remley & Herlihy, 2010, p. 3). Additionally, Remley and Herlihy (2010) noted that the counselor "must be prepared to practice in ways that are ethically and legally sound and promote the welfare of his or her client" (p. 3).

In recent times, there have been two quantitative instruments which assess ethical and legal knowledge in counseling students which are: the Ethical and Legal Issues in Counseling Questionnaire (ELICQ; Lambie, Hagedorn, & Ieva, 2010) and the Ethical and Legal Knowledge in Counseling Assessment-Revised or ELICA-R (Lambie & Ieva, 2009). The ELICA-R was derived from the ELICQ. The ELICQ had 50 items, but 19

items were removed in the creation of the ELICA-R which has 35 items. Both assessments measure 10 subscales of ethical and legal knowledge: (a) professional identity; (b) ethical and legal terms; (c) ethical decision-making principles; (d) confidentiality; (e) suicide and client violence; (f) abuse, neglect, and negligence; (g) counseling and educational records, (h) educational and civil right laws, (i) counselor development and wellness; and (j) discrimination laws and ethics.

Demographics and Ethical and Legal Knowledge

Zibert, Kern, and Durodoye (1998) demonstrated that ethical and legal knowledge was not significantly related to age, formal education, ethics course work, counseling theories, or earned credentials. There was a difference with private practice counselors scoring higher than public school and community agency counselors (Zibert et al., 1998). Females have also scored higher than males in ethical and legal knowledge (Zibert et al., 1998). These results need to be viewed with caution because the instrument within the study was not tested for reliability or validity (Zibert et al., 1998). As stated previously, an instrument for measuring ethical and legal knowledge in counseling has not been constructed until recent years with the ELICQ and the ELICA-R. With outside review and a test-retest reliability of 0.70 in the ELICQ, Lambie et al. (2011) found that younger practicing school counselors had higher levels of ethical and legal knowledge than older counselors.

Ethical and Legal Knowledge, Social-Cognitive Development, and Ethical Decision-Making

Among practicing school counselors and counseling students there has not been a significant relationship between ego development and ethical decision-making or

between ethical and legal knowledge and ethical decision-making (Lambie et al., 2011). However, there has been a predictive relationship between social-cognitive development and ethical and legal knowledge (Lambie et al., 2010; Lambie et al., 2011). Students with higher social-cognitive development appeared to acquire ethical and legal knowledge in briefer amounts of time (Lambie, et al., 2010). Lambie et al. (2010, 2011) employed the instrument the Ethical Decision- Making Scale Revised or EDMS-R (Dufrene, 2000) to measure ethical decision-making. EDMS-R is based on the DIT (Lambie et al., 2010; Lambie et al., 2011). The reliability of the EDMS-R is 0.77 and 0.76 (Lambie et al., 2010; Lambie et al., 2011).

The theoretical rudiments of the EDMS-R are in the Van Hoose and Paradise ethical orientation model (Dufrene & Glosoff, 2004). The Van Hoose and Paradise ethical orientation is based in Kohlberg and Piaget. According to Van Hoose and Paradise, ethical orientation has five stages which are: (a) punishment; (b) institutional; (c) societal; (d) individual; and (e) principle. Punishment concerns an individual making judgments on the basis of being rewarded or punished for good or bad behavior. The institutional stage is where an individual strictly adheres to policies and procedures. In the societal stage, a person attempts to support the standards of society. During the individual stage, a person focuses on the needs of others without violating rights and standards of society. The principle stage is where an individual operates from abstract principles which are self-selected. These stages are similar to the Kohlbergian six stages of moral development except there are five stages in the Van Hoose and Paradise ethical orientation model (Dufrene & Glosoff, 2004).

Ethical and Legal Knowledge, Cognitive Complexity, and Moral Reasoning

The aim of this study is to explore the predictive utility of ethical and legal knowledge and cognitive complexity upon the criterion variable of moral reasoning. The precedent has already been established for ethical and legal knowledge to be correlated with cognitive development constructs (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012). Moral reasoning is being utilized as the criterion variable because CACREP (2009) standards support students knowing "applications of ethical and legal considerations in the counseling profession" *(Standard, II.G.1.j.)*. Also, Welfel (2009) has theorized that ethical decision-making develops later than ethical and legal knowledge. Therefore, it is justifiable to explore what contributes or correlates with ethical decision-making (i.e. moral reasoning).

Moral reasoning is being employed as the ethical decision-making instrument in this study for several reasons. One reason is the rudiments of moral reasoning are in Kohlberg's theory of moral development (Rest et al., 1999). Influenced heavily by Kohlberg, Van Hoose and Paradise were instrumental in the theoretical construction of the EDMS-R (Dufrene & Glosoff, 2004). Also, moral reasoning is being used for ethical decision-making because of its extensive use in testing moral judgments with various populations. The DIT and DIT-2 have been utilized in a variety of populations as measurements of ethical decision-making and making moral judgments (Halverson et al., 2006; Kim et al., 2004; Latif, 2002; Williams, 2010). Thirdly, the EDMS-R is modeled after the DIT and the DIT-2 in terms of dilemmas and scoring (Dufrene & Glosoff, 2004). Therefore, with similar theoretical underpinnings, extensive assessments with a

variety of populations, and a prototype for instrument construction, it is fitting to measure ethical decision-making with the DIT-2, a moral reasoning instrument.

Social-cognitive development is a domain within the cognitive development family. Social-cognitive development concerns how individuals make meaning of experiences (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012). With this broad definition of meaning making, cognitive complexity also explores how individuals make meaning. Individuals make meaning through integration, analysis and synthesis of multiple perspectives (Granello, 2002, 2010). Further, similar to cognitive complexity, social-cognitive development is a stage theory. The theoretical underpinnings of social-cognitive development are Kohlberg and Piaget (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012). Cognitive complexity has been referred to as a neo-Piagetian theory (Eriksen & McAuliffe, 2006). Therefore, cognitive complexity can be utilized as a type of cognitive development domain to assess if there is a relationship between cognitive complexity and ethical and legal knowledge.

Ethical and Legal Knowledge Summary

With the myriad of situations counselors face, it is imperative counselors possess ethical and legal knowledge. Also, to render sound ethical and legal decisions counselors need moral reasoning to apply ethical and legal knowledge. Lambie et al. (2010, 2012) have demonstrated that students with higher levels of social-cognitive development demonstrate higher acquisition of ethical knowledge. In earlier studies there was not a correlation between ethical decision-making and ethical and legal knowledge or ethical decision-making and cognitive development (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012). This study explored the relationship among moral reasoning,

cognitive complexity, and ethical and legal knowledge with the instrument of the ELICA-R. There have not been any known studies testing the ELICA-R with cognitive development constructs of moral reasoning or cognitive complexity.

Cognitive Complexity

Granello (2010) defined cognitive complexity as the "ability to absorb, integrate and make use of multiple perspectives" (p.92). Cognitive complexity is a domain in the family of cognitive development which includes: moral reasoning or moral development, ego development or social-cognitive development, and conceptual complexity (Eriksen & McAuliffe, 2006; Halverson et al., 2006; Sias et al., 2006). This section provides the following through the lens of cognitive complexity: the Perry Model, cognitive complexity and the Role Category Questionnaire, and cognitive complexity's relationship to counseling and the general population.

Cognitive Complexity and the Perry Model

The model which this study employed was Perry's model of cognitive complexity. Perry's model of cognitive complexity discusses the levels at which an individual is able to integrate different perspectives. Perry's model is considered a neo-Piagetian model with theoretical underpinnings in Piagetian theory (Eriksen & McAuliffe, 2006). Perry's theory has nine positions. For simplicity, the majority of theorists use four positions which are labeled: dualism, multiplicity, relativism, and committed relativism (Thompson, 1999).

The position of dualism describes a person who thinks in terms of right and wrong. Further, the person believes authority originates outside of self (Thompson, 1999). The second position is multiplicity. Multiplicity is the belief in multiple

perspectives and there is not one right answer or wrong answer, but different ways to view an issue. Regarding locus of control, the person still views an authority as possessing all the knowledge. The third position is relativism and relativism occurs when an individual sees that there are no right answers in many situations. The individual understands that what is right originates with expectations of others, circumstances, and internal ideas. The commitment in relativism is the fourth and final stage and this is the stage in which an individual recognizes paradoxes and understands the importance of interpersonal relationships.

The Learning Environment Preferences (LEP; Moore, 1987) has been the instrument which has been used to measure cognitive complexity. To construct the LEP, Moore employed four positions to assess cognitive complexity. The following positions represent four levels of the Perry model: position 2 (dualism), position 3 (early multiplicity), position 4 (late multiplicity), and position 5 (early relativism). The positions of dualism and relativism have been described above (Thompson, 1999), but a description of early multiplicity and late multiplicity is necessary to understand the differentiation between the two on the LEP. Early multiplicity is thinking which involves solutions people know, but there are also solutions which are not yet known. In early multiplicity, these solutions can be discovered if the right tasks are employed. Late multiplicity is when a person thinks some problems are unsolvable and respects everyone's right to an opinion.

The LEP contains 65 items across five separate domains of learning: view of knowledge, role of instructor, role of student/peers, classroom activities, and role of evaluation/grading (Moore, 2000). The LEP explores a person's epistemology as it

concerns classroom learning. Within each section there is a sentence stem such as "My ideal learning environment would be" and then 13 prototypic statements from dualism to relativism follow the stem. On a Likert scale, respondents rate each item for significance from 1 to 4 in terms of *not at all significant*, *somewhat significant*, *moderately significant*, and *very significant*. Following the rating of each item, participants rank their three top choices for learning. The percentages of each position preference is calculated through the Cognitive Complexity Index (CCI) and it creates a composite score "ranging from 200 (stable position 2) to 500 (stable position 5)" (Moore, 2000, p. 9). Another instrument which also measures cognitive complexity differently is the Role Category Questionnaire (RCQ; Crockett, Press, Delia, & Kenney, 1974). This instrument has been used with counseling students to assess cognitive complexity (Duys & Hedstrom, 2000).

Cognitive Complexity and the Role Category Questionnaire (RCQ)

The RCQ is a test which assesses an individual's ability to hold a number of constructs about another person at once (Duys & Hedstrom, 2000). Within the test, individuals are asked to answer two open ended questions about two peers. One peer is a person the individual likes while the other peer is a person the individual dislikes. The writing part of the RCQ takes five minutes per question and the responses are assessed as levels of cognitive complexity. The test-retest reliability is high with 0.84 and 0.86 over a 1 month period (O'Keefe, Shepherd, & Streeter, 1982).

Cognitive Complexity and Counseling

Cognitive complexity has been considered an important characteristic for a counselor to possess (Neukrug, 2014). Brendel, Kolbert, and Foster (2002) asserted, "Higher levels of cognitive development relate to higher levels of emotional

responses...greater capacity to meet client needs" (p. 218). Choate and Granello (2006) also agreed that cognitive complexity leads to better client-counselor relations, ability to possess multicultural focus, improved hypothetical understanding of clients, and sophisticated conceptualizations of clients. Lovell (1999) stated, "Results indicated that more mature forms of thought (according to the Perry scheme) are associated with higher empathy levels (Hogan scale)" (p. 95). Lovell (1999) supported a significant positive relationship between cognitive complexity and level of clinical skill. However, Eriksen and McAuliffe (2006) determined that cognitive complexity was not related to higher levels of clinical skill. Therefore, the results have been mixed with some studies demonstrating a relationship between cognitive complexity and clinical skill and other studies not showing this relationship (Eriksen & McAuliffe, 2006; Lovell, 1999).

Field experience was a necessary component of counselors' development of cognitive complexity and the increase in cognitive complexity usually occurred after the internship experience in counseling students (Fong & Borders, 1997; Granello, 2002). In contrast, Lovell (2002) reported counseling students at higher levels of cognitive complexity actually decreased in supervisee levels of development. The situation of decrease in development could indicate that disequilibration occurs when counseling students are faced with new situations even if students have higher levels of cognitive complexity (Lovell, 2002). In contrast, on the RCQ, counseling skills training and specific teaching methods also served as catalysts for increasing cognitive complexity (Duys & Hedstrom, 2000; Little, Packman, Samby, & Maddux, 2005). These methods included "modeling, mastery, persuasion, arousal, and supervisory feedback during counseling training as key elements to promote skills acquisition, self-appraisal of

counseling skills, self-monitoring behavior" (Little et al., 2005, p. 190). Students seemed to develop cognitive complexity after intensive field practice and intentional teaching. Some studies have demonstrated that age, gender, or GPA had little influence on cognitive complexity (Granello, 2002, 2010; Lovell, 2002). For practicing counselors, results have demonstrated that years of practicing counseling, and the amount of education increases cognitive complexity (Granello, 2010).

Cognitive Complexity and the General Population

In the general population, age has been shown to be negatively correlated with cognitive complexity (Hood & Dopere, 2002). Education level and academic achievement have been shown to be associated with higher levels of cognitive complexity (Hood & Dopere, 2002; Zhang & Watkins, 2001). Work and travel experience have also been associated with higher levels of cognitive complexity in undergraduate students (Zhang & Watkins, 2001). Zhang and Watkins (2001) have demonstrated that first year undergraduate students scored significantly higher scores in cognitive complexity than second year students and fourth year students. Also, first year students scored higher than third year students, but not significantly. Lovell (2002) demonstrated a decrease in cognitive complexity of counseling students which is consistent with the above results concerning undergraduate students (Zhang & Watkins, 2001). These results could demonstrate that gains in cognitive complexity do not occur in a linear manner, but that gains and losses occur at different times.

Cognitive Complexity Summary

There has been a mixture of results regarding cognitive complexity and various constructs. Lovell (2002) demonstrated cognitive complexity was related to counseling

skills, while Eriksen and McAuliffe (2006) did not support a relationship. Some studies showed counseling students with higher complexity after field experience while other studies demonstrated the decrease of cognitive complexity with field experience and educational level (Fong & Borders, 1997; Granello, 2002; Lovell, 2002; Zhang & Watkins, 2001). In the studies involving the RCQ, educational interventions increased cognitive complexity (Duys & Hedstrom, 2000; Little et al., 2005). In counseling, no significance has been shown in age, gender, and GPA (Eriksen & McAuliffe, 2006; Granello 2002). However, Hood and Dopere (2002) supported an inverse relationship between age and cognitive complexity. There was a correlation with work and travel experience in college students and high cognitive complexity (Zhang & Watkins, 2001). Similarly, 10 or more years of experience in counseling was correlated with cognitive complexity (Granello, 2010). The mixture in results for cognitive complexity in counseling skills, field experience, educational level and age necessitates further study regarding cognitive complexity.

Moral Reasoning

This section reviews the literature through pertinent studies in moral reasoning and demographics such as institution and geographic location, occupation, student type, education, age, gender, race, and ethnicity. Moral reasoning is a six-stage theory which was created by Lawrence Kohlberg and is principally a cognitive theory that explains moral development (Myers, 1992). The three levels of Kohlberg's theory are preconventional, conventional, and postconventional. The preconventional level involves self-interest and contains stages one and two. Stage one concerns thinking and behavior which avoids punishment. Stage two includes gaining rewards and the duration of the

preconventional level is through childhood. The conventional level contains stages three and four. Stage three concerns following social rules to gain approval. Stage four comprises thinking and behavior which upholds rules and legal standards. The conventional level period is active during late childhood and early adolescence. The postconventional level contains stages five and six. Stage five encompasses thinking and behavior which supports majority rule and basic rights for all. Stage six is based upon abstract principles upon which a person makes decisions and intuitive appeals in relationships. The postconventional level is active from adolescence through adulthood. In recent years, various scholars have proposed a neo-Kohlbergian theory (Rest, Narvaez, Bebeau, & Thoma, 1999).

Rest et al. (1999) have refined Kohlberg's theory into three developmental schemas: personal interest, maintaining norms, and postconventional. Schemas are "general knowledge structures residing in long term memory and are formed as people recognize similarities in stimuli. The function of schema guides attention to new information and provides pathways for additional learning and integration of new information" (Cannon, 2008, p. 506). The personal interest schema includes thinking which focuses upon rewards and relationships. The maintaining norms schema includes sustaining the rules of society and groups. The postconventional schema encompasses an abstract set of principles such as majority rule, basic rights, and intuitive appeals in relationships. Moral reasoning can be deduced from exploring the processes by which individuals decide a course of action through moral dilemmas (Kohlberg, 1984). The Defining Issues Test (DIT; Rest, 1979) is an instrument which has been employed to evaluate moral reasoning (Rest et al., 1999). Prior to the DIT, Kohlberg used interviews

and scored people for moral reasoning based on an 800 page guide (Rest et al., 1999). The DIT has provided the pathway for mass testing of moral reasoning.

Moral reasoning explores how an individual arrives at judgments about what is right or obligatory in certain situations (Sias, Lambie, & Foster, 2006). The focus of moral reasoning is an individual's assessment of values regarding a moral dilemma, rather than the facts surrounding the dilemma. From understanding how an individual assesses values, moral dilemmas can demonstrate the schema in which an individual is operating. In the field of counseling, high levels of moral reasoning are important because of the ambiguous nature of counseling (Eriksen & McAuliffe, 2006; Sias et al., 2006).

