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A MIXED METHODOLOGICAL ANALYSIS OF THE ROLE OF CULTURE AND DIAGNOSTIC VARIANCE AMONG COUNSELORS AND COUNSELOR TRAINEES

by

Elizabeth A. Prosek
B.S., August 2004, The Pennsylvania State University
M.S. Ed., December 2007, Old Dominion University

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Old Dominion University in Partial Fulfillment of the
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

COUNSELOR EDUCATION AND SUPERVISION

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Approved by:

Danica G. Hays (Chair)

Christine A. Ward (Member)

Jill C. Dustin (Member)

ABSTRACT

A MIXED METHODOLOGICAL ANALYSIS OF THE ROLE OF CULTURE AND DIAGNOSTIC VARIANCE AMONG COUNSELORS AND COUNSELOR TRAINEES

Elizabeth A. Prosek
Old Dominion University, 2011
Dissertation Chair: Dr. Danica G. Hays

As the U.S. population continues to diversify, counselors are challenged to respond to the interface of culture and mental health concerns of clients (Gushue, Constantine, & Sciarra, 2008). It is important for counselors when making clinical decisions to reflect on the diverse needs of clients as well as the potential impact of cultural factors on mental health (Sue & Sue, 2008). Accordingly, this study sought to investigate the clinical decision-making process among counselors and counselor trainees and how, if at all, cultural factors influence the case conceptualization of clients. The study also investigated how counselors and counselor trainees collect and process client data when making clinical decisions to include: diagnostic decisions, current level of functioning, and prognosis. The concurrent mixed methods study tests and revises a grounded theory of clinical decision-making and degree of match between counselors, counselor trainees, and clients (Hays, McLeod, & Prosek, 2009; Hays, Prosek, & McLeod, 2010).

Participants viewed 1 of 6 mock client videos representing identical symptomology, but differing on cultural variables of race/ethnicity and gender. After viewing the video, participants diagnosed the client and completed an electronic survey packet of both qualitative open-ended survey questions and quantitative survey

instruments. Demographic information was collected from participants to determine degree of cultural match with client.

Results indicate counselors and counselor trainees arrive at different diagnostic decisions when provided identical clinical data. However, counselors and counselor trainees utilize similar cognitive tools when conceptualizing information from clients. Diagnostic variance was identified to account for differences in diagnoses. Cultural factors such as race/ethnicity and gender are considered within the presenting problem and/or diagnostic decision; but cultural bias also influences the clinical decision-making process. There is a statistically significant relationship between the degree of racial/ethnic match between counselor/counselor trainee and client and the consideration of race/ethnicity in the presenting problem and/or diagnostic decision. However, there was no statistically significant relationship between the degree of gender match between counselor/counselor trainee and client and the consideration of gender in the presenting problem and/or diagnostic decision. Lastly, there were no statistically significant relationships between cultural bias and perceptions of client functioning; although the small sample size limits the quantitative findings of the study. The developing theory of the clinical decision-making process of counselors and counselor trainees is presented. Implications of the theory for counselor educators and future research are discussed.

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And above all else, I love you...and red wine.

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CHAPTER ONE

INTRODUCTION

The U.S. population continues to racially and ethnically diversify as a culturally mosaic society (U.S. Census Bureau, 2009). This diversification impacts how counselors serve clients with mental health concerns (Constantine, Hage, Kindaichi, & Bryant, 2007; Constantine, Kindaichi, Arorash, Donnelly, & Jung, 2002; Gushue, Constantine, & Sciarra, 2008; Hays, McLeod, & Prosek, 2010). Counselor training programs have responded to the need to better serve an increasingly diverse population by incorporating multicultural competencies into curriculum standards (Council for the Accreditation of Counseling and Related Educational Program [CACREP], 2009; Sue, 1992). Previous research indicates counselor trainees with lower self-reported multicultural competence overlook or distort important client information during the clinical interview (Constantine, 2001; Gushue & Carter, 2000). Constantine and colleagues (2007) maintained helping professionals are afforded an opportunity to increase cultural awareness in society; however, this may only be achieved if professionals are culturally competent.

Cultural bias, judging others by standards related to one's own culture, interferes in the therapeutic process when counselors are not knowledgeable or skilled to work with clients from diverse cultural backgrounds (Hays & McLeod, 2010; Hays, McLeod, & Prosek, 2010; McAuliffe, 2008). With awareness of potential cultural bias, counselors and counselor trainees need to be prepared to diagnose and counsel clients from differing racial/ethnic and gender backgrounds (Gushue et al., 2008). There is uncertainty in the literature on how cultural factors of the counselor or client relate to counselor and

counselor trainee multicultural counseling competence. There is evidence, however, that culture may influence the way in which a client interprets a mental health problem, responds to stress, or displays symptoms (Constantine & Ladany, 2000; Eriksen, Kress, Dixon, & Ford, 2010). Therefore, it is of interest how a varying degree of cultural match (level of similarity or differences in race/ethnicity, gender) between counselor and client impacts the clinical decision-making process (i.e., diagnostic process).

The process of clinical decision-making incorporates how counselors gather information from clients, what they attend to, and the tools used to interpret collected data. From that clinical interpretation, counselors articulate diagnostic impressions, or assign diagnostic labels to clients from the *Diagnostic and Statistical Manual for Mental Disorders* (DSM-IV-TR; American Psychiatric Association [APA], 2000). The clinical decision-making process encompasses an assessment of the client's current level of functioning as well as prognosis if the client receives treatment or does not receive treatment. For example, the counselor identifies to what degree the client is functioning at the initial clinical interview (e.g., Global Assessment of Functioning score). The counselor also considers what treatments will be appropriate and assesses what the prognosis of the client may be if access to prescribed treatments occurs. Generally, acknowledgement of the disorder leads to the establishment of treatment plans and outcome goals related to the symptomology of the diagnostic impression (APA, 2000). Treatment objectives aim to reduce unwanted symptoms of the diagnosed serious mental illness, or provide behavioral guidelines to promote client wellness (APA, 2000).

At its core, clinical decision-making is dependent upon the characteristics and knowledge base of the counselor (Dumont & Lecomte, 1987). These individual

differences are categorized as diagnostic variance, the notion that counselors arrive at clinical decisions via various methods and means (Dumont & Lecomte). These methods and means are categorized as cognitive tools, or heuristic principles (Tversky & Kahneman, 1974). Since the establishment of heuristic principles, researchers continued to develop, define, and modernize the principles as cognitive tools utilized by counselors in the diagnostic process (Arkes, 1991; Dumont & Lecomte, 1987; Ellis, Robbins, Schult, Ladany, & Banker, 1990; Friedlander & Stockman, 1983; Hays, McLeod, & Prosek, 2009). Cultural bias and clinical decision-making are discussed as separate constructs. However, the intention of the researcher was to investigate how these constructs interact with and potentially influence the counselor and counselor trainee assessment of the client.

Background

The construct of cultural bias in the counseling profession was vastly researched in previous decades. Researchers have considered cultural bias in terms of race/ethnicity (Gushue, 2004; Gushue & Constantine, 2007; Jones & Gray, 1986; Parker, Moore, & Neimeyer, 1998; Snowden, 2001; Strakowski, Shelton, & Kolbrener, 1993) and gender (Biernat & Kobrynowciz, 1997; Eriksen & Kress, 2008; Ford & Widiger, 1989; Kaplan, 1983; Seem & Johnson, 1998; Wisch & Mahalik, 1990). The researcher chose race/ethnicity and gender as the two cultural factors of interest for the study because each is discussed predominantly in the counseling psychology and counselor education literature. The researcher considered other cultural factors, such as socio-economic status (SES); however, the current helping profession literature did not yield enough support in connection to the clinical decision-making process to use this variable. The researcher

decided to narrow the scope of the study and concentrate on race/ethnicity and gender. In this section, the two cultural factors race/ethnicity and gender are discussed in relationship to the clinical decision-making process.

Race/Ethnicity

Research has indicated societal bias in interpreting the ability levels of individuals that identify with diverse races/ethnicities (Biernat & Kobrynowicz, 1997; Biernat & Manis, 1994; Gushue, 2004). Research (Biernat & Kobrynowiz; Biernat & Manis) suggests those of the dominant race/ethnicity (i.e., White/Northern European) set lower expectations for individuals of non-dominant race/ethnicities in an employment setting. Congruently, in a study of White psychology students in a mock clinical setting, Gushue (2004) suggested clients of non-dominant races/ethnicities were rated less symptomatic than dominant races/ethnicity clients. Biernat and colleagues, and Gushue postulate a common theme of judgments made based on social stereotypes, lessening the expectations of those from non-dominant races/ethnicities. Gushue's findings that non-dominant races/ethnicities are rated more favorably is not congruent with the disproportionate diagnostic prevalence rates of severe psychotic disorder diagnoses among non-dominant groups as measured in the clinical setting. Literature reports African American and Latino clients are diagnosed at disproportionate rates with schizophrenia and other mood disorders compared to clients of dominant White ethnic groups (Jones & Gray, 1986; Schwartz & Feisthamel, 2009; Snowden & Cheung, 1990). What may be of interest to consider is whether methodology differences (i.e. research setting vs. clinical setting) influence the perceptions of non-dominant groups. In some cases, research settings represent data collected among lesser experienced trainees, while

clinical settings represent data collected from trained professionals. Using a research setting to collect data among trainees may assess ratings of perceived symptoms, whereas in clinical settings, professionals may provide ratings based on diagnoses from the DSM-IV-TR.

In the research literature, several investigators highlight critiques of the DSM-IV-TR criteria and categorical diagnostic system (Eriksen & Kress, 2006; Lopez et al., 2006; Widiger & Samuel, 2005) for race/ethnicity. The DSM-IV-TR carefully outlines the potential for clinician cultural bias when identifying a diagnosis and provides culturally relevant information within the manual to assist diagnosticians (APA, 2000). The research on the DSM-IV-TR has moved from criticisms of the potential cultural bias in the third edition (Kaplan, 1983; Kass et al., 1983) to critical analysis of the categorical structure used to diagnosis in the fourth edition (Lopez et al.; Widiger & Samuel). There remains an inability to distinguish specifically whether the race/ethnicity bias originates within DSM-IV-TR criteria, counselor bias, or both. The proposed study is designed to examine counselor bias through use of tools and diagnostic variance which may further inform the utility of the DSM-IV-TR. Due to the long-standing research of race/ethnicity bias and the remaining disparity, this current research study includes race/ethnicity as a cultural factor for consideration of potential influence on the clinical decision-making process.

Gender

Research on gender bias has explored how society defines optimal mental health for males and females (Biernat & Kobrynowicz, 1997; Biernat & Manis, 1994; Ford & Widiger, 1989; Kaplan, 1983). Broverman, Broverman, Clarkson, Rosenkrantz, and

Vogel (1970) postulated the definition of healthy behavior is rooted in masculine characteristics (e.g. independence, aggression). Therefore, any individual (male or female) demonstrating stereotypical feminine characteristics, such as dependence and compromise, is considered mentally ill (Kaplan). Further research supports an innate societal gender bias in other more general environmental settings, for example when applying for jobs (Biernat & Kobrynowicz; Biernat & Manis).

Specific to counseling programs and curriculum, Seem and Johnson (1998) suggested counselor trainees are more judgmental of both male and female clients who display non-traditional gender roles. In the marital and family therapy setting, counselor trainees working with couples recognized and addressed gender role considerations of the clients more frequently than other forms of diversity (Guanipa & Woolley, 2000). Guanipa and Woolley (2000) noted counselor trainees might become fixated on one area of culture and accompanying norms, rather than viewing clients with a wider lens.

In a conceptual article, Eriksen and Kress (2008) found prevalence rates of diagnoses among males and females are reported inconsistently in the literature. Males tend to be diagnosed more frequently with substance abuse disorders, whereas women tend to be diagnosed more frequently with mood and anxiety disorders (Eriksen et al., 2010; Ford & Widiger, 1989; Hartung & Widiger, 1998). There is evidence in the literature of how the diagnostic process, when infused with bias, can be harmful for clients. For example, feminist theorists suggest the process of diagnosis is especially harmful to females, due to historical oppression (Eriksen et al.). If gender bias influences the diagnosis of males or females inappropriately, it may be assumed that inappropriate treatments would also be prescribed (Eriksen & Kress, 2008). Due to the long-standing

research on gender bias in the helping profession literature, the proposed research study considers gender as a cultural factor for investigation of potential influence on the clinical decision-making process.

Cognitive Tools in Clinical Decision-Making

The construct of clinical decision-making includes innate skills counselors employ to diagnose clients. Tversky and Kahneman (1974) formulated foundational heuristic principles to describe these skills: representativeness, availability, and anchoring. Researchers (Arkes, 1991; Dumont & Lecomte, 1987; Friedlander & Stockman, 1983) identified other decision-making heuristic principles: confirmation bias, overconfidence, publicity, and vividness criterion. Hays et al. (2009) conceptualized these heuristic principles collectively as *cognitive tools*. Cognitive tools serve as the information processing techniques counselors employ while making clinical diagnoses and treatment decisions. This research study investigates what, if any, cognitive tools are used by counselors and counselor trainees in the clinical decision-making process.

The cognitive tools a counselor employs, or the manner in which the tools are employed, may impact the diagnostic outcome. This concept is termed *diagnostic variance*, the process by which differing cognitive tools and subjective observations are used by counselors in the clinical decision-making process (Dumont & Lecomte, 1987; Hays et al., 2009). Within the literature, there are four categories of diagnostic variance: *natural variance*, *information variance*, *observation/interpretation variance*, and *criterion variance* (Gigerenzer, 2002; Hays et al., 2009). Diagnostic variance may result in clinical error, misdiagnosis, underdiagnosis, and overdiagnosis (Hays et al., 2009).