Studies in Moral Reasoning

The DIT and DIT-2 (Defining Issues Test-2; Rest, Narvaez, Thoma, & Bebeau, 1999) have been used extensively to measure moral development in counselors and counseling students (Brendel et al., 2002; Cannon, 2008; Eriksen & McAuliffe, 2006; Halverson, Miars, & Livneh, 2006; Sias, 2009; Sias et al., 2006). Higher levels of moral reasoning have been predictive of higher levels of clinical skills (Eriksen & McAuliffe, 2006; Halverson et al., 2006). Eriksen and McAuliffe (2006) stated, "The ill-structured situations required by counseling seem to call on a post conventional capacity to withhold judgment, tolerate ambiguity, and empathically engage in another person's meaning making in order that clients might re-story their lives" (p. 190).

Some studies in counseling have demonstrated that counseling students have not experienced significant increases in moral development over time in their respective programs (Brendel et al., 2002; Halverson et al., 2006). These results were consistent

with another study which demonstrated undergraduates did not increase in moral development (Kim, Park, Son, & Han, 2004). Conversely, Cannon (2008) observed an increase in moral reasoning among counseling students with interventions such as journaling, analyzing dilemmas, and discussions. Also, Mayhew (2012) found that, "Moral reasoning scores after the first year in college were significantly higher than before the first-year in college" (p. 377). Additionally, Krawczyk (1997) demonstrated with nursing students that hours spent on ethical content correlated with higher moral reasoning.

Through the various studies, there is a mixture of results regarding developing and increasing moral reasoning skills. Some studies have demonstrated that moral reasoning stays consistent despite various interventions or increased educational experiences (Brendel et al., 2002; Halverson et al., 2006; Kim et al., 2004). Other studies have shown moral reasoning increases over time with interventions and experiences (Cannon, 2008; Krawczyk, 1997; Mayhew, 2012). In regard to increasing moral reasoning, research has shown interventions which increase moral reasoning are intensive class time on ethics, moral dilemmas, discussions, journaling, and group processing (Krawczyk, 1997; Mayhew, 2012).

Demographics and Moral Reasoning

Institutional and Geographic Location

Institutional type and geography can have an impact on moral reasoning. Mayhew (2012) found, "Students enrolled at community colleges were significantly less likely to demonstrate gains in moral reasoning than were students enrolled at liberal arts colleges" (p. 379). Additionally, geographic location can have a relationship to moral

reasoning (Latif, 2002). Latif (2002) demonstrated that pharmacy students in the northwestern region of the United States scored higher than the students in the southern region. More research still needs to be performed to draw conclusions about the relationship of geography on moral reasoning because studies that have been conducted only explored limited regions.

Occupation and Student Type

Studies have revealed that occupation and student type may have a relationship to moral reasoning (Swisher, 2010; Vitton & Wasonga, 2009). School principals have shown lower moral reasoning scores than the general population of adults (Vitton & Wasonga, 2009). Concerning healthcare students, Swisher (2010) noted, "physical therapists in this study scored lower on post conventional moral reasoning than medical students, graduate students, nurses, nursing students, occupational therapy students, PT [physical therapy] students and dental students in previous studies with the DIT" (p. 74). From the above research results, it appears occupational type may have a relationship to moral reasoning. Other studies from a wide ranging sample of occupations are needed to draw conclusions about the relationship of occupation to moral reasoning.

Education

Moral reasoning has been correlated with higher education level in counselors and undergraduate students (Mayhew, 2012; Sias et al., 2006). Sias et al. (2006) found the education level and recovery status of substance abuse counselors were positively correlated with their moral reasoning. Precollege academic preparation was also correlated positively with gains in moral reasoning (Mayhew, 2012). Derryberry, Jones, Grieve, and Barger (2007) noted crystallized intelligence, knowledge and skills gained

over time, had a statistically significant correlation with moral reasoning. In the majority of studies, the sample was drawn from students who had received the same amount of education. Therefore, further studies are necessary to determine education's relationship to moral reasoning.

Age, Gender, Race, and Ethnicity

Studies have been conducted in an effort to determine whether moral reasoning is related to demographic factors such as age, gender, and race. Some studies have found that age, gender, and race had no bearing on an individual's moral development (Al-Rumaidhi, 2008; Sias, 2009; Vitton & Wasonga, 2009). Regarding age, Latif (2002) found, "age was significantly correlated with DIT P% scores" (p. 180). In terms of gender, numerous studies determined that women possessed higher moral development than men (Crowson, Debacker, & Thoma, 2007; Latif, 2002; Mayhew, 2012; Myyry, Juujarvi, & Pesso, 2010; Swisher, 2010; Vitton & Wasonga, 2009; Williams, 2010). Conversely, one study involving pastoral counselors demonstrated that White males scored significantly higher than White females (Hestenes, 2004). Concerning race, in a few studies, Caucasians scored significantly higher than African-Americans and other minorities (Hestenes, 2004; Latif, 2002; Mayhew, 2012). The results of studies have been mixed when exploring age, race, and gender as predictors of moral development. Some studies suggest that ethnicity and cultural values may be a significant predictor in moral reasoning scores (Hestenes, 2004; Lin & Ho, 2009).

Two studies in particular found that ethnicity may be related to the moral reasoning scores of participants if the participants originate from a communal culture (Hestenes, 2004; Lin & Ho, 2009). Participants in these studies tended to score higher on

the maintaining norms level than the postconventional level. Lin and Ho (2009) reported, "Taiwanese and Chinese purchasing managers' collectivist orientation with group benefits was found to take precedence over benefits to the individual. They may therefore be focused more on gaining mutually satisfying outcomes and group harmonization..." (p. 206).

Moral Reasoning Summary

Changes have occurred in regard to the measurement of moral reasoning from a qualitative instrument to a quantitative instrument (Rest et al., 1999). Moral reasoning has been important in counseling because counselors have to make decisions regarding ambiguous situations (Eriksen & McAuliffe, 2006; Sias et al., 2006). Further, moral reasoning has been correlated with higher clinical skill (Eriksen & McAuliffe, 2006). There have been mixed results concerning demographics such as race, age, and gender. Consistently, women have scored higher than men in many studies while other studies have shown no significant difference (Al-Rumaidhi, 2008; Crowson, Debacker, & Thoma, 2007; Latif, 2002; Mayhew, 2012; Myyry, Juujarvi, & Pesso, 2010; Sias, 2009; Swisher, 2010; Vitton & Wasonga, 2009; Williams, 2010). Ethnicity and cultural values could have an effect on moral reasoning which raises the question of cultural bias in moral reasoning assessments (Hestenes, 2004; Lin & Ho, 2009). Since moral development is considered a domain of cognitive development, it has been utilized in studies with cognitive development instruments (Eriksen & McAuliffe, 2006). The area of cognitive complexity is also considered a domain of cognitive development (Sias et al., 2006).

Literature Summary

Lambie et al. (2011) noted, "Theoretically, counselors' ethical and legal knowledge and ethical decision making should be influenced by their social cognitive development" (p. 228). Additionally, accreditation standards have supported a link between ethical and legal knowledge and the application of ethical and legal standards (CACREP, 2009). Until recently, there has not been a tested instrument to assess ethical and legal knowledge in counseling. With the construction of these assessments (ELICQ and ELICA-R), the findings have supported a significant relationship between ethical and legal knowledge and social-cognitive development in counseling students and practicing counselors (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012). The prior studies were performed with the ELICQ, but now there is a shorter more reliable instrument, the ELICA-R (Ieva, 2012). Other studies need to be performed concerning the predictors of ethical decision making.

As stated previously, the construct of moral reasoning is an optimal instrument to assess ethical decision-making. Moral reasoning has theoretical roots in Kohlberg, high reliability and validity, and extensive use in measuring moral judgment (Halverson et al., 2006; Kim et al., 2004; Latif, 2002; Rest et al., 1999; Williams, 2010).). Further, the DIT was the prototype for the EDMS-R (Dufrene & Glosoff, 2004), which was the instrument used to measure ethical decision-making with ethical and legal knowledge and social cognitive development (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012). Consequently, moral reasoning can be utilized for ethical decision-making in relationship to ethical and legal knowledge.

Cognitive complexity is a domain of cognitive development. Even with mixed results, cognitive complexity has been correlated with greater counseling skill,

experience, and educational level in practicing counselors and counseling students (Granello, 2002, 2010; Lovell, 1999). As a domain of cognitive development, theoretical rudiments in Piaget, and with a theoretical basis for relationship with ethical decision-making and ethical and legal knowledge, cognitive complexity can be utilized as a cognitive development instrument (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012).

There have already been studies demonstrating ethical and legal knowledge is related to the cognitive developmental construct of social-cognitive development (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012). Other studies need to be performed to investigate the relationship among other cognitive development constructs such as cognitive complexity and moral reasoning. These studies are exploratory because of the novelty of ethical and legal assessments in counseling.

CHAPTER THREE: METHODOLOGY

Chapter Three delineates the methodology which this study employed. The sections of the chapter are as follows: research design, research questions, participants, instrumentation, methods, data analysis, and limitations.

Research Design

The research design was a quantitative, correlational, survey approach. Since the research investigated a mathematical relationship among participants' ethical and legal knowledge, cognitive complexity, and moral reasoning, the design was quantitative. The design was correlational because it explored if differences in scores of ethical and legal knowledge, cognitive complexity, and moral reasoning affected one another (Leedy & Ormrod, 2013). Further, the study was a survey design because it obtained a population of counseling students; acquired their responses through frequency counts and percentages; and made inferences from their responses on the three instruments (Leedy & Ormrod, 2013). The surveys consisted of three pre-made, self-administered instruments (Heppner, Wampold, & Kivlighan, 2008). The design was meant to describe any relationships that may exist among ethical and legal knowledge, cognitive complexity, and moral reasoning, therefore it was correlational.

Research Questions

The following were the research questions and their corresponding hypotheses:

Question One: To what extent can ethical and legal knowledge predict moral reasoning scores?

H_1: Ethical and legal knowledge will significantly predict moral reasoning.

Question Two: To what extent can cognitive complexity predict moral reasoning?

H_2: Cognitive complexity will significantly predict moral reasoning.

Question Three: To what extent can ethical and legal knowledge and cognitive complexity together predict moral reasoning?

H_3: Ethical and legal knowledge and cognitive complexity together will significantly predict moral reasoning.

Participants

This section describes the following areas: the identity of the population, the selection of participants, the number of participants, and the protection of the identity of participants. The sampling procedure which was used was a convenience sample. The procedure was a convenience sample because the sample contained advanced counseling students who were readily accessible to the researcher in internship in eight different counseling programs (Leedy & Ormrod, 2013). Requirements for participation in the study were that students needed to be in the first or second semester of internship and in a counseling program. Based on similar studies, the effect size was medium (ES=0.16) with a power of 0.80, at α=.05 (Cohen, 1992; Lambie, Hagedorn, & Ieva, 2010; Lambie, Ieva, Mullen, & Hayes, 2011; Lambie, Ieva, & Ohrt, 2012). For research questions one and two, bivariate regression was utilized with a minimum number of 50 participants (Buchner, Erdfelder, Faul, & Lang, 2009). For the third research question, multiple regression analysis was utilized with two independent variables at α=.05 and a medium effect size (ES=0.16) with a power of 0.80, (Cohen, 1992; Lambie et al., 2010; Lambie et

al., 2011; Lambie et al., 2012). To conduct the two statistical tests in an appropriate manner, a minimum of 63 participants was included in the study (Buchner et al., 2009).

Protection of participants involved utilizing web links for anonymity. In addition, for participants who provided emails, their identities were coded when their responses were sent for scoring. Survey Monkey provided security of responses through a secured and encrypted connection.

Instrumentation

Four instruments were employed for this study. The four instruments were as follows: the Ethical and Legal Issues in Counseling Assessment-Revised (ELICA-R; Lambie, Ieva, & Hagedorn, 2009) for ethical and legal knowledge in counseling; the Learning Environment Preferences (LEP; Moore, 1987) for cognitive complexity; and the Defining Issues Test-2 (DIT-2; Rest, Narvaez, Thoma, & Bebau, 1999) for moral reasoning, and the Participant Demographics Instrument.

Ethical and Legal Knowledge as the Predictor for Moral Reasoning

The ELICA-R is a revision of the original ELICQ which was a 50 item multiple choice assessment. The ELICQ had 10 subscales: (a) professional identity; (b) ethical and legal terms; (c) ethical decision-making principles; (d) confidentiality; (e) suicide and client violence; (f) abuse, neglect, and negligence; (g) counseling and educational records, (h) educational and civil right laws, (i) counselor development and wellness; and (j) discrimination laws and ethics (Lambie, et. al, 2010; Lambie et al., 2011; Lambie et al., 2012). There were five questions for each of the 10 subscales. The reliability of the ELICQ was satisfactory with a Cronbach's Alpha score of 0.70 with 64 counseling

graduate students (Lambie et al., 2010), and 0.71 with 226 school counselors (Lambie et al., 2011).

Reliability and Development of ELICA-R

The reliability and psychometric properties of the ELICQ were reinforced when a reliability analysis was performed on 64 counselors-in-training (Lambie et al., 2010), 226 school counselors (Lambie et al., 2011), and 28 school counseling students (Lambie et al., 2012). After the reliability analysis and a secondary review panel review, 19 items were removed and an internal consistency of reliability of 0.79 was established. The ELICQ (Lambie et al., 2010) was renamed the ELICA-R (Lambie & Ieva, 2009) and it now contains 35-items which assess the same 10 subscales as the ELICQ. Each item is worth 2 points. In the latest study involving the ELICA-R, the average score for school counselors (N = 301) was 50.27 (SD=8.02; range, 22-66), with the highest possible score of 70 (Ieva, 2012). This means that the average practicing school counselor scored approximately 71% on the ELICA-R.

Cognitive Complexity as the Predictor for Moral Reasoning

The LEP is an objective, recognition task instrument which was developed by Moore (1989). It is based on William Perry's qualitative research which concerns a model of intellectual and ethical development. The LEP contains 65 items with five domains and the domains include course content/view of knowledge and learning; role of instructor; role of student/peers; classroom atmosphere/activities; and evaluation procedures. The LEP is modeled after the Defining Issues Test of Moral Judgment (DIT; Rest, 1979). The items on the LEP are derived from the Measure of Intellectual Development (MID; Knefelkamp, Fitch, Taylor, & Moore, 1982).

Domains

Each of the five domains contains 13 statements concerning the various components of an ideal learning environment. Participants employ a 4 point Likert-type scale to assess the importance of each statement. At the conclusion of each section, participants rank the highest three responses they think are most important in their ideal learning environment (Granello, 2002). Every division of the LEP starts with a sentence stem inquiring of participants their opinions about the ideal learning environment. Participants rate each statement from 1 to 4 as *not at all significant*, *somewhat significant*, *moderately significant*, and *very significant*. Granello (2002) replaced some of the wording in the LEP to reflect counseling. For example, Granello (2002) restated the sentence stem that said, "My ideal learning environment would," to the following: "To learn counseling at my present level, my ideal environment would be..." (p. 283). This study also included the same wording with permission from the Center for the Study of Intellectual Development.

Scoring

The Center for the Study of Intellectual Development scored the LEP. There were two scores on the LEP which indicated a position rating and a cognitive complexity index (CCI) score. Regarding positions, the LEP placed participants on a level in the Perry model and began with position 2. In reference to Position 1, Moore (2000) asserted, "Position one is not included because it has never been adequately verified empirically; even in the original study it was largely a hypothetical extension of the forms of thought found with freshmen" (p. 6). The reason the positions only proceed to level 5 is because Moore (2000) thought that the deeper processing of levels 6-9 could be

assessed only through qualitative methods. The positions of the LEP are as follows: dualism (position 2), early multiplicity (position 3), late multiplicity (position 4), and relativism (position 5).

Position 2, dualism, represents a "...completely unquestioned view of truth as absolute truth in stark black and white...The world thus consists essentially of two boxes--right and wrong--and there is generally little trouble in distinguishing one from the other" (Moore, 2001, p. 20). Position 3, early multiplicity, states there are three boxes, "right, wrong and not yet known" (Moore, 2001, p. 20). Position 4, late multiplicity, expands on early multiplicity in demonstrating, "...not yet known notion of position 3 often becomes a new certainty [that] we will never know for sure" (Moore, 2001, p. 20). Contextual relativism is position 5 and its tenets view the "world as essentially relativistic and context bound with a few right/wrong exceptions" (Moore, 2001, p. 21). The LEP also provides a Cognitive Complexity Index (CCI) which gives a numerical score for cognitive development on a continuous scale. The score ranges are from 200 (early-level dualistic thinking) to 500 (early-level relativistic thinking). Participants with higher scores are considered to have higher levels of cognitive complexity.

Reliability and Validity

In a study performed by Moore (2000), the test-retest correlation was shown to be 0.89 for the Cognitive Complexity Index. The construct validity on the first factor (course content overview) of the LEP was determined to be 0.92 (Moore, 2000). On the other four factors, the construct validity was found to be 0.61 (Moore, 2000). With regard to concurrent validity, the LEP had a correlation of 0.38 ($N = 51$) and 0.57 ($N =$

34) to the Measure of Intellectual Development (MID) instrument (Knefelkamp et al., 1982).

Moral Reasoning as the Criterion Variable

Before the 1970s, to assess moral development, a researcher had to utilize an arduous interview with a participant. Kohlberg's theory of moral development was the basis for the DIT-2. There are three levels of moral development in Kohlberg's theory which are: preconventional, conventional, and postconventional (Myers, 1992). Two stages are contained within each level making six stages of progressive moral development.

The preconventional level contains the two stages of punishment and self-interest. Theoretically, this level corresponds to moral reasoning in children before age 9 (Myers, 1992). Stage one, obedience or punishment, demonstrates obeying the rules is necessary in order to avoid punishment. The second stage schema of self-interest is where a person does the right thing because of rewards.

During adolescence, the conventional level is enacted involving the stages of social conformity and law and order (Myers, 1992). Social conformity, the third stage, concerns how one tries to satisfy the norms of a group in order to be viewed as a "good boy or good girl." Stage four, law and order, views laws as intransigent and a person's duty is to uphold the law. In adulthood, people may ascend to the final and highest level of postconventional morality.

The postconventional level contains the stages of social contract orientation and universal ethics (Myers, 1992). The social contract, stage five, demonstrates that rules are not intransigent and the principles of society are majority rule, basic minimal rights,

and due process (Bebeau & Thoma, 2003). Universal ethics, stage six, comprises how relationships have intuitive appeals and abstract principles are the basis for behavior (Bebeau & Thoma, 2003). The DIT was developed as a "quick and dirty" instrument to measure moral development (Rest, Narvaez, Thoma, & Bebeau, 2000). Following the creation of the DIT, the DIT-2 was developed as a shorter, clearer, and more powerful test in terms of validity in relation to the original DIT (Rest et al., 2000).

The DIT-2 is an objective measure which is based on Kohlberg's theory of moral development. It stimulates moral schemas and measures the schemas on the basis of decision making (Rest et al., 2000). Schemas are the organization of general knowledge within a person's long term memory. Whenever there is scant information, an individual will fill in the missing information with a schema (Cannon, 2008). The DIT-2 provides information so an assessment can be made of an individual's moral schema.

Based on a neo-Kohlbergian approach, the instrument contains three schemas: personal interest, maintaining norms, and postconventional. The first schema, personal interest, involves thinking which is governed by rules outside of a person. Rest et al. (2000) explained that personal interest is when an individual "analyze[s] what each stakeholder in a moral dilemma has to gain or lose" (p. 387). A person operating in stages two and three of Kohlberg's theory would fit the category of personal interest.

The second schema, maintaining norms, includes the process of a person keeping the rules of a social group. A person with a maintaining norms schema would, "identify established practice (rules and roles) and who are the de facto authorities" (Rest et al., 2000, p. 387). This schema is equivalent to Kohlberg's stage four regarding law and order.

The third schema, postconventional, demonstrates thinking which is based on self-chosen values. Postconventional schema describes, "moral obligations...based on shared ideas, are fully reciprocal and open to scrutiny" (Rest et al., 2000, p. 388). This individual thinks and behaves according to his or her own set of values and thinking is based on consensus and basic rights (Bebeau & Thoma, 2003).

Scoring

The DIT-2 presents 5 moral dilemmas and the respondent ranks and rates the importance of 12 items which demonstrate decisions about a dilemma. The respondent is supposed to rate the importance of each statement as *great, much, some, little or no* on *a* 5-point Likert scale (Rest et al., 1999). After rating the items, the respondent chooses four items which the respondent deems most significant, i.e. *most important, second most important, third most important, etc.*

After rating and ranking the items, the DIT-2 provides the person with a personal interest, maintaining norms, and postconventional score. These scores are based on the number of items participants preferred in ranking for each schema (Rest et al., 1999). Personal interest provides a score from 0 to 100 (S. Thoma, personal communication, January 23, 2014); maintaining norms shows a score from 0 to 92 (S. Thoma, personal communication, January 23, 2014); postconventional provides a score from 0 to 95. For example, each time a participant ranks a postconventional item as most important, the individual receives four points. If the postconventional item is ranked as second most important, the individual receives three points, etc. Each schema is scored in this way.

Additionally, the DIT-2 analyzes the N2 score. The N2 score includes the respondent's P score and the difference in ratings between the postconventional items and

personal interest items (Rest et al., 2000). Percentage levels of the N2 score range from 0 to 100 (S. Thoma, personal communication, January 23, 2014). For graduate level students (N=15,496), the personal interest (Stage 2/3), maintaining norms (Stage 4), and postconventional (P score) have these respective ranges (M=20.61, M=34.07 and M=41.06; Dong, 2009). The DIT-2 categorizes participants according to their highest ranking in schema (Thoma & Rest, 1999). If a participant's score is significantly higher in one schema than another schema, the participant is categorized as consolidated. However, if the participant's rankings are not significantly higher than other schema, the participant is categorized as being in transition (Thoma & Rest, 1999).

Reliability and Validity

Psychometric properties of the DIT-2 show a test-retest reliability between 0.70s to 0.80s from a few weeks to a few months between administrations of the instrument. There is extensive evidence of construct validity with the DIT (Bebeau & Thoma, 2003). The DIT-2 has a Cronbach's alpha regarding internal consistency of 0.70's to 0.80's (Rest & Narvaez, 1998).

Participant Demographic Sheet

The Participant Demographic Sheet was utilized to collect data about the background of the counseling students who participate in the study. Age, race, gender, marital status, years in counseling program, and years in profession were listed on the demographic sheet. The data collected from this sheet was not used for data analysis; however the data were used for information to creators of the instruments. Also, the data were utilized so that readers of the study results would have an understanding of the population included in the study.

Procedure

Before data collection, the study was submitted as an exempt study to the Human Subjects Committee of the Darden College of Education. Once the exempt application was approved and the prospectus of the study was approved by the dissertation committee, data were collected. The data collection process was begun after securing agreement to participate in the study from 11 counseling programs. One counseling program was a Historically Black College and University (HBCU) in a southern state. Two of the counseling programs were CACREP accredited programs and religiously affiliated in the mid-Atlantic and the South. The other five counseling programs included five public predominantly White institutions (PWIs) in southern states. Three institutions did not respond.

At two institutions, faculty members who taught internship suggested that students complete the instruments as part of an assignment. The instruments the students completed were meant to provide them with insight regarding their development as counselors. Students stated in the informed consent whether their scores could be utilized in the research study. There was no pressure for students to participate and faculty members were not told which students agreed or did not agree to participate in the study. Following student approval, email lists were obtained from two institutions and the invitations were sent through web links for completing the instruments to the other nine schools. Following the administration and results of the instruments, a written summary of each student's results was provided to the students whose identity was known through email. Students were also given an interpretation of their scores as they related to their development as counselors.

After administration, the DIT-2 and LEP results were downloaded from Survey Monkey. They were placed on Excel files and coded to protect the identities of participants. After administration, the DIT-2 responses were sent to the Office for the Study of Ethical Development to be scored. Following scoring, the office provided four documents which contained the results in pdf and SPSS formats. When responses were submitted, the office provided a DIT-2 guide. The LEP responses were sent to the Center for Study of Intellectual Development to be scored. Following the scoring, the center sent an Excel file with the results and a LEP guide which explained the range of scores. The ELICA-R was scored by the researcher with answers from the creators of the instrument.

Data Analysis

Research Questions 1 and 2

Analysis. To answer research questions 1 and 2 of whether ethical and legal knowledge and cognitive complexity were predictors of moral reasoning, bivariate regression was utilized. Mertler and Vanatta (2005) stated, "Bivariate regression utilizes the relationship between the independent variable and the dependent to predict the score of the dependent variable from the independent variable" (p. 13). Further, Field (2009) stated, "Regression analysis is a way of predicting an outcome variable from one predictor variable" (p. 198). First, the results of the ethical and legal knowledge (ELICA-R) scores, as the independent variable were entered in SPSS 21.0. Additionally, the moral reasoning (DIT-2) N2 scores as the dependent variable were placed in SPSS 21.0 and analyzed applying linear regression. The same process was done entering the

cognitive complexity (LEP) scores as the independent variable and moral reasoning (DIT-2) N2 scores as the dependent variable.

Rationale. Bivariate regression was used to investigate the nature of the relationship between ELICA-R scores and DIT-2 N2 scores, and the relationship between cognitive complexity (LEP) scores and moral reasoning (DIT-2) N2 scores. The analyses revealed the degree to which ethical and legal knowledge (ELICA-R) and cognitive complexity (LEP) scores predicted moral reasoning (DIT-2) N2 scores. Linear regression explained the amount of variance that ELICA-R scores and LEP scores contributed to DIT-2 scores.

Power. For research questions 1 and 2, bivariate regression analysis was employed with one variable at α=.05 and a medium effect size (ES=0.16), power of 0.80 with a minimum of 50 participants (Buchner et al., 2009; Cohen, 1992; Lambie et al., 2010; Lambie, et al., 2011). The *F*-test was the test of significance because the *F*-test demonstrates "how much variability the model can explain relative to how much it cannot explain" (Field, 2009, p.209). The purpose of the research questions was to answer how much ethical and legal knowledge (ELICA-R) scores and cognitive complexity (LEP) scores contributed to moral reasoning (DIT-2) N2 scores respectively The significance criterion of α= .1 was utilized because there could be a 5 percent chance or less that a large *F*-ratio would occur if the null hypotheses of ethical and legal knowledge (ELICA-R) scores and cognitive complexity (LEP) scores not predicting moral reasoning (DIT-2) N2 scores were true (Cohen, 1992).

Research Question 3

Analysis. To answer research question 3 as to whether ethical and legal knowledge and cognitive complexity together predicted moral reasoning, multiple regression was employed. Mertler and Vannata (2005) stated, "Multiple regression identifies the best combination of predictors (IVs) of the dependent variables. Consequently, it is used when there are several independent quantitative variables and one dependent quantitative variable" (p. 14). For analysis, the ethical and legal knowledge (ELICA-R) scores and cognitive complexity (LEP) scores were entered into SPSS 21.0 as independent variables as a block relying on the standard of forced entry. Forced entry was used because there was a strong theoretical reasons for using the ELICA-R and LEP scores as the independent variables (Field, 2009). The dependent variable was the DIT-2 N2 scores.

Rationale. The research question investigated and analyzed the mathematical relationship among the instruments of the ethical and legal knowledge (ELICA-R) scores, cognitive complexity (LEP) scores, and moral reasoning (DIT-2) N2 scores. The reason for investigating the mathematical relationship with these three instruments was to try to predict values of moral reasoning by the constructs of ethical and legal knowledge and cognitive complexity and to recognize the relationship among the three constructs. Regression analysis can be employed "as a means in explaining causal relationships among variables" (Mertler & Vannatta, 2005, p. 165).

Power. Multiple regression analysis was employed at α=.05 with a medium effect size (ES=.16), power of .80 (Cohen, 1992; Lambie et al., 2010; Lambie, et al., 2011). A minimum of 63 participants was required (Buchner et al., 2009; Cohen, 1992).

Limitations

Some limitations of the study were the inability to obtain a broad base of counseling students affecting the external validity. In using a few diverse schools, the number of participants were obtained, but with more time and funding there could have been a broader base of participants from different parts of the country. The analysis was correlational therefore, the results of counselor education's impact on cognitive complexity, ethical and legal knowledge, and moral reasoning could not be determined. If the study were a longitudinal study with a pre-test and post-test, the effects of counselor education could be examined over time on counseling student's ethical and legal knowledge, cognitive complexity and moral reasoning. Theoretically, a person may have always operated at a certain level of ethical and legal knowledge, cognitive complexity, and moral reasoning. Also, regarding limitations, demographics could have impacted the level of ethical and legal knowledge, cognitive complexity, and moral reasoning, but the number of participants needed to be much greater to perform analysis of variance (ANOVA). Further, the ELICA-R is an instrument which has not been widely tested, so the reliability and validity of the ELICA-R is questionable due to its novelty. More studies are necessary to review, support, and analyze the validity and reliability of the ELICA-R.

CHAPTER FOUR: RESULTS

This study was conducted to examine the relationships among ethical and legal knowledge, cognitive complexity, and moral reasoning in counseling students. The instruments which were employed were the Ethical and Legal Issues in Counseling Assessment–Revised (ELICA-R; Lambie, Ieva, & Hagedorn, 2009) for ethical and legal knowledge, the Learning Environment Preferences (LEP; Moore, 1987) for cognitive complexity, and Defining Issues Test-2 (DIT-2; Rest, Narvaez, Thoma, & Bebeau, 1999) for moral reasoning. Results of this study are provided in Chapter Four. The chapter contains the following sections: preliminary data screening, demographics of participants, the results for research questions 1, 2, and 3 along with the respective hypotheses, and a summary of the results.

Preliminary Data Screening

Participants used the Survey Monkey instrument; therefore there were no missing data because the survey could not be completed without answering each question fully. Following the administration of the instrument, each participant was coded with a number. Data were entered into SPSS 21.0 with the results for the ELICA-R, LEP, and the DIT-2 N2 scores.

Descriptive Data of Participants

Participants were obtained through internship instructors, clinical coordinators, and faculty members from 11 universities. Out of these 11 universities, eight universities provided participants. Seven of the universities which responded were in the South, while one university was in the Mid-Atlantic region. The completed surveys were acquired from participants who attended the following types of universities: five public institutions, one Historically Black College and University (HBCU), one religious

institution, and one private institution. One university in the South provided 70.77% of the participants. From the permission of faculty and students, 146 invitations were sent through email or web link via Survey Monkey to potential participants. Completed surveys comprised 44.52%; incomplete surveys accounted for 15.07%; non-respondents comprised 39.04%; and removed surveys for data irregularities were 1.37% of the total.

Data Cleaning

Two participants were removed from the data because of irregularities in their scores. One participant was an outlier in ethical and legal knowledge with a z-score of more than -3.3 standard deviations below the mean on the ELICA-R. The other participant's responses were purged because the results of the DIT-2 were unreliable. The participant violated the nondiscrimination reliability check and the data was removed (Bebeau & Thoma, 2003). After the two participants were removed, 65 participants remained for analysis.

Demographic Information

The survey requested that participants provide their gender and descriptive data and the results are shown in Tables 1-6.

Table 1

Descriptive Statistics of the Gender of Participants (N = 65)

Gender	Frequency (n)	Percent
Female	55	85
Male	10	15
Total	65	100

Table 2

Descriptive Statistics of the Ethnicity of Participants (N = 65)

Ethnicity	Frequency (n)	Percent
African-American	17	26.15
American Indian	0	0.0
Asian-American	1	1.54
Asian	0	0.0
Spanish/Hispanic/Latino	1	1.54
White/Caucasian	41	63.08
Other	5	7.58
Total	65	100.0

Table 3

Descriptive Statistics of Marital Status of Participants (N = 65)

Marital Status	Frequency (n)	Percent
Single, never married	37	56.92
Divorced	7	10.77
Married	19	29.23
Widowed	2	3.08
Total	65	100.0

Table 4

Descriptive Statistics of the Counseling Specialty of Participants (N = 65)

Counseling Specialty	Frequency (n)	Percent
Career	1	1.54
Clinical Mental Health	44	67.69
College	3	4.62
Marriage/Family	0	0.0
School	17	26.15
Rehabilitation	0	0.0
Total	65	100.0

Table 5

Descriptive Statistics of the Age of Participants (N = 65)

Age	Frequency (n)	Percent
20-24	17	26.15
25-29	23	35.38
30-34	4	6.15
35-39	6	9.23
40-44	4	6.15
45-49	6	9.23
50-54	3	4.62
55-59	2	3.08
60+	0	0.0
Total	65	100.0

Table 6

Descriptive Statistics of the Years in Human Services of Participants

Years in Human Services	Frequency (n)	Percent
0-5	52	80.00
6-10	7	10.77
11-15	5	7.69
16-20	1	1.54
Total	65	100.0

Ethical and Legal Knowledge Results Measured by the ELICA-R

The participants completed the ELICA-R which contained 35 questions. These items contained 10 different subscales which assessed a participant's ethical and legal knowledge of counseling. The subscales were (a) professional identity; (b) ethical and legal terms; (c) ethical decision-making principles; (d) confidentiality; (e) suicide and client violence; (f) abuse, neglect and negligence; (h) educational and civil rights laws; (i) counselor development and wellness; and (j) discrimination laws and ethics. The mean score for the ELICA-R was 55.91 (SD = 4.71, range: 44-68). The highest score one could achieve was a cumulative score of 70. As shown in Table 7, approximately 63% of

participants scored at 80% or above in answering ethical and legal knowledge items correctly.