What is of interest in the proposed study is how diagnostic variance relates to the clinical decision-making process of counselors and counselor trainees.

Incorporation of Cultural Factors and Clinical Decision-Making

There is existing research on how cultural factors such as race/ethnicity and gender impact the diagnostic process in counseling (Hays et al., 2010; Jones, 1982; Trierweiler, et al., 2000). Jones (1982) asserted counselor-client race/ethnicity match did not significantly impact client outcomes in therapy. These findings opposed previous perceptions in psychology research which stated that clients were better served by counselors of the same race (see Banks, 1972; Bryson & Cody, 1973). Researchers continued the investigation of racial/ethnic factors in the therapeutic alliance and the therapeutic process. The therapeutic alliance was investigated from the perspective of a counselor's cultural identity. Helms (1984, 1995, 1996) highlighted how a counselor's cultural identity influences the therapeutic process. Specifically, Helms (1995) examined the relationship among stages of her racial identity development model with differing information-processing strategies (i.e. cognitive tools). Helms and Carter (1991) investigated how racial identity attitudes may predict racial/ethnic and gender preferences in selection of a counselor. The results indicate a significant preference for counselors similar to self-demographics (based on race/ethnicity and gender).

Research later focused specifically on the dominant race; White counselors' abilities to assess personal cultural bias and incorporation of cultural awareness into the therapeutic process. For example, Parker, Moore, and Neimeyer (1998) based on Helms' (1995) work developed a multicultural training program that helped counselor trainees to increase three areas of White racial awareness: personal awareness, cultural knowledge,

and cross-cultural competence. Counselor trainees self-rated more culturally competent and aware as compared to a control group of counselor trainees who did not receive the training program.

The research expanded to further consider how cultural make-up of the helping professional may influence the diagnostic decision. One research study, in particular, compared identification of symptoms between racially dissimilar counselors (Trierweiler et al., 2000). Counselors of diverse racial/ethnic identities utilized different symptoms in the diagnostic process of schizophrenia, yet diagnosed clients with schizophrenia at an equal rate. These findings suggest that diagnostic variance and cultural bias can be present, and yet equal prevalence rates still exist. Other studies have shown different prevalence rates based on cultural group, which could be explained by consistency in diagnosing. A mixed methods study is necessary to further understand the relationship of diagnostic variance, cultural bias, and clinical decision-making.

Historically, there are mental health disorders with higher prevalence rates for each gender (Hartung & Widiger, 1998). In particular, the relationship between gender and personality disorders (Axis II diagnoses) was analyzed for potential bias (Ford & Widiger, 1989; Funtowicz & Widiger, 1999). Many questions remain unanswered in the literature: where does the gender bias originate? Are the disproportionate rates a result of counselor gender bias or criterion bias within the disorder itself? Is it possible that our society influences genders differently and therefore genders identify unique symptoms when mental health concerns develop? Many researchers concur that the DSM-IV-TR does not illustrate innate bias in the criterion for personality disorders (Ford & Widiger; Funtowicz & Widiger). Therefore, it may be suggested disproportionate prevalence rates

are associated with either counselor gender bias or societal influences. In a conceptual piece, Eriksen and Kress (2008) reviewed the historical role of gender bias in the diagnostic process. The authors compared research studies from the 1970s and 1990s and concluded gender bias impacts diagnostic rates between men and women, and therefore may impact appropriate treatment opportunities. In a manuscript, they reported to the profession that the bias remains, regardless of where it originates in the clinical decision-making process (i.e. within the DSM-IV-TR or within professionals). Eriksen and Kress suggested future studies focus on client treatment and outcomes. This study investigated the relationship between cultural bias and prognosis, as suggested by previous research.

Previous literature on clinical decision-making provides many historical landmarks in the related conceptual areas of diagnostic variance, cognitive tools, and influential culture factors which demonstrate the progression of cultural awareness and the importance of appropriate diagnosis of mental health disorders of clients. The study addressed what previous studies have labeled as limitations or unexpected results that need strengthening from further study. These limitations include small sample sizes, unnatural hypothetical counseling situations, and the inability to specifically identify cognitive tools within the clinical decision-making process (Biernat & Kobrynowicz, 1997; Biernat & Manis, 1994; Falvey, 2001; Falvey et al., 2005; Feisthamel & Schwartz, 2009; Gushue, 2004; Biernat & Kobrynowicz, 1997; Biernat & Manis, 1994; Gushue, 2004; Gushue & Constantine, 2007; Hays et al., 2009; Hays et al., 2010). This study was an adaptation of Hays et al. (2009) and Hays et al. (2010): a mixed methods study of the clinical decision-making process of counselors and counselor trainees. The methodology incorporated a more natural clinical intake to promote a realistic counseling setting; this

was accomplished with video recorded clinical interviews with mock clients. The study elicited to a larger sample population than the previous study, however, still incorporated the same interview protocols, measurements, and research questions. A mixed methods approach to collecting data allowed for the testing and revising of a newly generated theory of how counselors and counselor trainees arrive at diagnostic decisions.

Purpose of the Study

The purpose of the study was to investigate how diagnostic variance among counselors and counselor trainees related to the clinical decision-making process and what, if any, cognitive tools are used in the process. The study also considered how, if at all, cultural factors of counselors, counselor trainees, and clients influenced the case conceptualization and prognosis of clients. The study investigated how counselors and counselor trainees collect and process client data when making clinical decisions to include: diagnostic decisions, current level of functioning, and prognosis. The concurrent mixed methods study tests and revises a grounded theory of clinical decision-making and degree of match between counselors, counselor trainees, and clients developed by Hays et al. (2010).

Research Questions

The overarching purpose of the research study was to build upon a preliminary theory of the clinical decision-making process of counselors and counselor trainees. The research questions of the study were replicated from previous literature (Hays et al., 2009; Hays et al., 2010). The qualitative portion of this study investigated research questions one and the first sub-question of research question two; the quantitative portion

of this study will investigate the second sub-question of research question two and research question three.

Research Question 1: How do counselors and counselor trainees arrive at clinical diagnostic decisions?

Sub-question 1: How does diagnostic variance relate to the counselors' and counselor trainees' clinical decision-making process?

Sub-question 2: How are cognitive tools (if any) utilized by counselors and counselor trainees in the clinical decision-making process?

Research Question 2: How do cultural factors influence the clinical decision-making process?

Sub-question 1: How does a client's cultural identity influence case conceptualization?

Sub-question 2: What impact does the cultural match between the counselor and counselor trainee and client have on case conceptualization?

(H_1) There is a significant relationship between the cultural match of the counselor/counselor trainee and client in the case conceptualization process.

(H_2) There is no significant relationship between the cultural match of the counselor/counselor trainee and client in the case conceptualization process.

Research Question 3: What is the relationship between cultural bias, perceived level of functioning, and prognosis in the clinical decision-making process?

(H_3) There is a significant relationship between cultural bias, perceived level of functioning, and prognosis in the clinical decision-making process.

(H_4) There is no significant relationship between cultural bias, perceived level of functioning, and prognosis in the clinical decision-making process.

Significance

Diagnosis provides means for third-party reimbursement, which supports counseling as a profession (Eriksen & Kress, 2005). The DSM-IV-TR allows for structure in the diagnostic process, a streamlined system that third-party reimbursement organizations deem appropriate to employ (APA, 2000). The DSM-IV-TR specifies the importance of clinical judgment (clinical decision-making) in cooperation with the categorical diagnostic system (APA, 2000). The American Counseling Association (ACA) addresses the importance of appropriate diagnosis in the Code of Ethics (ACA, 2005). Therefore, the process of clinical decision-making is a significant construct of counseling. The study considered how diagnostic variance is related to the clinical decision-making process, as clinical judgment is meant to be used in collaboration with the DSM-IV-TR. The primary researcher questioned how cultural bias and/or diagnostic variance and utilization of cognitive tools impacted the perceived diagnosis and prognosis of clients with mental health concerns. The study employed mixed methodology to encompass how the variables potentially interact in the clinical decision-making process.

Delimitations

In research, delimitations assist to limit the scope of the study by making intentional decisions in the development of the research inquiry (Creswell, 2009). Delimitations outline what characteristics are considered mandatory for participation, as well as what topics that will not be considered in this study. By establishing delimitations in the study, results may be more generalizable or more easily replicated for future studies.

This study was restricted to counselors and counselor trainees. Persons with other helping professional credentials (e.g., psychologists and social workers) were not included in the study. Other helping professions, especially psychology and psychiatry, already have established inquiry in clinical decisions; however few studies specifically consider the counseling profession. The script for the mock client includes general mood disorder symptoms. The symptoms are not written to specifically represent one particular mental health disorder. There is no "correct" answer in the diagnostic decision

The scope of the study is to investigate two cultural factors associated with clinical decision-making: race/ethnicity and gender. Other cultural factors, such as socioeconomic status, age, religious orientation, and theoretical orientation will not be addressed in relationship to the clinical decision-making process. The delimitation of cultural factors narrows the scope of the study.

Assumptions

This study assumed that counselors and counselor trainees employ a clinical decision-making process unique to themselves. It was assumed that different diagnostic decisions among counselors and counselor trainees may be accounted for by diagnostic

variance. This study assumed helping professionals utilize cognitive tools to process complex clinical data to assist in making a clinical decision. It was assumed that cultural factors are influential, consciously or unconsciously, in the clinical decision-making process.

In the design of this study, the researcher assumed diagnostic variance and cognitive tools could be identified in the clinical decision-making process using qualitative data collection methods. The researcher believed it was best to quantitatively measure the variables cultural bias, level of function, and prognosis. This study assumed mixed methodology would best capture the data required to test and revise a preliminary theory (Hays et al., 2009; Hays et al., 2010) of counselors' and counselor trainees' clinical decision-making process. The researcher assumed that all respondents answered all interview and survey questions honestly, to the best of their ability.

Definitions and Terms

Counselor is a person who engages in a "professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals" (American Counseling Association, 2010). Counselors apply principles of human development, mental health, and psychology through strategic interventions (American Counseling Association, 2010). Interventions aim to promote wellness and growth of the client. Counselors in the study may also represent individuals continuing their education in a doctoral program.

Counselor trainee is a student enrolled in a masters' degree program in counseling or doctoral program in counseling. Counselor trainees may specialize in different areas of counseling to include school, mental health, agency, college, and rehabilitation.

Counselor trainees will represent varying levels of training within a masters-level program, for example completion of a field practicum or current enrollment in an internship.

Council for the Accreditation of Counseling and Related Educational Programs (CACREP) is an accreditation program that provides curriculum standards for counseling education programs. A standard of the CACREP curriculum includes social and cultural diversity to address training counselor trainees from a multicultural perspective and therefore is defined in the study (CACREP, 2009). Participants in the study will not be identified in association with a CACREP accredited university; however the literature encompasses how the accreditation program has contributed to multicultural research.

Clinical decision-making process is the process in which a counselor forms a formal opinion or diagnosis of the client. For the purpose of this study, diagnoses are assigned using the *Diagnostic and Statistical Manual for Mental Disorders*, fourth edition (DSM-IV-TR; APA, 2000). This clinical decision-making process is influenced by cognitive tools utilized by the counselor or counselor trainee. This process also encompasses how counselors or counselor trainees assess a client's current level of functioning and prognosis. The clinical decision-making process leads to the creation of a treatment plan or objectives (APA, 2000).

Diagnostic Variance is the process by which differing cognitive tools and subjective observations are used by counselors in the clinical decision-making process (Dumont & Lecomte, 1987; Hays et al., 2009). Diagnostic variance is categorized by four types: natural variance, information variance, observation/interpretation variance, and criterion variance. *Natural variance* refers to the origin of the mental disorder, or

how the symptomology of the disorder manifests. For example, the duration of symptoms, the severity of symptoms, or the cultural differences expressed through symptomology. This type of variance influences clinical decisions when symptomology does not fully meet the criterion of a diagnosis, when clients meet criterion within many diagnoses of the same category, and/or when symptoms qualify the client for a multitude of diagnoses among various categories. *Information variance* represents the amount of information or data the client is willing to share with the clinician. This variance also includes the amount and type of information or data the counselor asks the client to share during the clinical interview. *Observation/interpretation variance* accounts for the individualization of the counselor in the interpretation process. There is variability in the way in which the same symptoms are viewed by different counselors. Each counselor has a unique perspective; even if displayed symptoms are similar. *Criterion variance* refers to the utilization of different criteria when making a clinical decision or diagnosis (Gigerenzer, 2002; Hays et al., 2009).

Cognitive Tools are the constructs used by counselors to process client information during the clinical interview. Cognitive tools assist counselors to make clinical decisions when symptoms do not completely fit criteria in the DSM-IV-TR (Hays et al., 2009). Cognitive tools as based in the subjective reasoning of the individual counselor (Kahneman & Tversky, 1973). The subjective reasoning of the individual counselor incorporates personal experiences, professional experiences, and cultural variables (Paniagua, 2005). Cognitive tools assist counselors to conceptualize otherwise complex client data in the clinical decision-making process; however, relying on cognitive tools when diagnostic criteria is not fully met may result in misdiagnosis,

overdiagnosis, and underdiagnosis of disorders (Hays et al, 2009; Kahneman & Tversky; Lopez, 1989; Paniagua; Rosenthal, 2004). The following cognitive tools are defined from the research literature and presented in alphabetical order: *anchoring*, *availability*, *confirmation bias*, *locus of attribution*, *overconfidence*, *representativeness*, and *vividness criterion*,

Anchoring is the process in which clinical judgments are based on salient information shared by the client early in the clinical interview. This process also includes judgments based on immediate biases presumed by the counselor. Anchoring may lead to misdiagnosis, underdiagnosis, or overdiagnosis if the counselor is unable to accommodate for further clinical information shared during the clinical interview beyond original data shared. (Friedlander & Stockman, 1983; Hays et al., 2009; Tversky & Kahneman, 1974).