Table 7

ELICA-R Scores (N = 65)

Scores	Frequency (n)	Percent
0-40	0	0.0
41-45	1	1.54
46-50	9	13.85
51-55	14	21.54
56-60	32	49.23
61-65	8	12.31
66-70	1	1.54
Total	65	100.0

Cognitive Complexity Results Measured by the LEP

Participants finished the LEP and the positions were as follows: Position 2 (early dualism), Position 3 (early multiplicity), Position 4 (late multiplicity), and Position 5 (early relativism). The participants received a Cognitive Complexity Index (CCI) score which ranged from 200 to 500 parallel to Position 2 (200) to Position 5 (500). Position 2, dualism is the schema which involves whether a person believes there is a definite right and wrong. Position 3, early multiplicity, is the schema which expresses there is right and wrong but some answers are not known until the experts find the answer. Position 4, late multiplicity, notes the belief about right and wrong, however there are answers people may never know. Further, all answers need to be justified by data. Position 5, early relativism is the notion that right and wrong are bound by context and there are few exceptions of exclusively right and wrong. Table 9 presents the results for the participants. There were not any participants who were in the early relativism stage of cognitive complexity as demonstrated in Table 8, while the overwhelming majority were

in early multiplicity and late multiplicity with 96.61%. The LEP score mean was 363.29 (*SD* = 42.84, range: 243–452).

Table 8

LEP Scores (N = 65)

LEP Position	Frequency (n)	Percent
2 (dualism) 200-284	2	3.08
3 (early multiplicity) 285-372	34	52.31
4 (late multiplicity) 373 – 460	29	44.31
5 (early relativism) 461-500	0	0.0
Total	65	100.0

Moral Reasoning Results Measured by the DIT-2

Participants finished the DIT-2 which encompassed 85 items related to five ethical dilemmas, each containing 17 questions measuring moral reasoning. Moral reasoning was measured according to three cognitive schema: personal interest schema, maintaining norms schema, and the postconventional schema. The personal interest schema concerns stages 2 and 3 of moral development. Stage 2 considers, "direct advantages…fairness of simple exchanges of favor for favor" and stage 3 contains "a party's concern for maintaining friendships and good relationships" (Bebeau & Thoma, 2003, pp. 18-19). On the personal interest items, participants scored a mean of 26.03 (*SD* = 11.61, range: 0.00–58.00). On average, participants ranked 26.03% of the personal interest items highly. Personal interest scores range from 0 to 100.

The next schema was maintaining norms which involved supporting the legal system and upholding organizational structure which is stage 4. For the maintaining norms items, the mean score was 25.91 (*SD* = 13.58, range: 4.00–58.00). Participants

ranked a proportion of 25.91% of stage four items highly. Maintaining norms scores can range from 0 to 92.

The postconventional schema encompasses stage 5 and stage 6. Stage 5 concerns fairness regarding people having basic rights such as majority rule and due process. Stage 6 is another aspect of this schema which is based on making social arrangements which include "intuitively appealing ideals" (Bebeau &Thoma, 2003, p. 19). Participants were given a P score which ranged from 0 to 95 and demonstrated how many items they answered based on the postconventional schema. For postconventional schema, participants scored a mean of 42.62 (*SD* = 16.58, range: 6.00–82.00). This means on average, 42.62% of the postconventional items were ranked highly by participants.

Another important and improved index of the P score was the N2 score. The N2 contains two parts which includes: the P score, and the discrimination ratings between the postconventional schema and the personal interest schema (Rest, Thoma, Narvacz, & Bebeau, 1997). To calculate the discrimination ratings, the difference between the average ratings of stage 5 and 6 (postconventional) and stage 2 and 3 (personal interest) was calculated. The difference was divided by the standard deviation of the total ratings of stages 2,3,5, and 6 (Rest et al., 1997). After the difference was divided by the standard deviation, the score was weighted by three and added to the P score (Rest et al., 1997). The DIT-2 N2 score mean was 40.92 (*SD*=15.17, range: 10.03-73.40). The range of the N2 score was 0 to 100. The degree to which participants chose postconventional items over personal interest items and the proportion of ranking postconventional items favorably was 40.92%. The N2 score is considered more precise than the P score because it also includes the rating items as discrimination between higher and lower

stages (Bebeau &Thoma, 2003). In scoring, participants are not placed in stages, instead participants receive a P score and a N2 score to demonstrate their postconventional thinking and discrimination among the various stages (Thoma & Rest, 1999). However, another measure was utilized to group participants into 7 different types as shown in Table 9.

Regarding the grouping of participants in certain schema, participants were placed according to their highest average score on each subscale: personal interest, maintaining norms, and postconventional. Therefore, if a participant scored highest on a certain type of schema they were placed in that schema (Thoma & Rest, 1999). Participants were given a label of consolidated or transitional on the basis of their score in one type being significantly different from another type. If their score was not significantly different between schemas, participants were categorized as transitional (Thoma & Rest, 1999). If they were solidly in one group as Types 1, 4, and 7 indicated, then they were labeled consolidated. However, if they had too much inconsistency with their choices; they were placed in transitional groups as shown in Types 2, 3, 5, and 6. In Table 9, the participants' various schema levels are demonstrated and it shows heavily that 58.46% of participants were postconventional or transitionally postconventional in their schema.

Table 9

Schema Types Based on Schema Averages (N = 65)

Schema Type	Characteristics	Frequency (n)	Percentage
Type 1	Consolidated-personal interest	1	1.54
Type 2	Transitional-personal interest-maintaining norms	9	13.85
Type 3	Transitional-maintaining norms-personal interest	4	6.15
Type 4	Consolidated-maintaining norms	6	9.23
Type 5	Transitional-maintaining norms-postconventional	7	10.77
Type 6	Transitional-postconventional-maintaining norms	14	21.54
Type 7	Consolidated-postconventional	24	36.92
Total		65	100

Results of Statistical Analyses

The following section will discuss linear and multiple regression analyses and the various assumptions which must be met in order to perform linear and multiple regression. This section contains the results of the scores meeting the following assumptions: normality, interval data, independence, linearity, independence of observations, homoscedasticity, and normality of residuals. To meet the assumption of linearity, a square root transformation was performed on the ELICA-R, LEP, and DIT-2 N2 scores (Osborne, 2002). Following the meeting of these assumptions, the results were reported concerning research questions 1, 2, and 3.

Linear Regression

Normality, interval data, and linearity. Regarding normality, the results of the DIT-2 N2 scores were normally distributed as assessed by the Shapiro-Wilk's test, S-W (65) = .35, p >.05. Each instrument was considered interval level data because the scores

were continuous. Each score was independent because all the scores originated from each participant. By visual inspection of scatterplots, the ELICA-R and LEP scores had a linear relationship with the DIT-2 N2 scores meaning the assumption of linearity was met as shown in Figures 1 and 2.

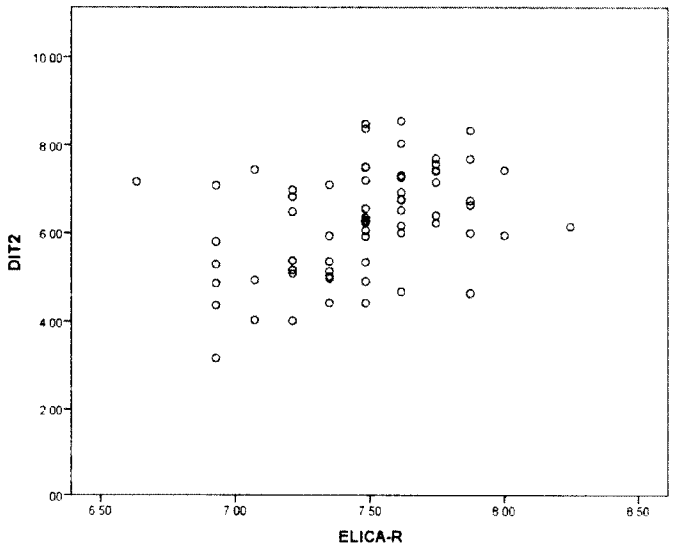

Figure 1. Scatterplot for the ELICA-R as a predictor of the DIT-2 N2 scores. This figure showed a linear relationship between the ELICA-R and the DIT-2 N2 scores.

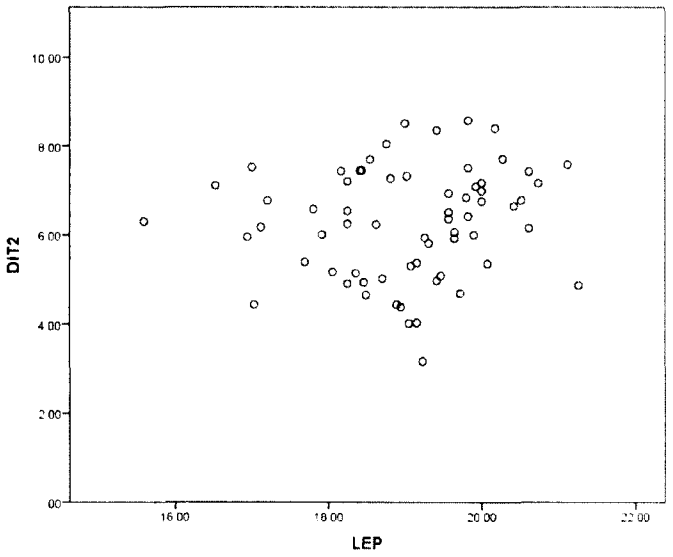

Figure 2. Scatterplot for the LEP as a predictor of the DIT-2 N2 scores. This figure showed a linear relationship between the LEP and the DIT-2 N2 scores.

Independence of Observations. Field (2009) noted values less than 1 or greater than 3 were cause for concern. The Durbin-Watson statistic should be at or near 2, therefore the residuals were not correlated (Field, 2009). The Durban-Watson statistic for the independence of scores on the dependent variable of moral reasoning was not violated.

Homoscedasticity. In inspecting the scatterplots, it was evident that the errors of prediction were equal across the standardized predicted values. They were spread across the y-axis and x-axis leading to a conclusion of homoscedasticity for the ELICA-R and LEP as predictors for the DIT-2 N2 scores. Homoscedasticity of the ELICA-R and LEP can be seen in Figures 3 and 4.

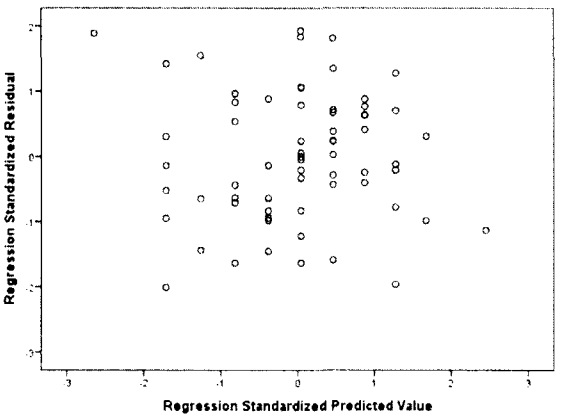

Figure 3. Scatterplot for the ELICA-R as a predictor of the DIT-2 N2 scores. This figure showed the homoscedasticity of the relationship between the ELICA-R and DIT-2 N2 scores as points were spread across X and Y axis.

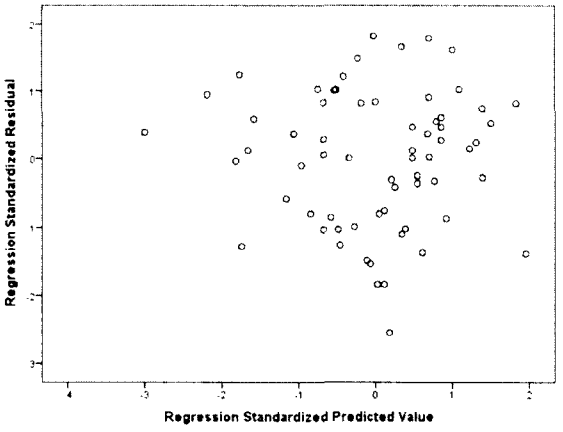

Figure 4. Scatterplot for the LEP as a predictor of the DIT-2 N2 scores. This figure demonstrated the homoscedasticity of the relationship between the LEP and DIT-2 N2 scores.

Normality of residuals. By visual inspection of the histogram and normal P-P plot, normality of residuals can be assumed as demonstrated in Figures 5 and 6 for the ELICA-R as a predictor for the DIT-2 N2 scores. With the histogram, the results

demonstrated a normal bell curve in Figure 5. The P-P plot showed points which did not deviate from the distribution in Figure 6. Also, the LEP showed a normal bell curve in Figure 7, as well as a P-P Plot which did not deviate far from the distribution in Figure 8. The assumption of normality of residuals could be assessed from visually inspecting the histograms of the LEP and ELICA-R and the P-P plots of the LEP and ELICA-R.

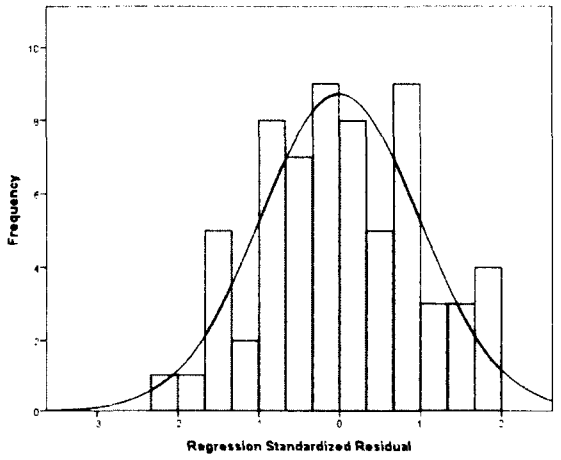

Figure 5. Normality of residuals for the ELICA-R as a predictor of the DIT-2 N2 scores. This histogram demonstrated normality of the residuals of ELICA-R scores as a predictor for the DIT-2 N2 scores.

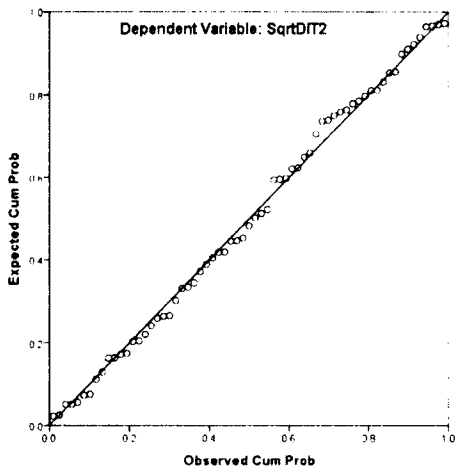

Figure 6. P-P plot to confirm normality of residuals for ELICA-R as predictor of the DIT-2 N2 scores. The plot demonstrated that the points were nearly along a straight line confirming normality.

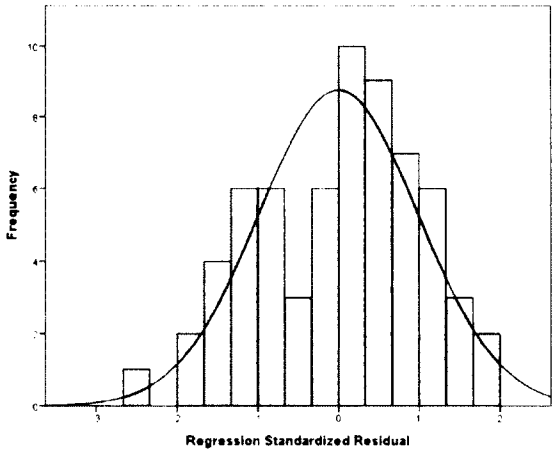

Figure 7. Normality of residuals for the LEP as a predictor of the DIT-2 N2 scores. In being a predictor of the DIT-2 N2 scores, this histogram demonstrated the normality of the residuals of LEP scores.

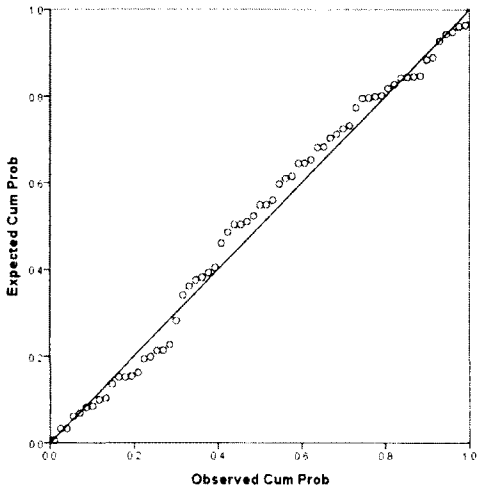

Figure 8. P-P plot to confirm normality of residuals for LEP as a predictor of the DIT-2 N2 scores. The plot demonstrated that the points were nearly along a straight line confirming normality.

Multiple Regression

Independence of observations and linearity. The Durbin-Watson for both the ELICA-R and LEP predicting the DIT-2 N2 scores was below 3 which showed the assumption was met for independence of observations. Independence of residuals was assessed by the Durbin-Watson and the statistic was 2.09. Also, there was linearity between both the ELICA-R and the LEP in predicting scores on the DIT-2 N2 scores as shown in the Figure 9.

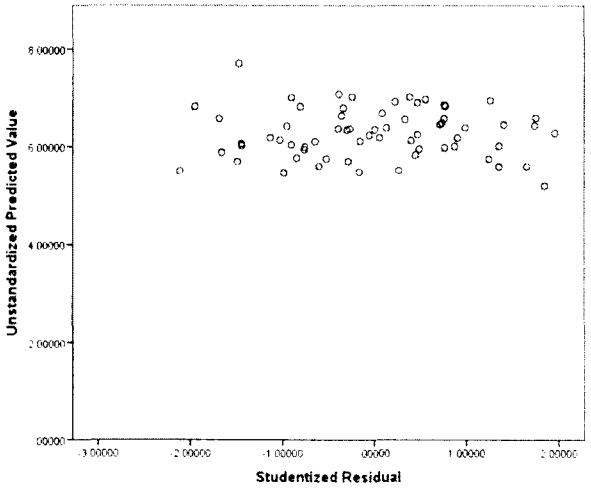

Figure 9. Scatterplot for the LEP and ELICA-R as predictors of the DIT-2 N2 scores. This figure showed a linear relationship between the LEP, ELICA-R and the DIT-2 N2 scores.

Homoscedasticity and multicollinearity. Upon visual inspection, homoscedasticity was demonstrated because the errors of prediction were evenly spread across the y-axis and x-axis as seen in Figure 10. Regarding multicollinearity, the tolerance was more than 0.1 and the VIF was significantly less than 10 (Field, 2009). There is no perfect relationship between the predictors of the ELICA-R and the LEP. The VIF between these two predictor variables was well under ten at 1.0 (Field, 2009).

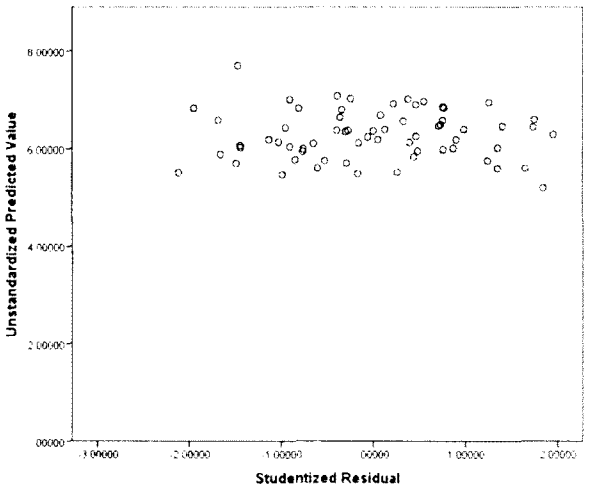

Figure 10. Scatterplot for the ELICA-R and LEP as predictors of the DIT-2 N2 scores. This figure showed the homoscedasticity of the relationship between the ELICA-R and DIT-2 N2 scores as points were spread across X and Y axis.

Leverage, influential points, and normality. Field (2009) mentions leverage points below 0.2, Cook's distances below 1, and a distribution which has a mean of approximately 0 meets the standards for assumptions of leverage, influential points, and normality. There were not any leverage points in the data because all of the points were below 0.2. Additionally, there were not any influential points according to Cook's distance because all of the points were below 1. The distribution was normal with a mean of approximately 0 and a standard deviation of nearly 1 (Field, 2009).

Results of Hypothesis Testing

Research Question 1

The first research question was: To what extent can ethical and legal knowledge predict moral reasoning? The research hypothesis was ethical and legal knowledge will have predictive utility for moral reasoning in counseling students. A simple linear regression was utilized to answer this research question with ELICA-R scores being

placed in SPSS 21.0 as predictors of DIT-2 N2 scores. The ratio between the regression model and the baseline model was calculated and provided the proportional reduction in error ($R^2 = 0.14$). Therefore, ethical and legal knowledge predicted 14% of variance in moral reasoning for counseling students.

The test of significance was the F-test of R^2 change while moving from the baseline model to the regression model. This test indicated how much the model improved the prediction compared to the regression model's error. The linear regression supported the predictive utility of ethical and legal knowledge for moral reasoning in counseling students, $F(1, 63) = 11.20$, $p < .05$, $R^2 = 0.14$. The regression equation was predicted DIT-2 = -4.99 + 1.51 (ELICA-R). The unstandardized beta coefficient demonstrated for every square root unit increase of ethical knowledge, there was a 1.51 square root unit increase of moral reasoning. The standardized beta coefficient was 0.39. For one standard deviation increase in ethical and legal knowledge, there was a 0.39 change in moral reasoning (see Table 10). Therefore, the DIT-2 N2 moral reasoning score will change by 7.29 points as ethical and legal knowledge changes by 4.71 points.

Table 10

Linear Regression for Ethical and Legal Knowledge as the Predictor for Moral Reasoning

Variable	B	SE_B	β
Intercept	-4.99	3.37	
Ethical and Legal Knowledge	1.51*	0.45	0.39

Note. B = unstandardized coefficient; SE_B = Standard error of coefficient; β = standardized coefficient.

[a]Units were analyzed in square root units.

* $p < .05$

Research Question 2

The second research question was: To what extent can cognitive complexity predict moral reasoning? The research hypothesis was cognitive complexity will predict moral reasoning in counseling students. To test the research hypothesis, linear regression was utilized with LEP scores being placed in SPSS 21.0 as predictors of DIT-2 N2 scores. The results did not support the research hypothesis. Cognitive complexity did not have predictive utility for moral reasoning in counseling students, $F(1,63) = 1.00$, $p > .05$, $R^2 = .02$. As seen in Table 11, for every square root unit increase of cognitive complexity, there was a 0.14 square root unit increase of moral reasoning.

Table 11

Linear Regression for Cognitive Complexity as the Predictor for Moral Reasoning

Variable	*B*	SE_B	β
Intercept	3.72	2.56	
Cognitive Complexity	0.14	0.13	0.13

Note. B = unstandardized coefficient; SE_B = Standard error of coefficient; β = standardized coefficient.
[a]Units were analyzed in square root units.

Research Question 3

The third research question was: To what extent can cognitive complexity and ethical and legal knowledge together predict moral reasoning in counseling students? The research hypothesis was cognitive complexity and ethical and legal knowledge together will predict moral reasoning in counseling students. To test the research hypothesis, multiple regression was conducted with the LEP and ELICA-R scores being placed in SPSS 21.0 as predictors of DIT-2 N2 scores. The results did support the hypothesis. Ethical and legal knowledge and cognitive complexity together had

predictive utility for moral reasoning in counseling students, $F(2,62) = 6.20$, $p < .05$, $R^2 = .14$. Ethical and legal knowledge and cognitive complexity together predicted 14% of the variance in moral reasoning. The multiple regression equation was predicted DIT-2 = -7.56 + 1.51 (ELICA-R) + .13 (LEP). However, of the two predictor variables, only ethical and legal knowledge contributed to statistical significance for prediction ($\beta = 1.51$, $p < .05$), while cognitive complexity did not add to statistical significance for prediction, ($\beta = .13$, $p > .05$). For every square root unit increase of cognitive complexity scores, there was a .13 square root unit increase in moral reasoning. In Table 12, regression coefficients and standard errors are shown. The DIT-2 N2 scores will positively change by 2.33 points as the LEP score changes by 42.84 points. Also, the DIT-2 N2 scores will positively change by 7.29 points as ethical and legal knowledge scores change by 4.71 points.

Table 12

Summary of Multiple Regression for Cognitive Complexity and Ethical and Legal Knowledge as Predictors for Moral Reasoning

Variable	*B*	SE_B	β
Intercept	-7.56	4.12	
Ethical and Legal Knowledge	1.51*	0.45	0.39
Cognitive Complexity	0.14	0.13	0.13

Note. *B* = unstandardized coefficient; SE_B = Standard error of coefficient; β = standardized coefficient.

[a]Units were analyzed in square root units

*$p < .05$

Summary of Results

The participants in this study were mostly women and Caucasian. The majority of the participants were single, never married from ages 20 – 29. Concerning

counseling, their orientation was predominantly clinical mental health with limited experience of 0–5 years. In terms of ethical and legal knowledge, the majority of participants answered 80% or more questions on the ELICA-R correctly. For moral reasoning, their cognitive schema was predominantly postconventional consolidated or transitional. Regarding cognitive complexity, the participants' predominant level was multiplicity with more participants being in early multiplicity than late multiplicity.

Ethical and legal knowledge and cognitive complexity were tested to explore whether they were predictors of moral reasoning. Specifically, ELICA-R scores and LEP scores were tested to determine whether they predicted DIT-2 N2 scores through the statistical method of regression. For the first research question which asked if ELICA-R scores predicted DIT-2 N2 scores, it was found that ethical and legal knowledge was a significant predictor of moral reasoning through linear regression. The second research question investigated whether cognitive complexity predicted moral reasoning. Linear regression demonstrated that cognitive complexity did not predict moral reasoning. In the third research question, ethical and legal knowledge and cognitive complexity were tested to determine whether together they were predictors of moral reasoning through multiple regression. It was found that ethical and legal knowledge and cognitive complexity together had predictive utility for moral reasoning. However, only ethical and legal knowledge added statistical significance to the prediction.

CHAPTER FIVE: DISCUSSION

The purpose of Chapter Five is to provide a discussion of the results. This chapter is divided into the following sections: summary of findings, limitations of the study, implications for counselors and counselor educators, and future research on the topic. The summary of findings section explores demographic comparisons with Council for Accreditation of Counseling and Related Educational Programs (CACREP) accredited programs, other studies, and a comparison of mean scores on the three instruments with other studies. In the limitations of the study, external and internal validity are discussed in relation to how those validity threats affected the study. Implications for counselor educators explain how the results of the study can be employed in the field of counseling. Future research explores the various directions which can be taken in regard to assessing and increasing ethical and legal knowledge in counseling. The conclusion discusses inferences which can be ascertained from this study as it relates to increasing moral reasoning and ethical and legal knowledge in counseling students.

Summary of Findings

The main idea of this study was to explore the relationship among ethical and legal knowledge, cognitive complexity, and moral reasoning in counseling students. Ethical and legal knowledge, cognitive complexity, and moral reasoning were measured by the Ethical and Legal Issues in Counseling Assessment-Revised (ELICA-R; Lambie, Ieva, & Hagedorn, 2009), the Learning Environment Preferences (LEP; Moore, 1987), and the Defining Issues Test-2 (DIT-2; Rest, Narvaez, Thoma, & Bebeau, 1999) respectively.

This section will provide information about participants including geographic location of the universities and the student response rate. Also, the process of acquiring the data will be discussed. The demographics of the students who participated in this study will be compared to the general demographics in counselor education and similar studies. Ethical and legal knowledge, moral reasoning, and cognitive complexity scores will be compared with counselors, counseling students, and graduate students in other studies.

Participants were obtained through internship instructors, clinical coordinators, and faculty members from 11 universities. Out of these 11 universities, participants were acquired from eight. Seven of the universities which responded were in the South, while one was in the Mid-Atlantic region. The completed surveys were acquired from participants who attended the following types of universities: five public institutions, one Historically Black College and University (HBCU) and two religiously affiliated private institutions. Of the completed responses in the data, 70.77% of the participants were obtained from one university in the South. The participants received the instruments through email or web link via Survey Monkey and 146 invitations were sent to potential participants. The response rate for completed surveys was 44.52%; incomplete surveys accounted for 15.07%; non-respondents comprised 39.04% and removed surveys for data irregularities was 1.37% of the total.

Gender

The gender of participants was similar to the gender of counseling students in CACREP accredited programs and similar studies. For example, women were 85% of the participants in this study while women were 83.54% of all master's level counseling

students in accredited programs (CACREP, 2013). In similar studies for counseling students, women were over 80% of the sample (Lambie, Hagedorn, & Ieva, 2010; Lambie, Ieva, & Orht, 2012). Among practicing school counselors the gender was also similar with women comprising approximately 79.4% (Lambie, Ieva, Mullen, & Hayes, 2011) and 87.9% (Ieva, 2012). This study was representative of the general population concerning gender within the counseling profession.

Race

A total of 63.08% of the participants in this study were Caucasian and 61.19% of counseling students in accredited counseling programs are Caucasian (CACREP, 2013). Caucasians were 80-90% of the sample of counseling students and practicing school counselors in other recent studies (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012). Ieva (2012) completed a study in which75.7% of the participants were Caucasian school counselors. The number of Caucasians who participated in this study (63.08%) was reflective of the number of Caucasians in counseling graduate programs.

African-Americans comprised 26.15% of the participants, while among CACREP accredited counseling programs, African-Americans make up 20.97% (CACREP, 2013). Two studies which involved counseling students grouped African Americans with other races so the actual percentage of African Americans could not be determined (Lambie et al., 2010; Lambie et al., 2012). However, in a study of school counselors involving ethical and legal knowledge, African Americans were 11.9% of practicing school counselors (Lambie et al., 2011). Ieva's (2012) sample of school counselors contained 4% African Americans. This study was more representative of African-Americans in proportion to the general population of counseling students in CACREP accredited

programs. One reason for a higher number of African-Americans in the present sample was that the majority of participants from the HBCU were African-Americans. In addition, the university that provided the majority of the participants has a relatively high percentage of African American counseling graduate students.

The percentage of Asian-Americans who participated in this study (1.54%) was comparable to the percentage in the CACREP study which included approximately 1-2% of Asian-Americans (CACREP, 2013). These two studies were consistent with the percentage in the Lambie et al. (2011) study of 1.1%. In a study of school counselors, Ieva (2012) Asian- Americans made up 0.3%.

There were less Hispanic and Latino students included in this study than found in the general counseling student population. CACREP (2013) reported that 7.30% of students in counseling are Hispanic or Latino and in this study the sample included only 1.54%. Lambie et al.'s (2011) school counseling sample was 3.8% Hispanic, while Ieva's (2012) sample was 15.9% Hispanic. For Hispanics, the numbers were varied with students and school counselors. The students in the sample of this study came from universities in the Southeastern part of the United States where less Hispanic and Latino persons live than in other parts of the country.

Counseling Track

The present sample was not representative of counseling track concerning counseling students enrolled in accredited counseling programs. Nearly 70% of the counseling students in this survey were in clinical mental health. This study was similar to the study by Lambie et al. (2010), which had a majority of mental health counseling students, (56.3%). In CACREP accredited programs, clinical mental health counseling

students comprised approximately 42% (CACREP, 2013). In addition to the overrepresentation of clinical mental health counseling students, there was an underrepresentation of school counseling students. This study had 26.5% of school counseling students, while the total proportion of school counseling students in accredited programs was almost 40% (CACREP, 2013). Lambie et al. (2010) had a similar proportion of school counseling students with 43.8%.

Marital Status

In this study, the majority of participants were not married (56.92%). This percentage was consistent with other similar studies where the majority of counseling students were not married (Lambie et al., 2010; Lambie et al., 2012). The proportion of married individuals was 29.23% which was comparable to other studies with approximately 1/3 of participants who were married (Lambie et al., 2010; Lambie et al., 2012).

Ethical and Legal Knowledge

In two prior studies (Lambie et al., 2010; Lambie et al., 2012), students took the Ethical and Legal Issues in Counseling Questionnaire (ELICQ; Lambie, Hagedorn, & Ieva, 2008) which had 50 questions, while students in this study, took the ELICA-R which included 35 questions. Since the ELICQ was a different instrument and contained less reliability and more items than the ELICA-R, means from the two studies were not compared. For the ELICA-R, the average score for counseling students was 55.91 (approximately 79.87%) which was higher than practicing school counselors ($N = 301$) who had an average score of 50.27 (Ieva, 2012). Since the ELICA-R is a new instrument,

it has not been tested widely with other counseling student populations. There is a very limited amount of literature because of the novelty of the instrument.

Learning Environment Preferences

On the LEP, the participants scored an average Cognitive Complexity Index (CCI) score of 363.3 which was considered transitional from early multiplistic to late multiplistic and was about the same (but slightly higher) than a sample of psychology graduate students ($N = 89$) with an average of 360.9 (Moore, 2000). A total of 95% of the students in this study scored in the stage of multiplicity. The results were practically split in half with 52.31% of students in early multiplicity and 44.31% of students in late multiplicity. This demonstrated that almost all of the students in this study were in the stage of multiplicity. With this average cognitive complexity score, students were generally in transition between believing in multiple perspectives and possessing a justification for one's perspective. Therefore, students were generally in transition in believing that there are multiple perspectives, but the experts know best and late multiplicity. Late multiplicity means that explanations must be justified with research. In a similar study, counseling students at the end of their program scored higher with a mean of 377.1 (Granello, 2002). The internal validity could be the cause of the higher scores in Granello's (2002) study because students completed the LEP in a controlled environment, while students in this study completed the survey at their convenience. Additionally, students in this study took two additional instruments.

One reason a majority of students were categorized in early multiplicity was that students are taught to depend upon experts regarding theories to demonstrate counseling. Also, various ethical codes assert counselors must demonstrate a theoretical orientation in

working with clients or else their counseling is considered unethical. Generally, counseling students are taught to agree and apply the work of experts in their initial counseling work. Additionally, in counselor education, students must engage in case conceptualizations and demonstrate why they believe clients should have diagnoses; i.e. they must justify for the diagnoses which is similar to late multiplicity. Thus, these are a few reasons the overwhelming majority of counseling students scored in early multiplicity or late multiplicity.