Availability is the process in which clinical judgments are based on the familiarity of the symptoms. Availability asserts that diagnoses are established based on the ease with which a counselor can compare symptoms with criterion of disorders. This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis as counselors must rely on self-knowledge and cues shared by clients. Some cues from clients are more obvious and available, therefore may be used more frequently (Dumont & Lecomte, 1987; Friedlander & Stockman, 1983; Hays et al., 2009; Tversky & Kahneman, 1974).

Confirmation bias is the process in which clinical judgments are based on data that counselors desire to see in order to support a presumed disorder. This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis as counselors will utilize the

symptoms they desire and may overlook important presenting concerns (Hays et al., 2009).

Locus of attribution is the framework from which a counselor perceives the client's symptomology. There are two frameworks from which clients may be viewed: dispositional and/or situational. From a dispositional framework a client's problem originates from within the client. From a situational framework a client's problem is a result of environmental factors, within a larger context. A counselor's consideration of cultural factors, as well as preferred theoretical orientation, contributes to the locus of attribution. Counselors may view a client from both frameworks. Locus of attribution may influence the perceived prognosis of the client. (Hays et al., 2009).

Overconfidence refers to the resulting inflated confidence in a clinical decision when counselors and counselor trainees inappropriately rely on readily available information (i.e., confirmation bias) (Arkes, 1991). This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis when counselors and counselor-trainees utilize this available information incorrectly with clients of diverse backgrounds.

Representativeness is the process in which clinical judgments are based on expected diagnoses of particular populations. This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis when counselors' expectations of populations and criterion create generalizations in diagnoses of disorders. (Friedlander & Stockman, 1983; Hays et al., 2009; Tversky & Kahneman, 1974).

Vividness criterion refers to the influence a more salient intensive feature or symptom may have on a diagnostic decision. During the clinical interview, a client may share specific information with more emotion or remain focused on a specific symptom.

This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis when the vivid criterion is disproportionately relied upon in the diagnostic process. (Dumont & Lecomte, 1987; Hays, et al., 2009).

Cultural factors represent potential influential characteristics of a person or group of people. For the purpose of this study, cultural factors are defined as race/ethnicity and gender. Cultural factors may be visually observed or inherently assumed by another. *Race* is a cultural factor that represents the biological or physical attributions of an individual, for example skin color (i.e., Black and White; Hays & McLeod, 2010). *Ethnicity* is a cultural factor that represents the shared characteristics of a group of people based on non-physical attributions, for example religion, language, and/or country of origin (i.e., African American and Northern European; Hays & McLeod). In this study, when making comparative statements of ethnic groups, the dominant English-speaking group is referred to as Northern European. *Gender* is a cultural factor that represents the socially constructed view of how an individual identifies himself or herself (Cannon & Singh, 2010). Commonly identified genders in society are male and female.

Cultural match refers to the degree in which a counselor and client share similar cultural factors. A cultural mismatch represents a therapeutic pairing in which the counselor and client are not similar in cultural identities (Hays et al., 2010).

Cultural bias refers to the counselor and counselor trainees' awareness of oppressed populations (Hays et al., 2010). Cultural bias assumes judgments of others are made from one's own cultural lens. For the purpose of this study, cultural bias is measured with the Privilege and Oppression Inventory (POI; Hays, Chang, & Decker, 2007).

Level of functioning refers to the perception of the counselor and counselor trainee about how the client is currently functioning while experiencing his or her mental health symptoms. For the purpose of this study, level of functioning is measured with the Global Assessment of Functioning (GAF) Scale, which represents Axis V in the DSM-IV-TR (APA, 2000). The GAF Scale is adapted from the Global Assessment Scale (GAS; Endicott, Spitzer, Fleiss, & Cohen, 1976).

Prognosis refers to the perception of the counselor and counselor trainee about how well the client will function in the future, if appropriate mental health treatment is accessed. For the purpose of this study, prognosis is measured with the Prognosis Scale (PS; Friedlander & Stockman, 1983).

Overview of Methodology

This study was an adaptation of previous studies (Hays et al., 2009; Hays et al., 2010) in which methodological limitations are addressed and modified. In the previous study, participants were provided a written case summary detailing the symptoms of culturally varying mental health clients. These participants reported limitations in the clinical decision-making process as they were not able to observe the nonverbal behaviors of the client during the clinical interview. This study accommodated those concerns with the incorporation of technology into the procedural process. Participants watched the clinical interview via video-streaming on an Internet website.

The study was mixed methods where diagnostic variance, cognitive tools, and perceptions of cultural factors in the clinical decision-making process data were collected qualitatively from a ground theory research tradition. The quantitative variable of cultural match was measured by the presented client's race/ethnicity and gender and the

participant's self-reported race/ethnicity and gender from the demographic form. The quantitative variable of cultural bias was measured with a self-report assessment, The Privilege and Oppression Inventory (POI; Hays, Chang, & Decker, 2007). The quantitative variable of perceived level of current client functioning was measure with the assessment scale The Global Assessment of Functioning Scale (GAF; APA, 2000). The quantitative variable of perceived client prognosis was measured with the assessment The Prognosis Scale (PS; Friedlander & Stockman, 1983). Both qualitative and quantitative methods of research are required to provide a holistic view of the clinical decision-making process and the relationship with cultural factors. The results of the study further inform the preliminary clinical decision-making theory of Hays et al. (2010) and Hays et al. (2009).

Conceptual Framework

The conceptual framework of this study is based in the qualitative research tradition of grounded theory. Grounded theory allows the data to organically develop into potential theories and systems. The outcome data from grounded theory may provide a foundational theoretical framework to analyze future data. This study adheres to the following values of grounded theory (Corbin & Strauss, 2008): development of theory is based on data grounded in the phenomena; phenomena are complex, beliefs that professionals are active participants in change; meaning is defined through action; researchers are sensitive to developing data; and researchers uphold an awareness of interrelationships between data and phenomena.

Summary

The purpose of this concurrent study was to explore the clinical decision-making process of counselors and counselor trainees. Using qualitative methods, this study investigated how diagnostic variance relates to clinical decision-making. It also investigated what cognitive tools, if any, are used in the clinical decision-making process. Cultural factors were considered in the study; specifically how a client's cultural identity may influence case conceptualization as well as how cultural match between counselor/counselor trainee and client influences case conceptualization. The variable cultural match was analyzed quantitatively with cross-tabulations of Chi-Square. Using quantitative analyses of correlational analysis and analysis of variance, this study explored the relationship between cultural bias, perceived level of functioning, and prognosis. The review of the literature in Chapter 2 establishes the significance of diagnosis in the counseling profession and presents prevalence rates of mental health disorders among cultural groups. The literature review provides a foundation of previous research on diagnostic variance, cognitive tools, and the potential relationship with clinical decisions. Cultural bias is defined and how counseling programs address multicultural competencies in the curriculum is discussed. The following chapter will establish the need for the study and connect the variables of cultural factors, level of functioning, and prognosis as it pertains to clinical decision-making.

CHAPTER TWO

LITERATURE REVIEW

Clinical decision-making is a multi-faceted process by which counselors assess client symptoms, determine client current level of functioning, assign a diagnosis based on symptomology and level of functioning, and predict client prognosis (Hays et al., 2010). The process of clinical decision-making requires the counselor to make these decisions from interpretations of client data expressed during the clinical interview (Hays et al., 2009). Counselors interpret client data and assess symptoms differently, a construct referred to as diagnostic variance. The internal cognitive processes of counselors during clinical decision-making will vary because counselors utilize different cognitive tools to make clinical decisions. One of the external results of the clinical decision-making process is the counselor's assignment of a mental health diagnosis from the DSM-IV-TR (APA, 2000).

The assignment of a diagnosis represents an important aspect of clinical decision-making as it is a requirement for third-party reimbursement (Eriksen & Kress, 2005). Third-party reimbursement determines accessibility to treatment services for clients. For counselors, diagnosis creates a common language to communicate among trained professionals, to better serve the needs of a client (Andrews, Anderson, Slade, & Sunderland, 2008). The DSM-IV-TR provides counselors with a categorical structure to guide the assessment of symptoms with mental health disorders for the purpose of diagnosis. The DSM-IV-TR identifies limitations of the categorical system in making accurate diagnostic decisions; counselors must incorporate professional clinical judgment when making diagnostic decisions (APA, 2000). Professional clinical judgment is

reinforced among counselor trainees in the classroom, as well as during practicum and internship experiences. Therefore, clinical decision-making training of counselors serves as an important aspect to counselor program curriculum. Incorporating the many aspects of clinical decision-making becomes an intricate and complex process for counselors. Research is limited in the development of a theory to represent how counselors vary in their clinical decision-making process (Hays et al., 2009).

The clinical decision-making process is further complicated by the potential influence of cultural factors (of both the counselor and client). The DSM-IV-TR responded to the need for increased multicultural awareness in the diagnostic process by incorporating cultural considerations into the fourth edition as means to guide and assist counselors during clinical decision-making (APA, 2000). The manual notes, "diagnostic assessment can be especially challenging when a clinician from one ethnic or cultural group uses the DSM-IV-TR Classification to evaluate an individual from a different ethnic or cultural group" (APA, 2000, p. xxiv). Thus, the degree of cultural match between the counselor and the client serves as a construct to be investigated in relationship to the clinical decision-making process.

The phenomenon of clinical decision-making has been studied in various helping professions, more in psychology than counseling. However, recent studies have focused solely on the counseling profession and the clinical decision-making process (Feisthamel & Schwartz, 2009; Hays et al., 2009; Hays et al., 2010). In particular, these studies investigated the interaction of clinical decision-making and cultural factors. Hays et al. (2010) developed a preliminary theory of how cultural factors influence clinical decision-making, which was revisited in the present study.

The review of the literature will discuss diagnostic prevalence among varying cultural groups; define and discuss the implications of diagnostic variance; define and articulate the implications of cognitive tools; and describe the relationship between cultural factors and the clinical decision-making process. Counselor training program implications are discussed to establish a need for the development of a theory that represents how counselors vary in their clinical decision-making process.

Diagnostic Prevalence

Findings in the research literature reveal disproportionate prevalence rates of mental health diagnoses for race/ethnicity and gender. It is important for counselors to be knowledgeable of these discrepancies in order to promote culturally competent critical judgment of our diagnostic system and clinical decision-making process. There are two systems in which diagnostic prevalence rates are calculated: research based rates and clinical based rates.

Research based prevalence rates are assessed through participant populations in the academic community. For example, Biernat and Kobrynowicz (1997) and Biernat and Manis (1994) found that undergraduate students reported gender differences in judgments for hypothetical employment situations, indicating gender bias in society. More specifically to diagnostic prevalence rates in counseling, research based rates were calculated when authentic counselors, serving as participants, diagnosis hypothetical clients (see Hays et al., 2009, Hays et al., 2010). Clinical based prevalence rates are calculated with post-hoc data of diagnostic decisions made in hospital or clinical settings. For example, Feisthamel and Schwartz (2009) analyzed the diagnoses assigned to 899 clients at a local mental health agency to determine prevalence rates of mental health

disorders among racial groups. Other clinical based prevalence rates are calculated using psychiatric hospitalization intake data (Snowden & Cheung, 1990). Both research based and clinical based prevalence rates generalize trends on how different cultural groups are perceived, judged, and diagnosed. In this section, prevalence rates of mental health diagnoses are reviewed by cultural factors: race/ethnicity, gender, and sexual orientation.

Race/Ethnicity

The U.S. Census Bureau (2009) indicated substantial population growth for non-dominant racial/ethnic groups between 1990 and 2000. The United States experienced a 58% growth rate of Latinos, 50% growth rate for Asian Americans and Pacific Islanders, 17% growth rate for Native Americans, and 16% growth rate for African Americans. During this same time frame, the White non-Hispanic population experienced only a 3% growth rate (U.S. Census Bureau, 2009); furthering the importance of non-dominant racial/ethnic awareness in the counseling community.

There is consistency among the research literature of disproportionate prevalence rates among the African American population. The research literature indicates African Americans are overdiagnosed with schizophrenia, or more severe diagnoses, and underdiagnosed with affective disorders as compared to the Northern European population (Hays et al., 2010; Jones & Gray, 1986, Neighbors et al., 1999; Snowden & Cheung, 1990; Strakowksi et al., 1997; Trierweiler et al., 2000; Whaley, 2001). For example, African Americans presenting with hallucinations as a symptom are misdiagnosed with schizophrenia, overlooked for the potential association of hallucinations and depression (Baker & Bell, 1999). Baker and Bell (1999) postulated clinician bias may have been a variable in the misdiagnosis of African American clients

in their study. In a study of African Americans diagnosed with bipolar disorder, researchers suggested the clients had histories of previous misdiagnoses of schizophrenia (i.e., more severe diagnosis; Mukherjee et al., 1983). African Americans were found to be disproportionately diagnosed with disruptive behavior disorders, while their dominant culture counterparts were diagnosed with less severe adjustment disorders (Feisthamel & Schwartz). It is also concerning that diagnostic rates of African Americans diagnosed with schizophrenia vary considerably between those diagnosed in hospital settings and those diagnosed by research diagnostics (Whaley & Geller, 2007). It should also be noted that African Americans are hospitalized for mental health services significantly more frequently than White ethnic groups (Garb, 1998; Lawson, Hepler, Holladay, & Cuffel, 1994; Snowden & Cheung).

There are fewer studies indicating prevalence rates of the Latino population. This may be a consequence of Latinos seeking mental health services less frequently than compared to other racial/ethnic groups such as African Americans and Northern European (Snowden & Cheung, 1990). It is documented that Latinos are diagnosed with schizophrenia 1.5 times the rate of their Northern European American counterparts (Delbello et al., 2001). Latinos were also less likely to be diagnosed with drug abuse or drug dependence disorder than compared to dominant White ethnic groups (Snowden & Cheung). Snowden and Cheung (1990) also reported Latinos were less likely to be diagnosed with major depressive disorders.

There is some literature that suggests sociopolitical factors (e.g., SES, religion, and stress factors) may also account for the disproportionate diagnostic prevalence rates among non-dominant groups. For example, research indicates social stress factors are

related to diagnoses of affective, anxiety, and substance use disorders (Dohrenwend, 2000). It may be connected that if 65% of the African American population live in urban neighborhoods and 25% fall under the poverty level then social stress factors are a prevalent consideration (Baker & Bell, 1999). Paniagua (2005) indicated that individuals with lower levels of education are more often diagnosed with schizophrenia, rather than a less severe mood disorder.

Another sociopolitical factor to consider is religion. It may be important to consider to what extent spirituality or the expression of religion may lead to a misdiagnosis of a mental health disorder (Ruiz, 2004). Baker and Bell (1999) conceptualize how multiple sociopolitical factors may be linked to disproportionate prevalence rates in diagnosis among non-dominant groups.

Although it is unclear to what extent clinician bias influences the disproportionate prevalence rates: the termination rates of racial/ethnic groups suggest a mistrust or dissatisfaction with services among non-dominant groups. For example, premature termination rates for non-dominant cultural groups are about 50%, compared to a 30% rate for Whites (Sue & Sue, 2008). Further research may consider if clinicians are biased in selecting certain diagnoses for racial/ethnic non-dominant clients, or the diagnostic system is valid and we have actual, accurate disproportionate diagnostic rates. Termination rates of non-dominant groups may also indicate situational or environmental factors, such as transportation, cost, insurance coverage, and socio-cultural views of mental health services. Research of the clinical decision-making process may investigate how a clinician's awareness of situational factors influences diagnostic decisions.

Gender

The literature on gender and mental health disorders suggests contradiction on whether males or females experience mental health disorders at a higher prevalence rate (Eriksen & Kress, 2008). Eriksen and Kress outlined the contradiction as research demonstrating females experience mental illness at a higher rate compared to males and research indicating females and males experience mental illness at relatively equal rates. In order to establish trends in gender bias and diagnosis, it may be easier to review prevalence rates using categorical dimensions of diagnosis.

According to the DSM-IV-TR, males are reported to be more frequently diagnosed with substance-related disorders compared to female counterparts (APA, 2000). Females tend to be diagnosed under the categorical dimension of mood and anxiety disorders (Eriksen & Kress, 2008). It is documented that males are also disproportionately diagnosed with factitious disorder, although researchers criticize the methods of this data collection (APA, 2000; Hartung & Widiger, 1998). Females are diagnosed twice as often with major depressive disorder compared to males (Hartung & Widiger). It is suggested, but not supported in DSM-IV-TR statistical reports, that females have higher rates of post-traumatic stress disorder (Breslau et al., 1991 as cited in Hartung & Widiger).

It is also of interest to consider gender prevalence rate trends across developmental levels. Before entering school, no significant differences are identified in the prevalence rates of diagnosis of mental health disorders between genders; however, at the elementary level, males are diagnosed at higher prevalence rates compared to females (Keenan & Shaw, 1997). The trend shifts in adolescence when females demonstrate

higher prevalence rates of mental health diagnoses compared to their male counterparts (Keenan & Shaw). Unlike adulthood, in childhood there does not seem to be a trend of diagnoses among genders based on categorical dimensions (McDermott, 1996). Similarly to adults, children and adolescents display symptoms differently between genders, which may lead to underdiagnosis or misdiagnosis (Caplan, 1992). In the research of childhood diagnostic rates between genders there is a focus on categorical dimensions such as behavioral/conduct disorders and learning disabilities; however, in adulthood, the research focuses on prevalence rate trends in the categorical dimension of personality disorders.

In consideration of personality disorders, adult males are more frequently diagnosed as paranoid, schizoid, schizotypical, antisocial and compulsive, whereas adult females are more frequently diagnosed with borderline, histrionic, and dependent personality disorders (Hartung & Widiger, 1998). There is contradictory research on the misdiagnosis of personality disorders in females, as some researchers have not indicated gender bias exists between the genders (Funtowciz & Widiger, 1999).

There is continued discussion in the literature on whether prevalence rates, especially with personality disorders, have less to do with clinician bias or diagnostic system bias, but in fact actual differences between genders and how genders express mental health disorders (Ford & Widiger, 1989; Kaplan, 1983). The difficulty to capture where the bias originates supports a qualitative inquiry method, as proposed in this study. Research discussing prevalence rates of mental health disorders among genders is available in the helping profession literature. As the profession's awareness of multicultural groups increased, so did the research literature on other cultural factors to

consider beyond race/ethnicity and gender when reviewing prevalence rate trends, such as sexual orientation.

Sexual Orientation

In reviewing literature of the lesbian, gay, and bisexual (LGB) population, there appear to be prevalence rate differences compared to heterosexual persons. Gay and bisexual men have reported higher rates of depression, panic attacks, and generalized psychological stress than their heterosexual male counterparts (Cochran, Sullivan, & Mays, 2003). Cochran and Mays (2000) suggest gay men demonstrate higher prevalence rates of major depression, anxiety disorders, and suicide attempts. Cochran et al. (2003) suggest lesbian and bisexual women represent a higher prevalence rate of generalized anxiety disorder than their heterosexual female counterparts. Overall, when assessing diagnostic rates among the LGB population, there are elevated rates of mood, anxiety, and substance use disorders (Cochran et al., 2003). It may behoove the counseling profession to further research this population in terms of the impact of the clinical decision-making process.

Summary of Prevalence Rates

Table 1 displays an overview of the prevalence rates presented in this section. Much of the available prevalence rate data derive from the psychiatric field (e.g. Jones & Gray, 1986; Strakowksi et al., 1997). The primary researcher of the study intended to advance prevalence rate research in the counseling profession (e.g. Feisthamel & Schwartz, 2009; Hays et al., 2009; Hays et al., 2010). Whaley and Geller (2007) acknowledge limitations in the inconsistency of prevalence rate calculations between research based methods and clinical based methods. The current study relied on research

based methods of prevalence rate calculations. This decision was not made to indicate this method is more accurate than clinical calculations, but rather the primary investigator has more access to counselors than clients; therefore using real counselors as participants and hypothetical clients. Also, it might become an ethical violation to distribute video recorded sessions with real clients.

Prevalence rate information is also limited by sampling bias. For example, when assessing diagnostic rates of mental health disorders in the hospital setting how might the accessibility of hospital services among cultural groups impact the resulting prevalence rates? Beyond issues of accessibility, it remains uncertain if clinician bias or diagnostic system bias results in the differing prevalence rates among cultural groups; or perhaps actual accurate disproportionate diagnosis exits among diverse populations. As a profession, it is important to increase awareness and understanding of diagnostic prevalence rates among cultural groups in order to serve as more culturally competent counselors. By reviewing more carefully the clinical decision-making process, the counseling profession may better assess the role of clinician bias vs. diagnostic system bias. Part of understanding the clinical decision-making process is the consideration of how counselors and counselor trainees may diagnose differently.

Table 1

Summary of Diagnostic Prevalence Rates by Race/ethnicity and Gender

	Greater Male Prevalence	Greater Female Prevalence	Greater White Prevalence	Greater African American Prevalence	Greater Latino Prevalence	Non-significant Differences
Adjustment Disorder			(Feisthamel & Schwartz, 2009)**			Gender (APA, 1994)*
Anxiety Disorder		(Eriksen & Kress, 2008)* (APA, 1994)*				
Bipolar I Disorder						Gender (APA, 1994)*
Bipolar II Disorder		(APA, 1994)*				
Disruptive Behavior Disorders (in Childhood)	(APA, 1994)*			(Feisthamel & Schwartz, 2009)**		
Major Depressive Disorder		(APA, 1994)*		Females (Jenkins-Hall & Sacco, 1991)*		
Mood Disorders		(Eriksen & Kress, 2008)*				
Post-Traumatic Stress Disorder		(Breslau et al , 1991)**				
Schizophrenia				(Mukherjee et al , 1983)** (Neighbors et al , 1999)** (Snowden & Cheung, 1990)** (Strakowski et al , 1997)** (Trierweiler et al , 2000)** (Whaley, 2001)**	(Delbello et al , 2001)* (Mukherjee et al , 1983)**	Race/Ethnicity (Sohler & Bromet, 2003)** Gender (APA, 1994)*
Substance Abuse/Use Disorders	(APA, 2000)*					Race/Ethnicity (Feisthamel & Schwartz, 2009)**

Note. *Denotes rates based on collaboration of research data. **Denotes clinical based rates

Diagnostic Variance

The clinical decision-making process is unique to each counselor; therefore it is possible for counselors to diagnose differently, a construct referred to as diagnostic variance. Diagnostic variance may result when the counselor cognitively processes client data incorrectly, referred to as clinical error. Cognitive tools and the potential for resulting clinical error will be discussed later in the chapter. Diagnostic variance accounts for the differences between counselors' clinical decision-making processes. Those differences are not harmful to clients when counselors arrive at appropriate diagnostic decisions. In this section, specific types of diagnostic variance are defined and the relationship between diagnostic variance and the clinical decision-making process is discussed.

Diagnostic variance may result when counselors systematically diagnose differently, which can be differentiated into four categories: *natural variance*, *information variance*, *observation/interpretation variance*, and *criterion variance* (Gigerenzer, 2002; Hays et al., 2009). *Natural variance* refers to the origin of the mental disorder. This type of variance considers how the symptoms have manifested over time. Natural variance represents the duration of symptoms, the severity of symptoms, and/or how cultures may express symptoms differently (Gigerenzer, 2002). This type of variance influences clinical decisions when expressed symptoms do not fully meet the criterion of a diagnosis according the DSM-IV-TR. It also represents a situation in which clients meet criterion for multiple diagnoses within the same category in the DSM-IV-TR. Natural variance also impacts the clinical decision-making process when symptoms qualify the client for diagnoses among various categories in the DSM-IV-TR. If

counselors are bias or uneducated about particular cultural characteristics, natural variance may result from misdiagnosis based on the culture's expression of symptoms.

The remaining three categories of diagnostic variance are largely dependent upon the therapeutic alliance, counselor level of expertise, and counselor theoretical orientation. *Information variance* represents the amount of information (clinical data) the client is willing to share with the clinician during the clinical interview (Gigerenzer, 2002). Clients unconsciously or consciously discuss symptoms and personal situations through their own selection bias (Dumont & Lecomte, 1987). The client's representation of self may already be distorted as a result of his or her symptomology or self-reflections. Information variance also represents the amount and type of clinical data the counselor asks the client to share during the interview process. The process of data collection may be influenced by a counselor's theoretical orientation, or the interview procedures of the mental health agency. The interview protocol, time constraints of the interview, and focus of the clinical intake all represent examples information variance.

Observation/interpretation variance represents the individual differences of counselors in the interpretation process of clinical decision-making. Each counselor views the same symptoms with some level of variability. Counselors adhere to a unique perspective rooted in personal experiences and interactions in society. Dumont and Lecomte (1987) defined inferences "as any judgment that goes beyond the information given or what we have at our disposal" (p. 433). Using this definition, inferences are influenced by both the client and counselor. For example, the client has, to some degree, already made inferences of his or her personal story before entering counseling; and therefore shares clinical data from that perspective. The counselor also makes inferences

of the data as it is shared during the session; relying on his or her personal and professional experiences.

Criterion variance represents the varying use of criteria in order to formulate a diagnosis in the DSM-IV-TR (Hays et al., 2009). Andrews et al. (2008) proposed the amount of criteria for many disorders are cumbersome to clinicians, which represented a component of criterion variance. The resulting complexity is deemed impractical and may contribute to this category of diagnostic variance. In order to support clinicians during the diagnostic process, the DSM-IV-TR includes diagnostic decision trees, which serve as a means to reduce criterion variance. However, these structured models are difficult to employ in the empathic clinical interview (Andrews et al., 2008).

Diagnostic Variance and the Clinical Decision-Making Process

There is limited research in the helping professions connecting diagnostic variance with clinical decision-making (Andrews et al., 2008; Brammer, 1997; Dumont & Lecomte, 1987; Falvey, 2001; Hays et al., 2009; Hill & Ridley, 2001; Trierweiler et al., 2000). However, from the existing research, it is apparent that helping professionals find the process of diagnosis to be difficult and challenging (Andrews et al., 2008; Hays et al., 2009). Hill and Ridley (2001) concluded that counselors delayed making diagnostic decisions for the maximum time allowed within the structure of the study. The gap in the research appears to be connecting the categories of diagnostic variance in relationship to the clinical decision-making process. Researchers suggest understanding the connection between these two constructs "will inform training and practice in relevant ways" (Falvey, Bray, & Herbert, 2005, p. 370). In the following section, the current

literature on the relationship between types of diagnostic variance and clinical decision-making is conceptualized to further support the importance of this area of study.

One aspect of natural variance is the influence of cultural expression of symptoms. In a study of African American inpatient individuals diagnosed with schizophrenia, researchers found that clinicians responded differently to these clients versus non-African American counterparts (Trierweiler et al., 2000). More specifically, clinicians (who identified as either Black or White) were more likely to investigate the negative symptoms of schizophrenia (e.g., blunted affect, monotone speech, poor eye contact) when determining the diagnosis of African American clients. It may be this particular cultural group expresses symptoms differently as a result of historical mistrust in relationship with the mental health system (Neighbors et al., 1989). This example of natural variance may also represent a systematic diagnostic bias towards the African American cultural group. Further research is needed to clarify specifically how natural variance impacts the clinical decision-making process.