Defining Issues Test-2

In a 2003 collection of 176 DIT-2 datasets, norms for the DIT-2 were assessed (Bebeau & Thoma, 2003). These datasets were obtained from the Center for the Study of Ethical Development which is the central warehouse for scoring the DIT-2. The datasets were from the period of 1998-2003 and the sample size was 10,870 (Bebeau & Thoma, 2003). Of these 10,870 participants, 853 were graduate students from a variety of disciplines. The average N2 score for these graduate students was 40.46. This score was consistent with the N2 score for this study which was 40.92. The N2 score represents two calculations: (1) the amount of postconventional items participants ranked in top place; and (2) the difference between ratings in postconventional items and personal interest items divided by the standard deviation of all the ratings weighted by three. Counseling students in this study were very similar to other graduate students in various disciplines regarding the N2 score. However, in other studies involving counseling graduate students, students scored lower.

In a longitudinal study of counseling students to assess if moral reasoning increased over time, the initial N2 score (M = 43.34) of counseling students was higher

than the N2 score for this study (Halverson, Miars, & Livneh, 2006). Counseling students received this score when they first entered the counseling program. By the time the students had finished practicum and were beginning internship, they had an average N2 score of 47.69 (Halverson et al., 2006). Also, Cannon (2008) conducted a study in assessing the impact of Deliberate Psychological Education (DPE) on moral reasoning and multicultural competence in counseling students and those students' initial N2 scores were higher with three different institutions respectively (m = 49.8, m = 44.3, m = 44.7).

One reason why the scores in the Halverson et al. (2006) and Cannon (2008) studies were higher than in this study could have been because of the method. These studies distributed the DIT-2 in a controlled environment and the instruments were collected at one time in classrooms. However, this study distributed the DIT-2 via email and web link, so participants could take the instrument at their convenience and there is a possibility they could have been distracted. Students in the Halverson et al. (2006) study may have scored higher in internship because they had already taken the instrument twice before the last administration. The sample size of both studies was smaller, so that could be an explanation for higher scores with high sampling bias among participants. Both of the studies had lower sample sizes with Cannon (2008) having 30 participants and Halverson et al. (2006) having 15-19 participants. Another note is Cannon's (2008) study included only Caucasian students because the study was exploring whether moral reasoning had any relationship to multicultural competence in Caucasian students.

For the P score, participants had a mean score of 42.62 in this study, while in the DIT-2 dataset, graduate students obtained a mean P score of 41.06 (Bebeau & Thoma, 2003). Therefore, students ranked a proportion of 42% of postconventional items in top

place. This P score was expected because counseling students are graduate students and their P score was typical of other graduate students in the DIT-2 dataset (Bebeau & Thoma, 2003). Therefore, this P score can serve as validation that the sample appears to be representative of a general population of graduate students who took DIT-2, but it may not be a general representation of counseling graduate students. In the Cannon (2008) study, counseling students achieved a higher P score than this study with three groups respectively (m = 50.0, m = 45.8, m = 46.6). The lower P scores of this study were surprising because it appeared from Cannon (2008) that counseling students scored higher than the general population of graduate students. However, as stated above, this study had a more diverse group of students than the Cannon (2008) study.

On the maintaining norms schema, participants ranked an average of 25.91% of the maintaining norms items as high priority. This means participants ranked 25.91% of the items which represented law and order and obeying authority as top place. Within the dataset of general graduate students, participants ranked an average of 32.64% of maintaining norms in top place (Bebeau & Thoma, 2003). The dataset of general graduate students has a higher level of maintaining norms than this study. Counseling students could have scored lower on maintaining norms than the other disciplines because counseling students are educated to respect individual client values. Therefore, many counseling students have been taught about being non-judgmental and to be judgmental involves applying and adhering to authority which could equal an imposition of values for counselors. The ACA Code of Ethics warns counselors to "be aware of their own, values, attitudes, beliefs and behaviors and avoid imposing values that are inconsistent with client goals" (*Standard A.4.b*). Additionally, sample size may have been the reason

for the difference in the maintaining norms score with other graduate students. Perhaps, if the sample had been larger, the maintaining norms score may have approached the graduate student norm of 32.64%.

In the DIT-2 dataset, graduate students ranked 21.69% of personal interest items as their top choice (Bebeau & Thoma, 2003). In this study, counseling students ranked more personal interest items higher with approximately 26% of the personal interest items in top place. This result indicates that maintaining friendships and mutual reciprocity were more important to counseling students than the general population of graduate students. Personal interest is higher in counseling students because counseling focuses on giving individuals' service. This service is attached to counselors receiving remuneration directly from a client. Relationships are vital in counseling therefore; this could be a reason why counseling students scored almost equally in personal interest and the maintaining norms schema. Counseling is relationship oriented because a counselor's first duty is for the welfare of the client. The priority of relationship could be the reason counselors scored higher in personal interest than graduate students. As stated earlier with the maintaining norms score, it is possible if the sample had been larger that the personal interest schema might have approached 21.69%.

The type of schema which counseling students predominantly possessed was postconventional schema which was categorized as transitional or consolidated. The percentages were 21.54% as postconventional transitional and 36.92% for postconventional consolidated. The transitional type means that students were postconventional but there was a failure to discriminate clearly between the maintaining norms and postconventional schema. Regarding the consolidated type, 36.92% of

counseling students could distinguish clearly in the postconventional schema. In conclusion, the results of the sample indicated that more than half of the counseling students were postconventional in their thinking. As stated earlier, since this sample was a convenience sample from largely one university and the pedagogy was similar, students could have been quite similar in their moral schema. At this point in their academic careers, one would expect counseling students to be consolidated in postconventional schema. Students would have already taken most of their required courses and they also have experience in ethical dilemmas via practicum. In the internship experience, most students are nearing the end of their respective counseling programs. From this study, the lack of students in the postconventional consolidated schema may indicate that students are not being challenged with higher moral development in their coursework and practicum/internship experience.

Ethical and Legal Knowledge as the Predictor for Moral Reasoning

In counseling students, ethical and legal knowledge predicted moral reasoning. As ethical and legal knowledge increased DIT-2 N2 scores also increased. These results were consistent with the hypothesis for two reasons: the validity and reliability of the instruments, and the theoretical underpinnings of Kohlbergian thought in both instruments.

According to Ieva (2012), the ELICA–R has a high internal consistency of 0.79. This high internal consistency denotes the items in the ELICA-R provide consistently similar scores. A researcher can be confident that the ELICA-R is measuring the construct of ethical and legal knowledge in counseling accurately. In addition, the DIT–2 has a high reliability from the upper .70s to the lower .80s and it has a construct validity

of .79 with the Defining Issues Test (DIT; Rest, 1979; Bebeau & Thoma, 2003). From this study, it would stand to reason ethical and legal knowledge and moral reasoning would be related because the instruments of the ELICA-R and DIT-2 appear to be sound in reliability and validity. The basis of the DIT-2 is Kohlbergian principles.

In an earlier study of counseling students, Lambie used the Washington University Sentence Completion Test (WUSCT; Hy & Loevinger, 1996) to predict ethical and legal knowledge through the ELICQ. The WUSCT is based on the theoretical underpinnings of Kohlberg (Lambie et al., 2010). The results were that the WUSCT did predict scores on the ELICQ. Lambie et al. (2011) also performed another study where school counselors took the WUSCT for ego development and the ELICQ for ethical and legal knowledge. The study found that ethical and legal knowledge was a significant predictor of ego development.

The ELICA-R is an updated version of the ELICQ. The ELICQ demonstrated a significant correlation with the Kohlbergian instrument of the WUSCT. Therefore, it is not surprising the ELICA-R also showed a significant correlation to the Kohlbergian instrument of the DIT-2 and supported the hypothesis. Among counseling students and school counselors from the previous three studies, there is a commonality of ethical and legal knowledge correlating with Kohlbergian based instruments. The Ethical Decision-making Scale-Revised (EDMS-R) was based on the Van Hoose and Paradise ethical orientation model and did not correlate independently with ethical and legal knowledge (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012). Even though the Van Hoose and Paradise ethical orientation model was based on Kohlbergian principles, it is

possible the EDMS-R was too far removed from these principles to correlate significantly with ethical and legal knowledge.

Cognitive Complexity as the Predictor for Moral Reasoning

Cognitive complexity as assessed by the LEP did not predict DIT-2 N2 scores. The result was surprising because the format of the LEP was based on the DIT. For the format of the LEP, the DIT was the model and a Cognitive Complexity Index (CCI) score was comparable to a P-Score (Moore, 2000). Another aspect which was similar between the two instruments was meaningless items. These items were meant to assess whether respondents are choosing items based on sounding complex. Further, the LEP began each section with items which were simple and progressed to complex items. Another reason why these results were surprising was because the LEP has been used successfully as an assessment tool to measure counselor cognitive development over time (Brendal, Kolbert, & Foster, 2002; Granello, 2002). The results of this survey demonstrated the major difference between the cognitive complexity domain of the LEP and moral reasoning in the DIT-2.

The major difference between the LEP and the DIT-2 is the LEP narrowly measures the domain of learning attitudes while the DIT-2 encompasses behavior in broad dilemmas. The LEP is measuring attitudes in the classroom and preferences for learning. For example, the LEP measures student attitudes toward the learning environment, role of the instructor, students, and the materials utilized in class. The DIT-2 measures how a person acts and thinks regarding various moral dilemmas. These results were consistent with another study which found that the LEP did not predict counseling skills, but the DIT did significantly predict counseling skills (Eriksen &

McAuliffe, 2006). Therefore, it can be cautiously inferred the LEP and the DIT are measuring two unrelated constructs (Eriksen & McAuliffe, 2006). Also, as stated earlier the DIT-2 has high convergent validity with the DIT (Bebeau & Thoma, 2003).

Ethical and Legal Knowledge and Cognitive Complexity as Predictors for Moral Reasoning

Ethical and legal knowledge and cognitive complexity as a linear composite did predict moral reasoning. The results supported a statistically significant relationship among ELICA-R scores, the LEP cognitive complexity index and DIT-2 N2 scores. Higher levels of ethical and legal knowledge and cognitive complexity predicted higher levels of moral reasoning. Upon further inspection of the beta coefficients, only ethical and legal knowledge contributed statistical significance to moral reasoning (Table 12).

This was surprising that cognitive complexity did not add to the statistical significance for moral reasoning. The literature has theorized a link between cognitive complexity and moral reasoning regarding counseling skills, empathy, and flexibility (Cannon, 2008; Eriksen & McAuliffe, 2006; Granello, 2002). Further, both Perry's model and Kohlberg's theory of moral development are based on Piagetian theory (Eriksen & McAuliffe, 2006). On the other hand, cognitive complexity was not significantly related to counseling skills while moral reasoning was related to counseling skills (Eriksen & McAuliffe, 2006). So this analysis did support the lack of relationship between cognitive complexity and moral reasoning. The lack of diversity and small sample size could account for the lack of additional statistical significance regarding cognitive complexity and moral reasoning.

Limitations

External Validity

There were a few reasons why the external validity of this study was limited. The reasons were as follows: small sample size, sampling procedure, and demographics. The sample size of this study was 65. Therefore, it can be difficult to generalize the findings to the entire population of counseling students.

In its nature, this sample was a nonprobability, convenience sample. Because this was a convenience sample, the results could be skewed in comparison to the entire population of counseling students. The threat for this study is low external validity and systematic bias which may not reflect the general population of counseling students. In terms of the source of the sample, 70.77% of the students who responded completely were from the same institution.

A few issues which limited the external validity of this study were the source of the sample and various demographic issues. Another threat to external validity was that 67.69% of the counseling students were in the area of clinical mental health. School counseling was underrepresented in this sample because school counseling in CACREP accredited masters programs has the largest enrollment of any program area (CACREP, 2013). This study did reflect the ratio of men to women in counseling programs with approximately 80% (CACREP, 2013). In race, the study did match the proportion of Caucasians and Asian-Americans in accredited counselor education programs. African-Americans were overrepresented in the study and Hispanic/Latinos were also underrepresented. Even though the N2 score and P scores were lower than counseling students in other studies, the scores did match general graduate students (Cannon, 2008;

Halverson et al., 2006). It is a possibility since the sample size was larger this sample could be a true representation of N2 and P scores among counseling students.

Internal Validity

Other limitations which involved internal validity were the correlational design, statistical analysis, instrumentation, and confounding variables of the study. Since the study was correlational and non-experimental, one cannot derive a cause and effect as to assert ethical and legal knowledge causes moral reasoning or vice versa. Many factors could account for the positive correlation between ethical and legal knowledge and moral reasoning. The design of the study limited the internal validity because a correlational design can tell the strength of a relationship, but it cannot tell the causes of the relationship like is possible in an experimental design. Another issue was utilizing regression because regression has demonstrated a surface level relationship, but an analysis technique like structural equation modeling could enhance the study to show the dynamics among the constructs.

Also, the methodological design which was employed was a survey design, therefore mediating and moderating variables could not be identified. That is a limitation because if the design were longitudinal, then mediating or moderating variables could have been identified. Further, there was not the comparison of identifying differences among groups as in a cross-sectional study to compare other variables which may affect ethical and legal knowledge, cognitive complexity, and moral reasoning.

Instrumentation measuring ethical and legal knowledge in counselors is still fairly new in the field of counseling. There are very few instruments which measure this construct. The ELICA–R is still being refined in terms of validity and reliability.

ELICA–R was derived from the ELICQ and has only been utilized in a few studies so further research has to be conducted to validate the instrument. This study was exploratory because it was the first time the ELICA–R had been studied in relationship to both the LEP and the DIT–2.

For this study, one other confounding variable was the length and time consumption of all three instruments which ranged from 45 minutes to two hours for completion. Since participants took the instruments online they could leave the instruments and return to them at their convenience. This could have affected how they answered the questions and their concentration during the administration of the instruments. Additionally, the conditions were not constant for all the participants in terms of the test taking environment. Some participants completed a portion of the instruments and may have returned a week later or longer to do other parts of the instrument. Also, participants who were taking the instrument could have become fatigued and began filling in some answers without critically thinking about the items. Cultural sensitivity was a limitation. Consequently, one participant could not complete the survey because there was not a category to identify as transgender.

The external and internal validity threats were limiting to the generalizability of the study. The sampling methods limited how the study could be applied to the entire population of counseling students. Nonetheless, even with the sampling bias, the numbers of the counseling students regarding gender and race did resemble in some ways the general population of counseling students in CACREP-accredited programs (CACREP, 2013). Although there were the internal validity threats of methodology, the implications for counselors, counselor educators, and future research projects are exciting

in the results for the constructs of ethical and legal knowledge, cognitive complexity, and moral reasoning.

Implications for Counselor Educators

For counselor educators, the implications involve the pedagogy of ethical and legal knowledge with the strong correlation between ethical and legal knowledge and moral reasoning. In classes concerning professional issues and ethics, counselor educators can teach moral reasoning and ethics simultaneously. From earlier studies, it has been demonstrated that DPE increases moral reasoning (Cannon, 2008). Therefore, in PhD programs, DPE can be taught as pedagogy to aspiring faculty in counselor education.

DPE includes the elements of students having cognitive dissonance and scaffolding students' current level of development with ethical dilemmas which promote higher cognitive development (McAuliffe & Eriksen, 2011). Instructors can be taught how to create cognitive dissonance and to recognize the moral developmental stages of students. In recognizing the moral development stage of students, instructors can create activities which promote cognitive development through a higher stage of reasoning. Interventions which aid in facilitating cognitive dissonance are readings, journaling, and self-reflection with feedback from instructors and peers (Cannon, 2008). Also, ethical dilemmas can help in initiating cognitive dissonance and facilitating students to think at a higher cognitive level. In addition, instructors have to be skillful in providing the correct amount of support and challenge for students to progress to higher levels of moral reasoning. The DIT-2 can be utilized as an assessment for students to be self-aware concerning their moral development level. A recurring problematic concern is the time in

which counseling students can incorporate all of this ethical and legal knowledge among all the competency demands of counseling programs. For increasing ethical and legal knowledge and moral reasoning, multiple opportunities for growth can be integrated into the supervision experience.

Supervision can be a time of assessment and self-reflection for students especially in practicum and internship groups. Students may take the ELICA-R and the DIT-2 to assess their ethical and legal knowledge and moral reasoning. Students can journal about their practicum and internship experiences, solve ethical dilemmas, and evaluate ethical decision making models. Instructors can challenge and support students by responding to journal entries with higher level thinking and posing questions as to the reasons why students made certain ethical choices. An advantage of group supervision is students can spend time discussing ethical dilemmas they have experienced at their various sites and apply ethical decision making models. Students may also hear feedback from their peers reflecting on their behavior in real-life situations at their work sites.

Future Research

Since this study has supported a significant relationship between ethical and legal knowledge and moral reasoning, more studies are warranted which investigate a relationship among ego development, ethical and legal knowledge, and moral reasoning in counseling students. By investigating these constructs, counselor educators can have a better understanding of the constructs which contribute to moral reasoning. In addition, the cognitive complexity instrument of the Role Category Questionnaire (RCQ; Crocket, Press, Delia, & Kenney, 1974) could be utilized to assess if this cognitive complexity construct contributes to moral reasoning and ethical legal knowledge. With these various

studies, the investigations can lead to further validation and reliability of the ELICA-R. Another area of relationship to be explored could be the relationship of counseling skills to ethical and legal knowledge. Further studies can assess the relationship between ethical and legal knowledge, moral reasoning, and counseling skills.