Examples of information variance are more prevalent in the research than natural variance. Through qualitative techniques, researchers were able to identify incidents of information variance among a sample of counselors and counselor trainees asked to diagnose a hypothetical client (Hays et al., 2009). The 41 participants verbally expressed that assigning a diagnosis to the client was limited to the information (clinical data) the client presented in the written clinical interview summary. Furthermore, a majority of the participants described the client as resistant or unwilling to share clinical data, which further complicated the determination of a diagnosis (Hays et al., 2009). Beyond a diagnostic decision, participants reported the information variance impacted their ability

to assess "treatment history; onset, duration, and frequency of symptoms; current social and occupational functioning; psychosis; family history of mental illness; trauma; and degree of urgency for clinical intake" (Hays et al., 2009, p. 10). To this end, it is evident counselors and counselor trainees felt limited by information variance issues when making clinical decisions.

There are further examples of information variance in the helping profession literature. In a quantitative study of 138 advanced psychology students, an "artificially intelligent computer program" was used to investigate how clinical experience was related to clinical data collection methods (Brammer, 1997, p. 339). Three incidents of information variance were identified. First, questions asked by clinicians were significantly related to the level of experience of the participant. Second, methods of client data collection were related to level of academic training of the participant. And third, efficiency of gathering client data was not predicted or related to level of experience of the participant. Brammer established the complexity of clinical decision-making and the external factors that may impact the process (such as clinical level of experience).

When inferences are made from the information shared it is representative of observation/interpretation variance. Dumont and Lecomte (1987) cautioned professionals that interpretation variance impacts the clinical decision-making process regardless of experience; "that each of us in unguarded moments is in danger of making causal attributions" (p. 435). Hays et al. (2009) noted many participants reported uncertainty in a diagnostic decision was rooted in a perceived lower level of competence in their own interpretation of client symptoms. Many of the participants suggested the

hypothetical client be referred to whom they perceived to be a more competent helping professional, such as a psychiatrist or psychologist for confirmation of a diagnosis (Hays et al., 2009). The uncertainty of counselors and counselor trainees in regards to interpretation of clinical data may serve as a call to the counselor education profession to renegotiate how this topic is incorporated into the curriculum. The uncertainty and lack of confidence to interpret clinical data may also be related to the final type of variance, criterion variance.

In a conceptual piece of the diagnostic classification in the DSM-IV-TR, Andrews et al. (2008) suggested the number of criteria for diagnoses were overwhelming to clinicians. The researchers suggest the complex criteria are impractical and may contribute to diagnostic variance. The DSM-IV-TR provides diagnostic decision trees to assist with differential diagnoses to increase accuracy; however utilizing this type of structured model in a clinical interview seems incongruent with the empathic techniques of counselors (Andrews et al., 2008). Criterion variance was prevalent in the research of Trierweiler et al. (2000), in which clinicians utilized different criterion of the diagnosis of schizophrenia in the clinical decision-making process with African American clients. The study suggests clinicians attributed negative symptoms of schizophrenia when assigning a diagnosis to African American clients, in comparison to their non-African American counterparts (Trierweiler et al., 2000). The participants in a qualitative study (Hays et al., 2009) reported a feeling of subjectivity with the diagnostic process, which serves as an example of criterion variance. The participants displayed inconsistencies in assigning severities of the assigned diagnosis, as well as, the level of functioning ratings on Axis V (Hays et al., 2009).

It is evident from the literature review that diagnostic variance interacts with the clinical decision-making process and therefore warrants further research in the counseling profession. It should be noted, diagnostic variance occurs even among professionals who are similarly trained, which further supports the individualistic tendencies of clinical decision-making (Falvey, 2001). What has emerged from the research on diagnostic variance is the premise of influence from other factors of the counselor, such as cognitive tools or cognitive processing during the clinical decision-making. "Diagnostic variance occurs in the diagnostic process largely because counselors use a variety of cognitive and information-processing tools in clinical decision-making" (Hays et al., 2009, p. 4). Therefore, it is imperative to define and discuss cognitive tools utilized in the clinical decision-making process of counselors and counselor trainees.

Cognitive Tools in Clinical Decision-Making

The heuristic principles developed by Tversky and Kahneman (1974) represent "mental shortcuts that reduce the complexity and difficulty of judgment tasks" (Smith & Agate, 2004, p. 32). For mental health professionals, heuristic principles refer to the reliance on cognitive processes to interpret data during the clinical interview. Tversky and Kahneman defined three heuristic principles in their research: representativeness, availability, and anchoring (also see Friedlander & Stockman, 1983). Recent research further conceptualized inferential heuristic principles as cognitive tools (Hays et al., 2009). Cognitive tools are employed consciously or unconsciously by counselors during the clinical interview. The types of cognitive tools utilized and/or the manner in which tools are employed may impact the collection and interpretation of clinical data. Consequently, cognitive tools may lead to the misdiagnosis of a client, or lead to clinical

error. Clinical error represents incidents in which populations of clients are misdiagnosed, underdiagnosed, or overdiagnosed with a particular mental health disorder (Friedlander & Stockman; Tversky & Kahneman). In this section, cognitive tools established in the literature are defined in alphabetical order and examples are provided where appropriate.

Anchoring is the process in which clinical judgments are based on salient information shared by the client early in the clinical interview. This process also includes judgments based on immediate biases presumed by the counselor. Anchoring may lead to misdiagnosis, underdiagnosis, or overdiagnosis if the counselor is unable to accommodate further clinical information shared during the clinical interview beyond original data shared (Friedlander & Stockman, 1983; Hays et al., 2009; Tversky & Kahneman, 1974). There is controversy surrounding the work of Friedlander and Stockman , as per a research study by Ellis et al. (1990). Ellis et al. replicated the original work of Friedlander and Stockman to investigate anchoring. The researchers suggest the statistical significance of anchoring found by the original authors may be attributed to Type I error.

Hays et al. (2009) participants demonstrated the use of anchoring, as 15 of the 41 counselors and counselor trainees connected their final diagnostic decision to salient information provided early in the clinical interview. The participants then searched for confirmatory clinical data support during the remainder of the interview (see *confirmation bias*); subsequently ruling out other possible diagnoses for the client. Arkes (1991) suggested what is important to consider with the cognitive processing tool of anchoring is the salience of the information and the resulting adjustments made by the

helping professional. Ellis et al. (1990) suggested their participants demonstrated appropriate adjustment after the introduction of salient information; however, if two sets of salient information were provided the participant required a mitigating factor in order to make an adjustment in the clinical decision-making process. Despite the controversy surrounding this cognitive process; it is evident anchoring is a tool significantly used when counselors make clinical decisions.

Availability is the process by which clinical judgments are based on the familiarity of the symptoms (Friedlander & Stockman, 1983; Tversky & Kahneman, 1974). Availability asserts that diagnoses are established based on the ease in which a counselor can compare symptoms with criterion of disorders (Dumont & Lecomte, 1987; Hays et al., 2009). The potential limitation of this cognitive tool is how to separate random correlations between data and an available idea from clinical correlations between symptoms and diagnostic criterion (Friedlander & Stockman). This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis as counselors must rely on self-knowledge and cues shared from clients. Some cues from clients are more obvious and available, therefore may be used more frequently. Other cues may trigger unrelated or closely related ideas from the counselor which may not accurately represent the conditions of the client (Dumont & Lecomte).

Dumont and Lecomte (1987) described availability as a random factor in the clinical decision-making process because the impact of availability is subject to the most recent encounters of the counselor. For example, a counselor may have read a journal article earlier in the day describing themes and symptoms of bipolar disorder. Upon meeting the client, the counselor begins to fill in the gaps of the client's story with

symptoms of bipolar disorder, simply because criteria of bipolar disorder are the most available information to the counselor. This becomes dangerous in the clinical decision-making process as serious consequences (e.g. treatment plan) for the client were based on causal interactions in the counselor's world, rather than representative of the clinical data. Dumont and Lecomte described availability as a "first come first serve rule" (p. 434) in the clinical decision-making process; which further distorts the true diagnosis as the availability bias becomes a more influential factor.

The DSM-IV-TR articulates the importance of the counselor's clinical decision-making process when a diagnosis is determined (APA, 2000). The participants of a qualitative study (Hays et al., 2009) report integrating other knowledge, such as academic training and counselor clinical interest, when making a diagnostic decision. From this perspective, the use of availability bias is helpful to counselors and adheres to the guidelines of the DSM-IV-TR.

Confirmation bias is the process in which clinical judgments are based on data that counselors desire to see in order to support a presumed disorder (Hays et al., 2009). This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis as counselors will utilize the symptoms they desire and may overlook important presenting concerns. Arkes (1991) defined confirmation bias as an "inappropriate consideration" (p. 498) of the evidence (symptoms demonstrated in the clinical interview). As cited earlier, participants in Hays et al. (2009) combined the use of confirmation bias with the cognitive process of anchoring. Once participants conceptualized a potential disorder, they continued to look for data to confirm judgments. This cognitive tool may become dangerous in the clinical decision-making process, as counselors may assimilate the

clinical data from their own biased perspective, based on preconceived notions, rather than empirical evidence (Arkes).

Overconfidence refers to the resulting inflated confidence in a clinical decision when counselors and counselor trainees inappropriately rely on readily available information (see *representativeness*). The research suggests it is easier for the helping professional to find supportive reasons for a clinical decision, rather than oppositional or contradictory evidence (Arkes, 1991). This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis when counselors and counselor trainees utilize this available information incorrectly with clients of diverse backgrounds. In a qualitative study investigating clinical decision-making, few participants (4 out of 41) became more confident about their final diagnostic decision at the end of the interview protocol (Hays et al., 2009). Overconfidence has been associated in the literature with counselor trainees' clinical decision-making process (Smith & Agate, 2004).

Representativeness is the process in which clinical judgments are based on probabilities of a similar experience (Arkes, 1991). Arkes suggested the danger of this cognitive processing tool is that it may easily lead to overgeneralization. In the helping profession, representativeness refers to knowledge of base rates of particular disorders (Friedlander & Stockman, 1983; Falvey et al., 2005). This cognitive tool may also lead to more rigidity in adherence to the DSM-IV-TR criteria (Hays et al., 2009). The DSM-IV-TR strongly asserts the diagnostic criteria is not to be utilized in "cookbook fashion" (p. xxxii), but in coordination with clinical judgment skills (APA, 2000). This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis when counselors'

expectations of culturally diverse populations and criterion create generalizations in diagnosis of disorders.

Participants of a qualitative study (Hays et al., 2009) demonstrated the cognitive processing tool of representativeness when adhering to the DSM-IV-TR criteria. Eighteen of 41 participants referred to the importance of necessary criterion in order to fit within the boundaries of a particular diagnosis. The participants made reference to utilizing base rates and expected frequencies based on the cluster of symptoms displayed by the hypothetical client. When a cluster of symptoms corresponded with multiple disorders, some participants utilized the DSM-IV-TR decision trees (Hays et al., 2009).

Vividness criterion refers to the influence a more salient or intensive symptom may have on a diagnostic decision (Hays et al., 2009). During the clinical interview, a client may share specific information with more emotion or remain focused on a specific symptom. The danger with this cognitive processing tool is that if a particular diagnostic criterion presents more intensely; it may result in an inappropriate diagnosis (Dumont & Lecomte, 1987; Hays et al., 2009). Dumont and Lecomte (1987) warned that when clients give greater weight to a particular symptom, counselors may also give it comparable weight leading to a "red herring" (p. 435) effect. This cognitive tool may lead to misdiagnosis, underdiagnosis, or overdiagnosis when the vivid criterion is more relied upon in the diagnostic process. (Dumont & Lecomte; Hays et al., 2009).

Vividness criterion is discussed in the literature as a cognitive tool that presents risk for error in the clinical decision-making process (Dumont & Lecomte, 1987). Specifically, counselor trainees or counselors with little experience may become distracted by salient aspects of the client story that are not related to the conceptualization

of a mental health disorder. Dumont and Lecomte (1987) described this scenario with a counselor as a detective following salient, yet misleading clues left behind by a criminal.

Cognitive processing tools allow counselors to interpret and/or assimilate presented clinical data in order to make clinical judgments. As presented in this review of the literature, the danger is that if cognitive tools are overused or misused it may lead to clinical error (Dumont & Lecomte, 1987). Counselors and counselor trainees may be misled by clinical data of little importance or adhere to earlier presented information without accommodating for new material (i.e., anchoring). The personal bias of the counselor and counselor trainee may also lead to the distortion of clinical data and therefore lead to clinical error (i.e., availability, confirmation bias). Counselor trainees in particular are accused of displaying overconfidence when making inferences about clinical data (Smith & Agate, 2004).

In the conceptualization of cognitive tool literature, a relationship between the employment of tools and the resulting diagnostic variance has emerged. It is difficult to statistically measure the relationship between these two constructs, however enough evidence exists to support qualitative investigation to further develop a theory of clinical decision-making. Diagnostic variance and cognitive tools both reference the personal bias of the counselor and counselor trainee as a piece of how clinical data are interpreted. It is also demonstrated in the literature that disproportionate rates of diagnosis are present among culturally different or oppressed groups (Eriksen & Kress, 2005; Feisthamel & Schwartz, 2009; Ford & Widiger, 1989; Jones & Gray, 1986). What remains unclear from the literature is how (if at all) diagnostic variance and cognitive tools impact these disproportionate prevalence rates. Research has not been able to assess whether the

diagnostic system is biased toward certain groups, if counselors are biased in selecting certain diagnoses for particular clients, or if the diagnostic system is valid and actual accurate disproportionate diagnosing exists. To this end, it is important to review the research literature in consideration of what role the identified cultural factors of the counselor and client may demonstrate in the clinical decision-making process.

Cultural Factors and the Clinical Decision-Making Process

The cultural diversification of the United States impacts the mental health profession in that counselors must address the emerging needs of a culturally-shifting population (Constantine et al., 2007; Constantine et al., 2002; Gushue et al., 2008). Culture represents a group of individuals who adhere to similar beliefs, behaviors, and attitudes (McAuliffe, 2008). Cultural factors may be identified through visible observations or inherently assumed by another (Hays & McLeod, 2010). For example, skin color serves as a visible indicator of race, however the observer makes assumptions when labeling the cultural identifier (e.g., light skin color assumes White racial identity).

Individuals may construct their worldview through the lens of self-identified cultural factors (Constantine, 2002). Cultural bias emerges in the therapeutic relationship when counselors are not able to accommodate a client perspective that is culturally diverse or different from their own worldview (McAuliffe, 2008). Hays et al. (2010) defined cultural bias as the counselor's awareness of oppressed populations. It is presumed the impact of cultural bias in the therapeutic alliance may be mediated through the process of broaching. Broaching is defined as the ability to consider client cultural factors within the presenting problems/concerns in the clinical interview (Day-Vines et al., 2007). In a conceptual article, the authors suggest broaching behavior is a continual

process in counseling; a demonstrated commitment to exploring diversity and diversity's potential impact on presented clinical problem (Day-Vines et al.). Cultural considerations within the therapeutic alliance are increasingly prevalent in the literature (see Nilsson, Love, Taylor, & Slusher, 2007).

In the counseling profession, cultural considerations serve as an important construct to be researched. In a content analysis of quantitative research studies published in the *Journal of Counseling & Development* between 1991 and 2000, multicultural issues were the second most frequently occurring topic (Nilsson et al., 2007). In the sample reporting of the studies published between 1991 and 2000, 60% reported the race/ethnicity of the sampled population and 88% identified the gender of participants (Nilsson et al.). This serves as evidence that the cultural factors of race/ethnicity and gender are considered important constructs in the counseling profession research. In the following section, the literature on race/ethnicity and gender in relationship to clinical decision-making is presented.

Race/Ethnicity

Race is a cultural factor that represents the biological or physical attributions of an individual, for example skin color (e.g., Black, White; Hays & McLeod, 2010). The cultural factor *ethnicity* refers to the shared characteristics of a group of people based on non-physical attributions, for example, religion, language, country of origin (e.g., African American and Latino; Hays & McLeod, 2010). When making comparative statements of ethnic groups, the dominant English-speaking group is referred to as Northern European. The inclusive construct of *race/ethnicity* is the terminology presented in the study to more accurately represent the intended cultural groups to be researched (African

American, Latino, Northern European). In the current literature it is reported that racial/ethnic non-dominant groups represent 30% of the United States population; however it is predicted that by 2050 the non-dominant population will become the measureable majority (Sue & Sue, 2008). In the review of the literature, the role of race/ethnicity within the context of the helping profession has illuminated further questions surrounding the clinical decision-making process.

Bias measured in society. Research of race/ethnicity suggests innate bias within a societal context (Biernat & Kobrynowicz, 1997). Utilizing undergraduate students as a sampling population, researchers investigated the perceptions of competence of African American and Northern European candidates for a hypothetical advanced employment opportunity (Biernat & Kobrynowicz). The participants were provided identical resumes of the hypothetical male candidates with manipulations that inferred two different race/ethnicities (e.g., African American candidate listed membership in Black Student Union). The findings of the study suggest lower standards or levels of competence were assumed of the African American employment candidates. These non-dominant candidates were expected to provide more evidence of qualifications for an executive position, than compared to the culturally dominant Northern European candidates (Biernat & Kobrynowicz). This study failed to report the racial/ethnic identities of the participants; therefore no conclusions can be drawn to connect dominant cultural bias towards oppressed non-dominant groups. However, the research demonstrates a generally perceived lower expectation of competence among a non-dominant racial/ethnic population.

Measuring societal bias is complicated by how cultural bias or prejudice behavior is defined. Biernat and Manis (1994) investigated standards of judgment of marginalized populations. Their findings report members of different populations are evaluated by different standards, which may be considered to be prejudice behavior. However, if participants do not shift standards of judgment when assessing marginalized populations, negating the potential influence of privilege and oppression than it may also be considered to be prejudicial behavior. Biernat and Manis encouraged further inquiry to the objective and subjective judgments of differing populations, concluding that non-dominant social groups are evaluated with different standards than dominant social groups (Biernat & Manis,, 1994).

In health service research, assumptions associated with race/ethnicity were investigated to further illustrate the potential for cultural bias. Moscou (2008) used qualitative quota sampling methods to investigate the role of race/ethnicity as a variable in health services research. The findings suggest expert health service providers assigned other sociopolitcal factors to racial/ethnic groups not otherwise specified or investigated (Moscou, 2008). The participants utilized the provided race/ethnicity to presume other social markers of the individuals, such as social class, social conditions (e.g., residential location, access), and social behaviors. In the conclusion, Moscou reported racial classification is associated with negative social consequences. However, from a counseling profession perspective, if race/ethnicity is negated then there is risk to perpetuate cultural bias due to lack of social awareness among helping professionals.

Bias measured in helping professions. There is historical literature dating back to 1914 documenting differences between dominant and non-dominant populations'

accessibility and utilization of mental health services (Snowden & Cheung, 1990). It is evident the helping profession (to include counseling, psychology, and psychiatry) is aware that differences in mental health services exist between racial/ethnic groups. The majority of the research on racial/ethnic bias in mental health is based in the fields of psychiatry and psychology (Jones & Gray, 1986; Mukherjee, Shukla, Woodle, Rosen, & Olarte, 1983; Strakowski et al., 1993; Trierweiler et al., 2000). More specifically, the research studies tend to investigate the racial/ethnic group differences in the diagnosis of schizophrenia (Jones & Gray; Mukherjee et al.; Strakowski et al.; Trierweiler et al., 2000; Veling, Hoek, & Mackenbach, 2008). These studies provide a foundation of understanding racial/ethnic bias in the clinical setting.

Jones and Gray (1986) suggested misdiagnosis of African American clients may be associated with racial/ethnic bias, such as cultural differences in "language and mannerisms" (p. 61). The study acknowledged ingrained stereotypes within the psychiatric profession, such as African American clients rarely experience symptoms of affective disorders, perpetuated the misdiagnosis of schizophrenia among this non-dominant racial/ethnic group. It is not uncommon in the research for racial/ethnic non-dominant groups to be misdiagnosed with schizophrenia. In a study of clients diagnosed with bipolar disorder, results indicated African American and Latino clients were misdiagnosed earlier in life with schizophrenia (Mukherjee et al., 1983). Mukherjee et al. (1983) reported African American and Latino clients were at greater risk of misdiagnosis of schizophrenia than compared to Northern European clients. Even though African American, Latino, and Northern European clients demonstrated no significant differences among symptoms related specifically to paranoid schizophrenia (e.g., persecutory

delusions, irritability); African American clients were more likely to be misdiagnosed with paranoid schizophrenia (Mukherjee et al.).

Research studies further demonstrate the differences in conceptualization of symptoms among racial/ethnic groups. In a study of discharged inpatient clients, African American clients displaying psychosis were diagnosed with schizophrenia significantly more than the dominant ethnic clients with similar symptoms (Strakowski et al., 1993). The findings also noted the African American clients were prescribed higher doses of medication than compared to Northern Europeans (Strakowski et al.). Trierweiler et al. (2000) suggested the prevalence of a diagnosis of schizophrenia among African American clients may be due to adherence to different symptom attributions between dominant and non-dominant groups. Trierweiler and colleagues (2000) considered the symptom attributions in more specific detail than Strakowski et al. (1993).

Clinicians diagnosed 292 adult clients in the Trierweiler et al. (2000) study identified as African American and non-African American in the report. The findings suggest clinicians associated hallucinations with a diagnosis of schizophrenia in African American clients significantly more so than when diagnosing non-African American clients. Researchers struggle to conclusively explain the differences in diagnosis of schizophrenia among racial/ethnic groups. In Europe, researchers intended to link perceived racial discrimination as a risk factor for schizophrenia in non-dominant racial/ethnic groups; however the findings did not demonstrate statistical significance (Veling et al., 2008).

Jenkins-Hall and Sacco (1991) extended the research on diagnosis among racial/ethnic groups beyond schizophrenia, concentrating on female clients diagnosed

with depression. The findings indicate clinicians viewed African American female clients diagnosed with depression more negatively than dominant White ethnic group female clients. The researchers were surprised to find that non-depressed clients were rated equally, regardless of race/ethnicity (Jenkins-Hall & Sacco, 1991). The authors concluded that the participants in the study, dominant White ethnic group clinicians, "discriminate against blacks in situations in which failure to respond favorably could be attributable to factors other than the person's race" (pp. 329-330); in this study depression served as the attributable factor. However, this may be perceived as conjecture, as the results do not directly link the potential racism embedded in the clinicians' clinical decision-making. In order to further develop racial/ethnic bias in clinical decision-making, investigators have restructured the design of studies to include more focus on the identified race/ethnicity of the clinician in hopes of improving conceptualization of the phenomenon.

Bias measured within degree of cultural match. In order to further explore racial/ethnic bias in the helping profession, researchers have acknowledged there may be more factors involved than prevalence rates in diagnosis. Research studies considered how the racial/ethnic identification of the clinician may impact the diagnostic rates of non-dominant populations (Rosenthal, 2004; Trierweiler et al., 2005; Trierweiler et al., 2006). Other studies describe the construct *degree of cultural match*, in which the similarities and dissimilarities between clinician and client are considered in the clinical decision-making process (Hays et al., 2010; Jones, 1982; Whaley, 2004). This section will review the literature investigating clinician race/ethnicity, as well as studies focused on degree of cultural match in relationship to clinical decision-making.

In a 2004 study of vocational rehabilitation counselors (Rosenthal, 2004), participants read identical case materials, with the exception of race/ethnicity of the client, in order to make predictions of success in the rehabilitation process. The sample of participants represented dominant White ethnic group counselors, and multivariate analyses indicated they judged the African American client more negatively than the dominant race client. The author suggested the results could also indicate the dominant White ethnic group client may have been underpathologized; however, historical research on race/ethnicity bias would support indications that the African American client was in fact unfairly judged more negatively.

Trierweiler et al. (2006) considered clinician race/ethnicity differences in the diagnostic process of schizophrenia among a low-income African American community. The findings indicated African American clinicians diagnosed schizophrenia when hallucinations were present in the symptomology. In comparison, non-African American clinicians relied on the use of negative symptoms (e.g., blunted affect, monotone voice, limited eye contact) in their diagnostic process of schizophrenia. Although African American and non-African American clinicians utilized different attributions when making clinical judgments, diagnostic outcomes remained consistent (i.e., clients were diagnosed with same disorder, schizophrenia; Trierweiler et al., 2006).

In a qualitative analysis of how African American and non-African American clinicians come to diagnostic decisions, Trierweiler et al. (2005) indicated African American clinicians were more likely to consider situational information in their clinical decision-making process. In this study, situational information measured as statistically significant were aggressive behavior towards self, others, and/or property; presence of

addictions; stability or change in psychiatric condition; and treatment history of non-psychiatric medical illness (Trierweiler et al., 2005). Among non-African American clinicians consideration of situational information did not increase the likelihood of a diagnosis of a mood disorder.

A few studies have considered the degree of cultural match between clinician and client in order to provide further conceptualization of the clinical decision-making process (Hays et al., 2010; Jones, 1982; Whaley, 2004). Jones (1982) paired "racially similar" and "racially dissimilar" (p.722) psychotherapists and clients to investigate differences in assessment of treatment outcomes after the therapeutic alliance was terminated. The findings of the study (Jones, 1982) report that all clients, regardless of race/ethnicity, were perceived to have benefited from therapeutic services. At the time of publication (1982), this result was contradictory to previous findings that cross-race matches did not predict good outcomes for clients. Jones indicated that when an effective therapeutic alliance is built successful outcomes are possible, despite racial/ethnic differences between clinicians and clients.

Differences among pairings were revealed in the clinicians' personality descriptions of clients (Jones, 1982). The findings indicated that in Northern European psychotherapist-African American client dissimilar matches, clinicians described the clients to be more impaired compared to the descriptions from African American psychotherapist-African American client similar matches. Overall, Northern European psychotherapists described clients more psychologically impaired; even in Northern European -Northern European similar matches (Jones, 1982).

African Americans are established in the literature as disproportionately diagnosed with schizophrenia (as previously discussed in this chapter); therefore Whaley (2007) was particularly interested in the role of cultural bias in the diagnostic process of African Americans. As previously discussed research indicates, many studies investigate dominant White ethnic group clinicians, therefore Whaley (2007) paired African American psychiatrists with African American clients in his investigation of cultural bias in the diagnosis of schizophrenia. In the study, diagnoses were assigned through three possible methods of collecting data: review of the client chart, a structured interview protocol, and the psychiatrists' best estimate. The findings suggest that utilization of a structured interview protocol reduced cultural bias in the diagnosis of schizophrenia among African American clients (Whaley, 2007). In this study, cultural bias was measured by the client's self-reported cultural mistrust, which serves as a limitation in the methodology. There are instruments available that may more accurately measure cultural bias in the therapeutic alliance.