Future research can employ quasi-experimental designs regarding the growth of ethical and legal knowledge and moral reasoning. Cannon (2008) completed a study in which moral reasoning did increase over a nine month period in counseling internship through DPE. Other designs could measure whether ethical and legal knowledge and moral reasoning increase through DPE. The control group could be the teacher not teaching with a DPE model. In the experimental group, the instructor would teach using the DPE model. A longitudinal study could be designed to assess whether ethical and legal knowledge and moral reasoning change over time in counseling students during their counseling programs.

Presently, ethical and legal knowledge has been measured among school counselors and counseling students. These results would make the third study in which counseling students have consistently scored higher in ethical and legal knowledge than practicing counselors, in particular school counselors (Ieva, 2012; Lambie et al., 2011). Future research may explore if there is a statistically significant difference in the ethical and legal knowledge of practicing counselors and counseling students. There could also be studies investigating ethical and legal knowledge comparisons between the different tracks of counseling such as marriage and family, rehabilitation, career, college, pastoral, etc. From the current studies known, ethical and legal knowledge has been measured in school counselors, but not in other counseling specialties. The different tracks of

counseling could be compared among practicing counselors regarding ethical and legal knowledge and moral reasoning.

Conclusions

This study explored the relationship among ethical and legal knowledge, cognitive complexity, and moral reasoning in counseling students. Ethical and legal knowledge was a significant predictor of moral reasoning and cognitive complexity was not a significant predictor of moral reasoning. Ethical and legal knowledge and cognitive complexity together were predictors of moral reasoning, but cognitive complexity did not add to the statistical significance in the multiple regression. The study was the first of its kind to use the ELICA-R for ethical and legal knowledge and the DIT-2 for moral reasoning.

From this study, ethical and legal knowledge appears to have a theoretical basis in Kohlberg. In other studies it was found that ethical and legal knowledge was correlated with the Kohlbergian instrument of the WUSCT (Lambie et al., 2010; Lambie et al., 2011). This assertion of Kohlbergian underpinning can lead to a paradigm shift in the way counselor educators teach ethics.

Other studies have demonstrated through using the DPE Model, moral reasoning can increase over time (Cannon, 2008). Perhaps, the time to concentrate on increasing moral reasoning and knowledge of ethics is not solely in a professional orientation and ethics class. The best time to combine and increase ethics and moral reasoning could be during supervision where students have the time to take the instruments. Also, during practicum and internship students can relate their ethical and legal knowledge and moral reasoning to real life situations with peer feedback. PhD students in counseling can be

taught a pedagogy which focuses on moral development and increasing moral development through a DPE Model.

This study has shown a link between two vital constructs which equip counselors in making sound ethical decisions. Interventions and teaching methods are already available for counseling students and counselors to advance in moral reasoning and ethical and legal knowledge. The application of these interventions and DPE model is necessary in fulfilling the CACREP standards of students knowing and applying ethical and legal axioms in professional practice (CACREP, 2009).

Predictors of Moral Reasoning in Counseling Students

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Abstract

Curriculum standards require that counseling students possess and apply ethical and legal knowledge. This study investigated ethical and legal knowledge and cognitive complexity as predictors of moral reasoning in 65 counseling students. Ethical and legal knowledge scores significantly predicted moral reasoning scores. Inferences for pedagogy in counselor education were discussed.

Keywords: ethical and legal knowledge, cognitive complexity, moral reasoning

INTRODUCTION

Moral reasoning is the process by which individuals determine right and wrong action. To determine ethical decision-making ability, moral reasoning has been employed with a variety of populations i.e. counselors, business students, pharmacy students, and physical therapists (Kim, Park, Son, &Han, 2004; Latif, 2002; Schmidt, McAdams, & Foster, 2009; Sias, 2009; Swisher, 2010). In the counseling profession, higher levels of moral reasoning have been associated with greater empathy, flexibility, problem solving, and clinical skill (Brendel, Kolbert, & Foster, 2006; Cannon, 2008; Eriksen & McAuliffe, 2006; Sias, Lambie, & Foster 2006). The context of moral reasoning is not necessarily personal morality but a broad focus concerning, "formal structures such as laws, rules, institutions and policies regarding rights" (Cannon, 2008, p. 506). Theoretically, in the field of counseling, formal structures would include accrediting, credentialing and counseling association bodies.

Counseling programs introduce counseling students to ethical codes and legal standards of formal structures which they must understand, apply, and synthesize. The Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2009) asserts that students must comprehend "ethical standards of professional organizations and credentialing bodies and applications of ethical and legal considerations in the counseling profession" *(Standard, II.G.1.j.)*. Counselor educators have to concentrate on two distinct areas in educating counseling students concerning ethical and legal standards. These two areas are (1) knowledge of ethical and legal standards and (2) application of ethical and legal standards to a variety of situations.

Cognitive development has also been theoretically related to application of ethical and legal standards (Welfel, 2009).

Ethical and Legal Knowledge

Accrediting bodies, credentialing bodies, and state licensure boards unanimously agree that counselors should have sufficient ethical and legal knowledge. According to the ACA (2005) *Code of Ethics*, counselors should "understand the ACA Code of Ethics and other applicable ethical codes from other professional organizations or from certification and licensure bodies of which they are members" (*Standard H.1.a)*. The National Board of Certified Counselors (NBCC, 2012) stated that National Certified Counselors (NCCs) should adhere to legal standards and state licensing boards and adhere to the directives in the NBCC *Code of Ethics*. Not only do the accrediting and credentialing bodies in counseling demand understanding of ethical and legal knowledge, but the state licensure boards "mandate that licensees demonstrate knowledge of professional orientation issues, which include legal and ethical issues" (Remley & Herlihy, 2010, p. 3).

In spite of this requirement, there have not been many studies which have investigated the factors that are related to ethical and legal knowledge and ethical decision-making in counseling students. Ethical and legal knowledge has not been investigated because a known standardized quantitative instrument had not previously been constructed to assess ethical and legal knowledge in counselors. Recently, two instruments have been developed to measure ethical and knowledge, the Ethical and Legal Issues in Counseling Questionnaire (ELICQ; Lambie, Hagedorn, & Ieva, 2008) and

the updated Ethical and Legal Issues in Counseling Assessment-Revised (ELICA-R; Lambie, Ieva, & Hagedorn, 2009).

Two studies were conducted which explored the relationship of the three constructs of ethical and legal knowledge, social-cognitive development, and ethical decision-making in counseling students (Lambie, Hagedorn, & Ieva, 2010; Lambie, Ieva, & Ohrt, 2012). Social cognitive development is a division of cognitive development. Cognitive development is how individuals make meaning of experience and enact decisions. Cognitive development has been related to counseling skills, ability, empathy, autonomy, and interdependence (Cannon, 2008; Sias, Lambie, & Foster, 2006).

In contrast to CACREP (2009) standards, ethical decision-making was not a significant predictor of ethical and legal knowledge in counseling students or practicing school counselors (Lambie et al., 2010; Lambie, Ieva, Mullen, & Hayes, 2011; Lambie et al., 2012). However, their findings did support that students with higher cognitive development acquired significantly more ethical and legal knowledge than students with lower social-cognitive development (Lambie et al., 2010; Lambie et al., 2012). Also, practicing school counselors with higher cognitive development achieved higher ethical and legal knowledge scores (Lambie et al., 2011). Surprisingly, Lambie et al (2011) did not find a relationship between cognitive development and ethical decision-making. The prior studies necessitate further exploration of ethical and legal knowledge with cognitive development constructs such as cognitive complexity and moral reasoning.

Cognitive Complexity as Cognitive Development

The Perry model is a cognitive development theory which measures cognitive complexity (Granello, 2002). Cognitive complexity is the ability to acquire, synthesize,

and apply multiple perspectives. The Perry model has been one of the most frequently cited theories in higher education and has been extensively applied to counselor education (Lyons, & Hazier, 2002). In counselors, higher levels of cognitive complexity have been associated with higher levels of empathy, emotional responses, flexibility, toleration of ambiguity, confidence and less prejudice (Brendel, Kolbert, & Foster, 2002; Eriksen & McAuliffe, 2006; Granello, 2010; Lovell, 1999) Since the advent of the ethical and legal knowledge instrument, there have not been any known studies measuring cognitive complexity in relationship to ethical and legal knowledge and ethical decision-making. The instrument for cognitive complexity assesses an individual's cognitive complexity level according to the Perry model in four positions.

In reference to position one, Moore (2000) asserted, "Position one is not included because it has never been adequately verified empirically; even in the original study it was largely a hypothetical extension of the forms of thought found with freshmen" (p. 6). The reason the positions only proceed to level five is because Moore (2000) thought that the deeper processing of levels six to nine could be assessed only through qualitative methods. The positions are as follows: dualism (position 2), early multiplicity (position 3), late multiplicity (position 4), and relativism (position 5).

Position two, dualism, represents a "...completely unquestioned view of truth as absolute truth in stark black and white...The world thus consists essentially of two boxes--right and wrong--and there is generally little trouble in distinguishing one from the other" (Moore, 2001, p. 20). Position three, early multiplicity, states there are three boxes, "right, wrong and not yet known" (Moore, 2001, p. 20). Position four, late multiplicity, expands on early multiplicity in demonstrating that the "...not yet known

notion of position three often becomes a new certainty [that] we will never know for sure" (Moore, 2001, p. 20). Contextual relativism is position five and its tenets view the "world as essentially relativistic and context bound with a few right/wrong exceptions" (Moore, 2001, p. 21). There have not been any known studies which have tested cognitive complexity in relationship to moral reasoning and the new assessment of ethical and legal knowledge.

Moral Reasoning as Ethical Decision-making

In a myriad of studies, moral reasoning has been employed to measure judgments of right and wrong involving ethical dilemmas (Halverson, Miars, & Livneh, 2006; Kim, Park, Son, & Han, 2004; Latif, 2002; Williams, 2010). For ethical decision-making, Lambie et al. (2010, 2011) used the EDMS-R (Ethical Decision Making Scale-Revised; Dufrene, 2000) to assess ethical decision-making and found no correlation between ethical and legal knowledge and ethical decision-making. Even though the previous studies (Lambie et al., 2010; Lambie et al., 2011; Lambie et al., 2012) did not demonstrate a relationship among ethical decision-making and the other two constructs, this study used moral reasoning because it has been utilized extensively to measure thoughts and actions based on moral principles with various populations (Halverson et al., 2006; Kim et al., 2004; Latif, 2002; Williams, 2010).

In recent years, various scholars have proposed a neo-Kohlbergian theory (Rest, Narvaez, Bebeau, & Thoma, 1999). Rest et al. (1999) have refined Kohlberg's theory into three developmental schemas: personal interest, maintaining norms, and postconventional. Schemas are "general knowledge structures residing in long term memory and are formed as people recognize similarities in stimuli. The function of

schema guides attention to new information and provides pathways for additional learning and integration of new information" (Cannon, 2008, p. 506).

The first schema, personal interest, involves thinking which is governed by rules outside of a person. Rest, Narvaez, Thoma, and Bebeau (2000) explained that personal interest is when an individual "analyze[s] what each stakeholder in a moral dilemma has to gain or lose" (p. 387). The second schema, maintaining norms, includes the process of a person keeping the rules of a social group. A person with a maintaining norms schema would, "identify established practice (rules and roles) and who are the de facto authorities" (Rest et al., 2000, p. 387). The third schema, postconventional, demonstrates thinking which is based on self-chosen values. Postconventional schema describes, "moral obligations...based on shared ideas, are fully reciprocal and open to scrutiny" (Rest et al., 2000, p. 388). Moral reasoning can be deduced from exploring the processes by which individuals decide a course of action through moral dilemmas (Kohlberg, 1984).

Purpose of Study

Since accrediting, credentialing, and licensing bodies have emphasized the necessity for counselors to demonstrate a sound base of ethical and legal knowledge and an ability to apply ethical and legal standards, this study investigated constructs which may predict moral reasoning. The purpose of this study was to assess the relationship among the three constructs of ethical and legal knowledge, cognitive complexity, and moral reasoning. The three research questions were (a) To what extent can ethical and legal knowledge predict moral reasoning scores? (b) To what extent can cognitive

complexity predict moral reasoning? (c) To what extent can ethical and legal knowledge and cognitive complexity together predict moral reasoning?

Method

Procedure and Participants

Data were collected using an Internet based survey tool, Survey Monkey, which allowed individuals to participate anonymously through encryption. A web address was attached to each administration of the instruments. There were no missing data because participants could not complete the survey without answering each question fully. Each participant was coded with a number. Data were entered into SPSS 21.0 with the results from the three instruments. The ELICA-R was scored by the researcher. Responses for the Learning Environment Preferences (LEP; Moore, 1989) were sent to the Center for the Study of Intellectual Development to be scored. The Center for the Study of Ethical Development scored the Defining Issues Test-2 (DIT-2; Rest, Narvaez, Thoma, & Bebeau, 1999).

Descriptive Data of Participants

The criterion for participation was that counseling students must have completed clinical practicum. Participants were recruited through contacts with faculty members from various universities around the country. Eleven universities were sent information pertaining to the study and eight universities responded. The participants were obtained from seven universities in the South and one university in the Mid-Atlantic region of the United States. Web links were used so that participants could complete the three instruments. Identified participants were promised they would receive results of the instruments to provide them with information regarding their cognitive complexity,

ethical and legal knowledge, and moral reasoning. A total of 146 surveys were sent; 67 participants responded completely; 22 participants responded partially, and 57 did not respond. The total response rate was 44.52%. Two participants were removed from the data because of irregularities in their data regarding ethical and legal knowledge and moral reasoning scores. After the two participants were removed, 65 participants remained for analysis.

Instrumentation

The following instruments were used in this study: the ELICA-R, LEP, and DIT-2. Participants also completed a demographic questionnaire to describe their characteristics regarding gender, race, age, marital status, counseling track, and years in human services. Moral reasoning was the criterion variable while ethical and legal knowledge and cognitive complexity were the predictor variables.

ELICA-R. The ELICA-R measures ethical and legal knowledge in counselors. This assessment includes 35 items measuring ten subscales of ethical and legal knowledge which include the following: (a) professional identity; (b) ethical and legal terms; (c) ethical decision-making principles; (d) confidentiality; (e) suicide and client violence; (f) abuse, neglect, and negligence; (g) counseling and educational records, (h) educational and civil right laws, (i) counselor development and wellness; and (j) discrimination laws and ethics. This instrument was derived from the original ELICQ which had 50 items, but 19 items were removed for greater reliability. The ELICA-R has a reliability of 0.79 and includes 35 items (Ieva, 2012). The scoring range is from 0-70 and each item is worth two points.

LEP. The LEP is an objective, recognition task instrument which was developed by Moore (1989). It is based on William Perry's qualitative research which concerns a model of intellectual and ethical development. The LEP contains 65 items with five domains: content/view of knowledge and learning, role of instructor, role of student/peers, classroom atmosphere/activities, and evaluation procedures.

Each of the five domains contains 13 statements concerning the various components of an ideal learning environment. Participants employ a 4 point Likert-type scale to assess the importance of each statement. At the conclusion of each section, participants pick the highest three items they feel are most important in their ideal learning environment (Granello, 2002). Every division of the LEP starts with a sentence stem asking participants their opinions about the ideal learning environment. Participants rate each statement as 1 for "not at all significant" to 4 meaning "very significant." Granello (2002) replaced some of the wording in the LEP to reflect counseling. For example, Granello (2002) restated the sentence stem that said, "My ideal learning environment would," to the following: "To learn counseling at my present level, my ideal environment would be..." (p. 283). This study also included the wording developed by Granello (2002) with permission from the Center for the Study of Intellectual Development.

There are two scores on the LEP which indicate a position rating and a Cognitive Complexity Index (CCI) score. The CCI provides a numerical score for cognitive development on a continuous scale. The score ranges are from 200 (early-level dualistic thinking) to 500 (early-level relativistic thinking). In a study performed by Moore (2000), the test-retest correlation was shown to be 0.89 for the CCI. The construct

validity on the first factor (course content overview) of the LEP was determined to be 0.92 (Moore, 2000). On the other four factors, the construct validity was found to be 0.61 (Moore, 2000). With regard to concurrent validity, the LEP had a correlation of 0.38 ($N = 51$) and 0.57 ($N = 34$) to the Measure of Intellectual Development (MID) instrument (Knefelkamp, Fitch, Taylor, & Moore, 1982).

DIT-2. To measure moral reasoning the DIT-2 was used in this study. The DIT-2 is an objective measure which is based on Kohlberg's theory of moral development. It stimulates moral schemas and measures the schemas on the basis of decision making (Rest, Narvaez, Thoma, & Bebeau, 2000). Schemas are the organization of general knowledge within a person's long term memory (Rest et al., 2000). Whenever there is scant information, an individual will fill in the missing information with a schema. The DIT-2 provides information so an assessment can be made of an individual's moral schema.