In a mixed methodological analysis of the roles of cultural factors in the clinical decision-making process, counselors and clients were conceptualized as culturally-matched or culturally-mismatched based on identified race/ethnicity of each (Hays et al., 2010). Seventeen pairs were culturally matched by race/ethnicity; 10 White-White pairs and seven non-dominant-non-dominant pairs (e.g. African-American-Latino/Hispanic). Twenty-three pairs were culturally mismatched. Degree of cultural match was analyzed in relationship to consideration of cultural factors during the conceptualization of the client. Dominant-dominant counselor-client pairs (e.g. White-White) did not consider race/ethnicity in the conceptualization of the client, with the exception of one case. The

case of exception described counter-transference during the conceptualization process. Furthermore, when White clients were paired with non-dominant counselors (a non-dominant-dominant pair) race/ethnicity was not considered in the clinical decision or assessment of the client. Meaning, if a client is of a dominant race/ethnicity group then race/ethnicity is not utilized as an important cultural factor to consider in the clinical decision-making process. Conversely, with a non-dominant-non-dominant pair, 43% considered race/ethnicity in the conceptualization of the hypothetical client (Hays et al., 2010). It may be perceived that race/ethnicity is more important to consider when the client represents a non-dominant racial/ethnic population. When White participants were paired with non-dominant clients ($n = 8$), 44% did not consider race/ethnicity in the establishment of a presenting problem or assignment of diagnosis. When non-dominant participants were paired with a White client ($n = 4$), about 80% did not consider race/ethnicity in the clinical decision-making process (Hays et al., 2010).

Hays et al. (2010) concluded counselors do not consider race/ethnicity in the determination of a presenting problem and diagnosis. The authors specifically denoted participants may have identified cultural factors during the interview protocol, however most participants did not utilize the factors in the overall conceptualization of the client. Furthermore, the researchers report participants did not usually mention cultural factors until the interviewer posed specific questions regarding race/ethnicity (Hays et al., 2010).

Gender

Counselor education texts define *gender* as a cultural factor that represent the biologically and socially constructed view of how an individual identifies himself or herself (see Cannon & Singh, 2010). Commonly identified genders in society are male

and female. There is increasing attention towards the inclusion of the transgender population as well. The current study does not include transgender in order to limit the scope of the study. Future studies may focus specifically on sexual orientation and transgender populations in order to further current literature. Gender bias is discussed in the following sections.

Bias measured in society. Biernat and Kobrynowicz (1997) investigated expectations of genders from a societal perspective, in application for employment. In the study, the participants represented 313 undergraduate students who were asked to make hiring decisions based on resumes provided and job descriptions. The job descriptions were identical, with the exception of job titles; some participants received a feminine position title and others received a masculine position title (Biernat & Kobrynowicz). Findings of the study indicate that participants rated female applicants more favorably for the feminine secretarial position and male applicants more favorably for the masculine executive position. More specifically, participants required female applicants to further document their ability to perform the masculine executive job than the male applicant counterparts (Biernat & Kobrynowicz). This study emphasizes the societal perspective that women are judged with lower expectations, regardless of presented qualifications equal to men.

When participants of Biernat and Kobrynowicz's (1997) study were asked to predict the applicants' performance in the perspective job positions, genders were rated more favorably in correspondence with their gender-matched position. For example, the female applicants were rated to perform better in the secretarial role. In other aspects of feminine and masculine characteristics, participants assessed individuals based on gender

bias (Bierant & Manis, 1994). Seventy-five participants were provided identical behavioral description of either "Linda" or "Larry" and were asked to assess assertiveness and aggressiveness. Findings suggest participants adhered to gender-bias in their assessment of the behavior (Bierant & Manis). The hypothetical woman, Linda, was rated aggressive, however Larry was not deemed aggressive although the behavior provided was identical. Participants were also more likely to judge Larry as unassertive, but not make the same assessment of Linda based on the identical behavior. Bierant and Manis were able to generalize gender bias in society, but it is important to look specifically at gender bias in helping profession community.

Bias measured in the helping profession. In a conceptual review of gender bias in diagnosis research, Hartung and Widiger (1998) indicated two potential sources of the aforementioned bias: bias in sampling and bias in diagnostic criteria. These two forms of bias appear to have a reciprocal relationship; as bias in the research study samples may contribute to the bias in the diagnostic criteria (and vice versa). In their review, Hartung and Widiger asserted no blame is directed towards those who work diligently to create and empirically test the DSM-IV-TR criteria; however, the prevalence rate differences among genders are important to consider in the helping profession.

The first source of potential gender bias is within the sampling procedures of the empirical research used to support the formation of the disorder in the DSM-IV-TR (Hartung & Widiger, 1998). In general, convenient nonprobability sampling is used in the empirical studies. This results in a disproportionate representation of genders in the samples; which suggests potential error in the findings of the studies. It may also be important to consider why there might be disproportionate representation of the genders,

such as it suggests there are gender differences in willingness to seek treatment. For example, it may be that mental health disorders are more present among women because more women are willing to seek the psychological treatment available. There are clinical settings in which men are more likely to seek treatment, e.g. gambling treatment centers (Hartung & Widiger). Therefore, the question is raised: does society decide which disorders are acceptable for each gender? It is very difficult to attribute level of variance to each of these potential factors of gender bias. Changes in the method of sampling in empirical research may assist to clarify the prevalence rates of mental health disorder among genders.

The second potential source of gender bias lies within the diagnostic criteria itself (Hartung & Widiger, 1998). The difficulty in assessing gender bias in the diagnostic criteria is that genders may express symptoms of the same disorder differently. It is difficult to create gender-neutral criteria when genders respond differently to disorders. These incidents of different symptomology expression have been documented in the literature for mental health disorders such as sexual desire disorders and personality disorders (Hartung & Widiger). The literature of gender bias among mental disorders with differing prevalence rates among genders has indicated contradictory findings. In a survey study, Funtowicz and Widiger (1999) found that sex bias was not prevalent within the diagnostic criteria of personality disorders. The research of Kaplan (1983) adamantly disagreed, reporting that diagnostic criteria for personality disorders and sex disorders are biased towards females, utilizing traits of males as the societal norm. Findings do suggest however that there are personality disorders that tend to represent males and females differently (Funtowicz & Widiger, 1999). For example, males tend to be

diagnosed with paranoid, antisocial, and compulsive personality disorders; whereas females tend to be diagnosed with dependent, borderline, and histrionic personality disorders. Therefore, gender bias may be evident in the assignment of a diagnosis, but not in the criteria itself (Ford & Widiger, 1989).

If the DSM-IV-TR were to recreate criteria to manipulate equal prevalence rates among the genders, then there is risk of contributing to the underdiagnosis of one gender in particular disorders when actual prevalence rate differences do exist. There is opportunity to improve methodology of research used to support the diagnostic criteria and allow for reassessment of prevalence rates after the publication of the fifth edition of the DSM-IV-TR. Another perspective of gender bias to review in the literature is that of potential clinician bias.

Wisch and Mahalik (1999) in a quantitative study of 196 male psychologists investigated how clinical judgments were impacted by gender bias of the clinician. The participants were presented with one of six male client case summaries manipulated to demonstrate different sexual orientations and emotional states. The findings suggest clinical judgment was influenced by client gender role behavior (Wisch & Mahalik, 1999). The results caution that clinicians experiencing gender role conflict in the conceptualization of a client may over or underpathologize.

In a qualitative study of cultural match in the therapeutic relationship, counseling dyads were analyzed when gender matched between counselor and client and when gender mismatched within the dyad (Hays et al., 2010). In the gender matched counseling dyads, 50% of the clinicians report the consideration of gender when making decisions about the client's presenting problem or diagnosis. Hays et al. (2010) report

that within the gender mismatched dyads, 56% did not report consideration of gender when making decisions about the client's presenting problem or diagnosis. The results indicate counselors are more likely to consider gender in the clinical decision-making process when the client's gender is congruent with their own.

The literature review of cultural factors (race/ethnicity and gender) within the therapeutic relationship reveal the potential for cultural bias to impact the clinical decision-making process of the clinician. From the literature, it is apparent that awareness of the potential implications is prevalent among professionals. It is important then to consider how the helping profession is responding to need for cultural competence within training programs.

Training Program Considerations

The helping profession literature asserts the importance of training implications in the research of clinician competence (Constantine, 2007; Sue, Rivera, Capodilupo, Lin, & Torino, 2010). Helping profession trainees are expected to successfully conceptualize a client through appropriate clinical judgment, which includes inclusion of multicultural competence. Multicultural competence represents the level of awareness, knowledge, and skills trainees employ during the therapeutic alliance (Sue & Sue, 2008). This section will review the literature on both diagnosis competence and multicultural competence in helping profession training programs.

Diagnosis Competencies

In the therapeutic relationship, counselors are expected to collect and interpret clinical data in order to make diagnostic and treatment decisions. Dumont and Lecomte (1987) postulated the importance of a curriculum that teaches inferential reasoning skills,

as well as the possible clinical judgment errors associated with these skills. Counselor trainees benefit from awareness of their own clinical decision-making process, the reasoning skills used, and the potential risk for error within each skill. The DSM-IV-TR clearly asserts the clinical judgment of the counselor is a larger portion of the diagnostic process than matching of symptoms to a particular disorder (APA, 2000). The problem lies in the implementation of this training. Garb (1998) discussed the literature's lack of consensus on how educators are to effectively teach clinical decision-making skills. It is difficult to measure an individual's internal cognitive processing skills (Hillerbrand & Claiborn, 1990).

Smith and Agate (2004) developed a clinical judgment training module to support counselor trainees' self-reflection and awareness during the clinical decision-making process. Participants in the training module were advanced counselor trainees in an internship seminar course. The findings indicate that the baseline clinical judgment of the trainees was inflated with overconfidence in their decision-making skills. However, after participating in the instructional module confidence levels lowered, suggesting a more appropriate level of awareness of implications in the diagnostic process (Smith & Agate, 2004). This study supports the importance of teaching decision-making skills during the educational experience of a counselor program.

Furthermore, Falvey et al. (2005) suggested the manner in which clinical data is collected relates to how it is processed. In a quantitative study investigating clinical judgment, Falvey and colleagues report a template approach to collecting data (matching symptoms to a diagnosis) correlated to lower levels of clinician interpretation. This evidence further supports the warnings from the DSM-IV-TR of the important role of

clinician cognitive skills (APA, 2000). The study also indicates that experience alone does not increase cognitive complexity skills, which is congruent with previous literature findings (see Brammer, 1997; Garb 1998; Hillerbrand & Claiborn, 1990).

In a comparison of experienced and novice psychologists, Brammer (1997) postulated experience level would be demonstrated by more efficient and precise methods of data collection. The results of the study indicate the further complexities of client conceptualization. Experience level could predict the types of questions asked during a clinical interview and the methods in which the data were collected, however could not predict confidence level of clinician or efficiency in clinical data collection (Brammer, 1997). It is evident that cognitive processing skills must be taught in helping profession training programs to promote appropriate clinical decision-making processes.

A qualitative analysis of the clinical decision-making process revealed further themes related to data collection (Hays et al., 2010). Information variance was prevalent among both counselors and counselor trainees who served as participants in the study. This identified theme emergence serves as a reminder to counselor educators that not only do trainees need to be aware of how to gather information from clients labeled (perhaps inappropriately) "resistant," but also the need for self-awareness of what the counselor is unwilling or unable to ask for from the client. This connects to the research on broaching, or the level of ability or willingness to discuss cultural differences within the therapeutic relationship that may assist in the rapport building process (Day-Vines et al., 2007).

Hays and colleagues (2010) in a grounded theory study identified a subtheme of observation/interpretation variance. Both counselors and counselor trainees report

feelings of uncertainty in their diagnostic decisions and on many occasions referred the client be re-assessed by another professional (e.g., psychologist, psychiatrist). The participants perceived these other professionals to be more competent with diagnostic decisions. The authors suggest counselor educators and supervisors may be able to assist trainees during cognitive processes to promote growth in client conceptualization. The study revealed a third theme of diagnostic variance: criterion variance (Hays et al., 2010). The results indicate the subjective nature and imprecision of diagnosis and level of functioning rating (GAF score). Further research in this area is needed; however the results imply that training in the utilization of the DSM-IV-TR needs to be more thorough within the curriculum.

The process of clinical decision-making is complex, as the literature has consistently demonstrated. The hope in training counselors is to promote the multi-faceted nature of clinical decision-making, especially how to incorporate appropriate clinical judgment and the criteria of the DSM-IV-TR when making assessments. To further complicate the clinical decision-making process, external factors such as culture play a vital role in the therapeutic alliance. To this end, multicultural competency serves as a pivotal piece of the counseling curriculum.

Multicultural Competence

In a call to the counseling profession in 1992, Sue and colleagues provided a clear rationale for the importance of incorporating multicultural competencies into the helping professional curriculum. The rapid cultural changes of the United States population have further served as an impetus for such change. Counseling curricula have since incorporated multicultural and diversity education as a core element in the CACREP

standards (CACREP, 2009). Counselor educators are challenged to serve as an impetus for creating social justice awareness among trainees which may influence further recognition of the important role of culture at a societal level (Constantine et al., 2007). The literature presents studies specifically discussing the education of multicultural awareness among helping profession trainees.

Race/ethnicity. Counselor trainees served as participants in a quantitative study investigating multicultural competencies (Constantine, 2001). Specifically, the study investigated differences among African American, Latino/Hispanic, and Northern European counselor trainees and multicultural competencies. The findings indicate non-dominant racial/ethnic trainees were more culturally competent than their dominant counterparts (Constantine, 2001). However, the results also indicated that multicultural counseling competence education also increased awareness, knowledge, and skills of diverse clients. This study serves to support the positive implications for incorporating competencies into the counseling curriculum. This study also suggests dominant race/ethnic trainees may require further culture development.

Gushue and Constantine (2007) investigated White counselor trainees specifically for the potential implications of racial attitudes in the counseling relationship. The findings reveal the importance of White counselor trainees' awareness of their own racial identity, as evidence by the negation of racism associated with lower levels of racial identity. This study emphasizes the importance of dominant race/ethnicity trainees processing their own cultural experiences and acknowledgment and understanding of White privilege as part of their multicultural awareness education (Gushue & Constantine, 2007).