The DIT-2 presents 5 moral dilemmas and the respondent ranks and rates the importance of 12 items which demonstrate decisions about a dilemma. The respondent rates the importance of each statement as *great, much, some, little or no* on *a* 5-point Likert scale (Rest, Narvaez, Bebeau, & Thoma, 1999). After rating the items, the respondent ranks the previous 12 items in order of importance with four top choices ranging from *most important* to *fourth most important.*

After rating and ranking the items, the DIT-2 provides the person with a personal interest, maintaining norms, and postconventional score based on the number of items he or she ranked highly which reflected the three types of schema (Rest et al., 1999). Participants may receive the following score range from each of the schema: personal

interest (0-100), maintaining norms (0-92), and postconventional (0-95). The postconventional score is also called a P percentage score. Additionally, the DIT-2 provides the N2 score. The N2 score adds the P score to the difference in ratings between postconventional items and personal interest items weighted by three (Bebeau & Thoma, 2003).

Psychometric properties of the DIT-2 show a test-retest reliability between 0.70s to 0.80s from a few weeks to a few months between administrations of the instrument. The Defining Issues Test (DIT; Rest, 1979) has extensive evidence of construct validity with the DIT-2 (Bebeau & Thoma, 2003). For internal consistency, the DIT-2 has a Cronbach's alpha of 0.70's to 0.80's (Rest & Narvaez, 1998).

Data Analysis

Research Questions 1 and 2

Research questions one and two were the following: a) To what extent can ethical and legal knowledge predict moral reasoning? and b) To what extent can cognitive complexity predict moral reasoning? To answer these research questions, bivariate regression was utilized. Bivariate regression was utilized because the research questions investigated the nature of the relationship between ELICA-R scores and DIT-2 N2 scores, and the relationship between cognitive complexity (LEP) scores and moral reasoning (DIT-2) N2 scores. The analysis revealed the degree to which ethical and legal knowledge (ELICA-R) and cognitive complexity (LEP) scores could predict moral reasoning (DIT-2) N2 scores. First, the results of the ethical and legal knowledge (ELICA-R) scores, as the independent variable were entered in SPSS 21.0. Additionally, the moral reasoning (DIT-2) N2 scores as the dependent variable were placed in SPSS

21.0 and analyzed applying linear regression. Similarly, the same process was utilized entering the cognitive complexity (LEP) scores as the independent variable and moral reasoning (DIT-2) N2 scores as the dependent variable.

For research questions one and two, bivariate regression analysis was employed with one variable at α=.05 and a medium effect size (ES=0.16), power of 0.80 with a minimum of 50 participants (Buchner, Erdfelder, Faul, & Lang, 2009; Cohen, 1992; Lambie et al., 2010; Lambie, et al., 2011). The *F*-test was the test of significance because the *F*-test demonstrates "how much variability the model can explain relative to how much it cannot explain" (Field, 2009, p.209).

Research Question 3

The third research question was: To what extent can ethical and legal knowledge and cognitive complexity together predict moral reasoning? To answer the third research question, multiple regression was employed. The research question investigated and analyzed the mathematical relationship among the instruments of the ethical and legal knowledge (ELICA-R) scores, cognitive complexity (LEP) scores, and moral reasoning (DIT-2) N2 scores. For analysis, the ethical and legal knowledge (ELICA-R) scores and cognitive complexity (LEP) scores were entered into SPSS 21.0 as independent variables as a block relying on the standard of forced entry and DIT-2 N2 scores were entered as the dependent variable. Multiple regression analysis was employed at α=.05 with a medium effect size (ES=.16), power of .80 (Cohen, 1992; Lambie et al., 2010; Lambie, et al., 2011). A minimum of 63 participants were required (Buchner et al., 2009; Cohen, 1992).

RESULTS

Participant Characteristics

Regarding gender, there were substantially more women in the study than men. There were 55 women (85%), and 10 men (15%). The ethnic composition of the study included 41 Caucasians (63.08%), 17 African-Americans (26.15%), 5 Multi-racial or other race (7.58%), 1 Asian-American (1.54%), and 1 Hispanic/Latino (1.54%). The marital status of participants was the following: 37 never been married (56.92%), 19 married (29.23%), 7 divorced (10.77%) and 2 widowed (3.08%). Regarding counseling track, the sample had a majority of clinical mental health students. The counseling tracks were as follows: 44 clinical mental health (67.69%), 17 school (26.15%), 3 college (4.62%), and 1 career (1.54%). Descriptive statistics for age were: 40 participants (61.53%) ages 20-29, 10 participants (15.38%) ages 30-39, 10 participants (15.38%) ages 40-49, and 5 participants (7.7%) ages 50-59. In terms of experience, 52 participants (80%) had less than five years of human services experience; 7 participants (10.77%) had 6-10 years; 5 participants (7.69%) had 11-15 years; and 1 participant (1.54%) had 16-20 years.

Ethical and Legal Knowledge Results Measured by the ELICA-R

The participants completed the ELICA-R which contained 35 questions. These items contained 10 different subscales which assessed a participant's ethical and legal knowledge of counseling. The mean score for the ELICA-R was 55.91 ($SD = 4.71$, range: 44-68). The highest score one could achieve was a cumulative score of 70. Approximately 63% of participants scored at 80% or above in answering ethical and legal knowledge items correctly.

Cognitive Complexity Results Measured by the DIT-2

There were no participants who were in the early relativism stage of cognitive complexity which was position five. The overwhelming majority were in early multiplicity and late multiplicity with 96.61%. The LEP score mean was 363.29 (*SD* = 42.84, range: 243–452). On average, participants were in transition between believing experts could eventually find answers and the belief that some answers may never be known.

Moral Reasoning

On the personal interest items, participants scored a mean of 26.03 (*SD* = 11.61, range: 0.00–58.00). On average, participants ranked 26.03% of the personal interest items highly. Personal interest scores can range from 0 to 100. For the maintaining norms items, the mean score was 25.91 (*SD* = 13.58, range: 4.00 – 58.00). Participants ranked a proportion of 25.91% of stage four items as their top choices. For the postconventional schema, participants scored a mean of 42.62 (*SD* = 16.58, range: 6.00–82.00). This means on average, 42.62% of the postconventional items were ranked highly by participants. The DIT-2 N2 score mean was 40.92 (*SD*=15.17, range: 10.03-73.40). The range of the N2 score is 0 to 100. The degree to which participants chose postconventional items over personal interest items and the proportion of ranking postconventional items favorably was 40.92%. Table 1 shows the division of schema among the participants with 58% scoring on the postconventional level.

Ethical and Legal Knowledge as Predictor for Moral Reasoning

The first research question was: To what extent can ethical and legal knowledge predict moral reasoning? The research hypothesis was ethical and legal knowledge will

have predictive utility for moral reasoning in counseling students. A simple linear regression was utilized to answer this research question. The ratio between the regression model and the baseline model was calculated and provided the proportional reduction in error ($R^2 = 0.14$). Therefore, ethical and legal knowledge predicted 14% of variance in moral reasoning for counseling students. The linear regression supported the predictive utility of ethical and legal knowledge for moral reasoning in counseling students, $F(1, 63) = 11.20$, $p < .05$, $R^2 = 0.14$the DIT-2 N2 moral reasoning score will change by 7.29 points as ethical and legal knowledge changes by 4.71 points (see Table 2).

Cognitive Complexity as a Predictor for Moral Reasoning

The second research question was: To what extent can cognitive complexity predict moral reasoning? The research hypothesis was cognitive complexity will predict moral reasoning in counseling students. To test the research hypothesis, linear regression was utilized with LEP scores being placed in SPSS as predictors of DIT-2 N2 scores. The results did not support the research hypothesis. Cognitive complexity did not have predictive utility for moral reasoning in counseling students, $F(1,63) = 1.00$, $p > .05$, $R^2 = .02$.

Ethical and Legal Knowledge, Cognitive Complexity as Predictors for Moral Reasoning

The third research question was: To what extent can cognitive complexity and ethical and legal knowledge together predict moral reasoning in counseling students? The research hypothesis was cognitive complexity and ethical and legal knowledge together will predict moral reasoning in counseling students. Ethical and legal knowledge and cognitive complexity together had predictive utility for moral reasoning

in counseling students, $F(2,62) = 6.20$, $p < .05$, $R^2 = .14$. However, of the two variables, only ethical and legal knowledge contributed to statistical significance for prediction ($\beta = 1.51$, $p < .05$), while cognitive complexity did not add to statistical significance for prediction, ($\beta = .13$, $p > .05$). In Table 3, regression coefficients and standard errors are shown.

DISCUSSION

The DIT-2

In counseling students, ethical and legal knowledge predicted moral reasoning. As ethical and legal knowledge increased DIT-2 N2 scores also increased. These results were consistent with the hypothesis for two possible reasons: the validity and reliability of the instruments, and the theoretical underpinnings of Kohlbergian thought in both instruments.

According to Ieva (2012), the ELICA–R has a high internal consistency of 0.79. This high internal consistency denotes the items in the ELICA-R provide consistently similar scores. A researcher can be confident that the ELICA-R is measuring the construct of ethical and legal knowledge in counseling accurately. In addition, the DIT–2 has a high reliability from the upper .70s to the lower .80s and it has a construct validity of .79 with the Defining Issues Test (DIT; Rest, 1979; Bebeau & Thoma, 2003). From this study, it would stand to reason ethical and legal knowledge and moral reasoning would be related because the instruments of the ELICA-R and DIT-2 appear to be sound in reliability and validity. The basis of the DIT-2 is Kohlbergian principles.

In an earlier study of counseling students, Lambie used the Washington University Sentence Completion Test (WUSCT; Hy & Loevinger, 1996) to predict

ethical and legal knowledge through the ELICQ. The WUSCT is based on the theoretical underpinnings of Kohlberg (Lambie et al., 2010). The results were that the WUSCT did predict scores on the ELICQ. Lambie et al (2011) also performed another study where school counselors took the WUSCT for ego development and the ELICQ for ethical and legal knowledge. The study found that ethical and legal knowledge was a significant predictor of ego development.

The ELICA-R is an updated version of the ELICQ. The ELICQ demonstrated a significant correlation with the Kohlbergian instrument of the WUSCT. Therefore, it is not surprising the ELICA-R also showed a significant correlation to the Kohlbergian instrument of the DIT-2 and supported the hypothesis. Among counseling students and school counselors from the previous three studies, there is a commonality of ethical and legal knowledge correlating with Kohlbergian based instruments.

THE LEP

In linear regression, cognitive complexity as assessed by the LEP did not predict DIT-2 N2 scores. Further when cognitive complexity was used as a predictor in multiple regression, it failed to add statistical significance to moral reasoning. The result was surprising because the LEP has been used successfully as an assessment tool to measure counselor cognitive development over time (Brendal, Kolbert, & Foster, 2002; Granello, 2002). The results of this survey highlighted the major difference between the cognitive complexity domain of the LEP and moral reasoning in the DIT-2. The major difference between the LEP and the DIT-2 is the LEP narrowly measures the domain of learning attitudes while the DIT-2 encompasses behavior in broad dilemmas. The LEP is measuring attitudes in the classroom and preferences for learning. For example, the LEP

measures student attitudes toward the learning environment, role of the instructor, students, and the materials utilized in class. The DIT-2 measures how a person acts and thinks regarding various moral dilemmas. It can be cautiously inferred the LEP and the DIT are measuring two unrelated constructs (Eriksen & McAuliffe, 2006).

Limitations

In its nature, this sample was a nonprobability, convenience sample. Because this was a convenience sample, the results could be skewed in comparison to the entire population of counseling students. The threat for this study is low external validity and systematic bias which may not reflect the general population of counseling students. In terms of the source of the sample, 70.77% of the students who responded completely were from the same institution. External validity was threatened because 67.69% of the counseling students were in the area of clinical mental health. School counseling was underrepresented in this sample because school counseling in CACREP accredited masters programs has the largest enrollment of any program area (CACREP, 2013).

Other limitations which involved internal validity were the correlational design and confounding variables of the study. Since the study was correlational and non-experimental, one cannot derive a cause and effect as to assert ethical and legal knowledge causes moral reasoning or vice versa. A confounding variable was the length and time consumption of all three instruments which ranged from 45 minutes to two hours for completion. Since participants took the instruments online they could leave the instruments and return to them at their convenience. The external and internal validity threats were limiting to the generalizability of the study. Although there were the internal validity threats of methodology, the implications for counselors, counselor educators, and

future research projects are exciting in the results for the constructs of ethical and legal knowledge, cognitive complexity, and moral reasoning.

Implications for Counselor Educators

For counselor educators, the implications involve the pedagogy of ethical and legal knowledge with the strong correlation between ethical and legal knowledge and moral reasoning. These findings imply that counselor educators can teach moral reasoning and ethics simultaneously. From earlier studies, it has been demonstrated that Deliberate Psychological Education (DPE) increases moral reasoning (Cannon, 2008). Therefore, in PhD programs, DPE can be taught as pedagogy to aspiring faculty in counselor education. DPE includes the elements of students having cognitive dissonance and scaffolding students' current level of development with ethical dilemmas which promote higher cognitive development (McAuliffe & Eriksen, 2011). Interventions which aid in facilitating cognitive dissonance are readings, journaling, ethical dilemmas and self-reflection with feedback from instructors and peers (Cannon, 2008). Lambie et al (2012) demonstrated how knowledge of ethical and legal issues increased through activities such as readings, assessments, research, and analysis of ethical decision-making models in counseling students. Aspiring faculty can implement techniques already suggested to increase ethical and legal knowledge and moral reasoning (Cannon, 2008; Lambie et al., 2012).

Conclusions

This study explored the relationship among ethical and legal knowledge, cognitive complexity, and moral reasoning in counseling students. Ethical and legal knowledge was a significant predictor of moral reasoning and cognitive complexity was

not a significant predictor of moral reasoning. Ethical and legal knowledge and cognitive complexity together were predictors of moral reasoning, but cognitive complexity did not add to the statistical significance in the multiple regression.

From this study, ethical and legal knowledge appears to have a theoretical basis in Kohlberg. In other studies it was found that ethical and legal knowledge was correlated with the Kohlbergian instrument of the WUSCT (Lambie et al., 2010; Lambie et al., 2011). This assertion of Kohlbergian underpinning can lead to a paradigm shift in the way counselor educators teach ethics. This study has shown a link between two vital constructs which equip counselors in making sound ethical decisions. Interventions and teaching methods are already available for counseling students and counselors to advance in moral reasoning and ethical and legal knowledge. The application of these interventions and DPE model is necessary in fulfilling the CACREP standards of students knowing and applying ethical and legal axioms in professional practice (CACREP, 2009).

Table 1

Schema Types Based on Schema Averages (N = 65)

Schema Type	Characteristics	Frequency (n)	Percentage
Type 1	Consolidated-personal interest	1	1.54
Type 2	Transitional-personal interest-maintaining norms	9	13.85
Type 3	Transitional-maintaining norms-personal interest	4	6.15
Type 4	Consolidated-maintaining norms	6	9.23
Type 5	Transitional-maintaining norms-postconventional	7	10.77
Type 6	Transitional-postconventional-maintaining norms	14	21.54
Type 7	Consolidated-postconventional	24	36.92
Total		65	100

Table 2

Linear Regression for Ethical and Legal Knowledge as a Predictor for Moral Reasoning

Variable	*B*	SE_B	β
Intercept	-4.99	3.37	
Ethical and Legal Knowledge	1.51*	0.45	0.39

Note. B = unstandardized coefficient; SE_B = Standard error of coefficient; β = standardized coefficient.

[a]Units were analyzed in square root units.

* $p < .05$

Table 3

Summary of Multiple Regression for Cognitive Complexity and Ethical and Legal Knowledge as Predictors for Moral Reasoning

Variable	*B*	SE_B	β
Intercept	-7.56	4.12	
Ethical and Legal Knowledge	1.51*	0.45	0.39
Cognitive Complexity	0.14	0.13	0.13

Note. B = unstandardized coefficient; SE_B = Standard error of coefficient; β = standardized coefficient.

[a]Units were analyzed in square root units.

*$p < .05$

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APPENDIX

Participant Demographic Sheet

Do you agree for the results of your survey to be used for research in this study?

__ Yes

__ No

1. **Gender**
   - __ Female
   - __ Male
2. **Ethnicity**
   - ___African-American
   - __ American Indian
   - __ Asian-American
   - __ Asian
   - __ Spanish/Hispanic/Latino
   - __ White/Caucasian
   - __Other (please specify)
3. **Marital Status**
   - __Single, never married
   - __Divorced
   - __Married
   - __Widowed
4. **Counseling Specialty**
   - __Career
   - __Clinical Mental Health
   - __College
   - __Marriage/Family
   - __Rehabilitation
5. **Age**
   - __20-24
   - __25-29
   - __30-34
   - __35-39
   - __40-44
   - __45-49
   - __50-54
   - __60-64
   - __65-69
   - __70-74
   - __75+

VITA

Matthew W. Bonner obtained his Bachelor of Arts degree from Rutgers University in 1996. After earning his first degree, he acquired a Master of Divinity from Howard University in 2000. Then, he earned a Master of Science degree in Pastoral Counseling from Loyola University in Maryland. He is a National Certified Counselor and is under supervision for licensure in Virginia.

He is a member of the American Counseling Association and Virginia Association for Counselor Education and Supervision. He has presented at state and national conferences on topics such as ethics, multiculturalism, counseling theory, and supervision. While at Old Dominion University, he was awarded the National Board for Certified Counselors Minority Fellowship. Before Mr. Bonner embarked upon a career in counselor education, he was a pastor for 11 years in the Christian Methodist Episcopal Church.