In order to better understand how White counselor trainees conceptualize race as a cultural factor in the counseling profession, researchers employed qualitative focus group methods to elicit this important information (Sue et al., 2010). The study resulted in three major themes among the participants: perspective about race, reactions, and strategies. Within the first major theme of perspective about race, White trainees revealed their worldview of racial beliefs, which were subthemed into four categories: denial of White privilege, colorblindness, fear of appearing racist and feeling they had no right to dialogue on race (Sue et al., 2010). These worldview beliefs of White trainees may have serious implications for potential conceptualization of clients, as the themes are not congruent with successful broaching and awareness of culture. In the second major theme of reactions, White trainees described their reactions to classroom experiences relevant to multicultural education. The participants recalled anxiety, helplessness, and feelings of being misunderstood by others when expressing views in class. Trainees connected these three resulting feelings to fear and discomfort of not knowing how to participate in perceived difficult conversations about race in the classroom setting (Sue et al., 2010) The third major theme from the focus groups was strategies of how to make difficult conversations about race more comfortable (and therefore more successful) in the classroom setting. The trainees report validating feelings, facilitating discussion of feelings, instructor disclosure of own biases and feelings, and a more passive approach would improve the success of a multicultural education experience.

There are several implications from Sue and colleagues (2010) regarding White counselor trainees' perspective of multicultural education. A lack of understanding of White racial identity (e.g., White privilege) leads to feelings of fear and anxiety when

discussing topics of race. Trainees are frozen to facilitate and participate in difficult dialogues associated with a cultural factor such as race in fear of being perceived as racist. Hays, Dean, and Chang (2007) reported similar findings of the self-reported preferences of multicultural course structure. Trainees preferred more time to process readings and classroom discussions associated with more sensitive multicultural issues. Sue at al. also proposed the importance of how counselor educators facilitate dialogues of race in the classroom. Trainees report a professor who validates feelings and discloses examples of personal bias create a more trusting atmosphere in which White trainees are more courageous to participate in difficult dialogues.

Gender. As discussed previously in the literature, gender bias may influence the clinical decision-making process of counselors. Like race/ethnicity, gender is considered an important cultural factor of multicultural competence training and is therefore included in the curriculum within the CACREP standards (CACREP, 2009). The research literature suggests counselor trainees display gender bias (Seem & Johnson, 1998).

An exploratory study of gender bias among counselor trainees investigated 210 students within counselor education and counselor psychology programs (Seem & Johnson, 1998). The students were presented with one of two case descriptions. One case description represented a male or female making traditional gender role life choices, and the second case description represented a male or female making non-traditional gender role life decisions. For example, the non-traditional female client was deciding to work outside the home, and the non-traditional male client was considering the role of a stay-at-home husband. The results indicated several examples of bias within the

therapeutic relationship. Female counselor trainees were supportive of a non-traditional female's right to choose work; however they were very concerned about a female's non-traditional decision to not have children, citing it as a regrettable decision. In some cases the female counselor trainees' responses were not considered bias, but in fact following a feminist theory perspective to facilitate a discussion of the societal influences of the female client's decisions (Seem & Johnson).

In the case of the non-traditional male, a few trainees reflected emotional support for this client as he was breaking traditional roles. However, more trainees pathologized that the non-traditional male must have feared failure in the professional world, and therefore was avoiding it. The trainees displayed the most bias with this particular male client, presuming skepticism of a man who genuinely preferred the role of stay-at-home husband (Seem & Johnson, 1998). This study serves as evidence of the important role of diversity awareness. Trainees struggle to be supportive of clients who choose non-traditional gender lifestyles.

Multicultural competence training needs to encourage students to be flexible in their cognitive schemas and conceptualizations of clients (Gushue et al., 2008). In a meta-analytic review of multicultural competence training, researchers indicate that all forms of multicultural education were somewhat beneficial (Smith, Constantine, Dunn, Dinehart, & Montoya, 2006). However this review cited more positive ratings for multicultural curriculum that adhered to a theoretical framework. Smith and colleagues (2006) also advise curriculum to incorporate experiential activities to further promote skills, rather than solely knowledge of multicultural competence. It is also considered significantly important to incorporate multicultural issues across the curriculum and

outside the classroom in other experiences. In a self-report survey of counselor trainees, Dickson and Jepsen (2007) concluded correlations between higher levels of multicultural knowledge and awareness to students in programs that incorporated multicultural training into multiple courses and supervision. It appears trainees respond more productively to a consistent, empathic, and supportive environment in terms of multicultural competence development. The quality of multicultural competence training received during a counseling program may impact the ability of counselor professionals to incorporate multicultural awareness into their clinical decision-making process.

Summary

There are five emerging themes in the literature that are pertinent to the proposed study. First, the literature review establishes disproportionate prevalence rates for non-dominant groups among mental health disorder diagnoses. These non-dominant groups include both racial/ethnic non-dominant groups and females as the non-dominant gender. Overall, the non-dominant groups are judged more harshly by society and helping professionals. Second, the disproportionate prevalence rates represent the potential for cultural bias; however, it is difficult to articulate where the bias originate: clinician bias, bias in the clinical decision-making process, and/or bias in the DSM-IV-TR diagnostic system. Third, there are connections between diagnostic variance and the clinical decision-making process, however connecting this gap in the research literature may further inform training programs for helping professionals. Fourth, the literature review illuminates how cultural factors and degree of cultural match impact diagnostic variance, and then perhaps also the overall clinical decision-making process. What is less clear in the literature is how multicultural competence and awareness of the counselor may

impact clinical decision-making. Finally, the review of the literature in regards to counselor training programs asserts that it is important for counselor trainees to receive diagnostic training and multicultural competence training. If clients are more accurately diagnosed then treatment outcomes may be improved overall.

The literature presented in Chapter Two is not without limitations. The research studies on diagnostic variance and cognitive tools are outdated (e.g., Dumont & Lecomte, 1987). It is unclear why the clinical decision-making process has not been more recently researched in the counseling profession (such as the works of Feisthamel & Schwartz, 2009; Hays et al., 2009; Hays et al., 2010). Overall, the research literature on diagnostic decision-making is within the psychology and psychiatry fields. Researching clinical decision-making fills a gap in counselor education research. Another limitation of the literature review to consider is the primary focus on cultural factors in diagnosis in relationship to schizophrenia. It is difficult to find research studies that analyze the diagnosis process of mood disorders such as bipolar disorder and major depressive disorder. It is also difficult to assess the accuracy of prevalence rates of diagnoses among culturally different groups, potentially related to how rates are calculated (i.e., research based rates vs. clinically based rates).

The review of the literature in Chapter Two represents how researchers have utilized various research methods in the investigation of clinical decision-making, diagnostic variance, and cultural factor implications. Larger studies relied on mass surveys of undergraduate students or post-hoc client data at mental health agencies or psychiatric hospitals (e.g. Biernat & Manis, 1994; Jones & Gray, 1986; Feisthamel & Schwartz, 2009; Schwartz & Feisthamel, 2009). Other studies sought to create

hypothetical clients through written summaries or artificial intelligence computer systems (Falvey 2001; Falvey et al., 2005; Hays et al., 2009; Hays et al., 2010). The primary investigator took into consideration suggestions of previous studies in the development of the proposed methods. When developing the methodology for a study investigating clinical decision-making, some researchers assert the preference for face-to-face interactions as the most natural environment for counseling (Arkes, 1991; Falvey, 2001; Lopez, 1989). However, face-to-face interactions limit the accessibility to a random sampling. Therefore, using video recorded sessions of clients, rather than paper summaries, may serve as best practice for collecting data on the clinical decision-making process (Guanipa & Woolley, 2000; Gushue & Constantine, 2007; Wisch & Mahalik, 1999). This study utilized a mixed methodology to investigate how these constructs interact in order to test and revise a preliminary theory (see Hays et al., 2009; Hays et al., 2010) on how counselors and counselor trainees come to diagnostic decisions. Because of the complex nature of the clinical decision-making process, to research its constructs is complicated. In Chapter Three, the design of the proposed mixed-methods study is described. The researcher acknowledges how limitations and suggestions from previous literature have influenced the proposed design in order to address previous concerns and further this important counseling research area.

CHAPTER THREE

METHODOLOGY

This chapter introduces the methodological design that was used in exploring the clinical-decision making process of counselors and counselor trainees. It provides a rationale of mixed methods design. This chapter describes the research design, procedure, participant criteria and selection procedures, and an overview of the instruments used in this study. Data collection and analysis procedures, as well as the limitations of this methodology are discussed.

Mixed Methods Research Design

The literature review establishes the importance of researching the clinical decision-making process to further understand the importance of cultural factors and the implications bias may have on diagnosis and prognosis. The literature review also presents the differing methodologies used previously to collect data on diagnostic variance, cognitive tools, and cultural factors such as race/ethnicity and gender. This study was an adaptation of previous research in which a concurrent design was utilized (i.e., grounded theory, survey design; see Hays et al., 2009; Hays et al., 2010). A grounded theory qualitative research design allows for thick description of the clinical decision-making process to formulate from the perspective of the population (i.e., counselors and counselor trainees). Quantitative data are collected to demonstrate possible relationships between cultural bias, level of functioning, and prognosis. Therefore, a mixed methods research design is best suited for the investigation of the clinical decision-making process.

The present study is a concurrent design (Creswell, 2009). Specifically, a concurrent design was chosen because the qualitative portion addresses the process by which counselors and counselor trainees make diagnostic decisions, while the quantitative portion analyzes the potential for cultural bias to impact perceptions and diagnostic decisions. The qualitative portion utilized grounded theory procedures (Corbin & Strauss, 2008) in order to further develop a theory on how diagnostic variance, cognitive tools, and cultural factors impact the clinical decision-making process of counselors and counselor trainees (see Hays et al., 2009; Hays et al., 2010). The quantitative portion of this mixed methodological study is a non-experimental survey design. Three assessment measures were used to investigate the relationship between cultural demographics of participants and the hypothetical clients and perceived level of functioning and prognosis of the clients.

There are benefits and challenges to qualitative and quantitative research inquiry that build support for the utilization of a mixed methods approach. Qualitative research is exploratory in nature, allowing a researcher to identify emerging themes directly from the participant source. An open-ended question inquiry in qualitative data collection reduces researcher bias as the responses are genuinely that of the participant. As most important to this study, a qualitative research design allows for a preliminary theory to be tested and revised; allowing further development of a theory. Qualitative design is not without challenges. Open-ended question responses may be too vague and therefore difficult to draw conclusions from. Due to the electronic format of the interview, there is no immediate assistance to the participant if he/she does not understand a question, or misinterprets the questions. Also, the primary investigator and research team must be

aware of personal bias that may impact the analysis of the data. Within the qualitative nature of the study, there was more uncertainty in how many participants are minimally acceptable to make larger generalizations with the results.

Alternatively, quantitative research inquiry outlines specific protocol and data requirements for each statistical measure, allowing an investigator to confidently generalize results when minimal requirements are met. Quantitative methods also allow for a construct to be empirically measured, which can be used for comparisons or to support assumptions. A challenge of quantitative research methods is that it may limit the scope of a study, as it can only measure the identified variable, not allowing flexibility for other themes to be identified (Crewell, 2009). A mixed methods approach is considered in research design when a qualitative or quantitative approach separately may not adequately represent the proposed topic (Creswell). For this study, a mixed methods approach allows for open inquiry on the further development of a theory (clinical decision-making), while also empirically measuring a variable (cultural bias). A concurrent approach allows the primary investigator to analyze how the theory and variables converge.

The study was a replication and extension of previous research designed to address the limitation in sample size. Hays et al. (2009) and Hays et al. (2010) utilized a sample size of 41 participants; however, assuming for Power of .80 and a moderate effect size (Cohen, 1992) a sample size of 172 participants is required. To increase potential sample size, the procedure to collect data was changed in the adaptation of this study. Previously, a research team recruited counselors and counselor trainees to read a client summary, participate in an interview, and then complete a survey packet. This study

utilized a secure website to collect data. Instead of a written client summary, six mock client videos were created to represent the same symptomology, but differ in cultural factors (i.e. gender, race/ethnicity). The design was intended to capture a larger sample population, however, it was unsuccessful. The sample size limitations are discussed in Chapter 5.

Procedure

The target population for the study was counselors and counselor trainees. Participants were recruited via two methods. The first method to recruit participants was to email program coordinators of counseling programs from a randomized list of CACREP programs and ask for the invitational email to be distributed to their students (Appendix A). The second method to recruit participants was to email the presidents of ACA divisions and ask for the invitational email to be distributed to their members (Appendix B). Both methods of recruitment and response rates are discussed in detail in Chapter 4.

The invitational email provided an outline of the study purpose and encourages potential participants to enter the secure website to review the informed consent document (see Appendix C) before making a decision to participate. The website was designed collaboratively by a website developer and the primary investigator. The primary investigator met with the website developer in person on two occasions. All proceeding correspondences with the website developer were done via email or telephone. The website developer was not monetarily reimbursed for services.

If a participant chose to continue participation in the study after reading informed consent, a URL link to continue allowed access to the study. The website was

programmed to randomly choose 1 of 6 mock client sessions for the participant to view. Each participant watched one mock client session video; unaware five other videos existed.

After viewing the client video, the participant was prompted to complete a series of five tasks. The first task was to complete a five axis diagnosis of the client from the DSM-IV-TR (APA, 2000). This task included the assignment of a Global Assessment of Functioning (GAF) score, displayed on Axis V, which inquires for the current level of functioning of the client on a numerical scale. The second task was the Prognosis Scale (PS), an assessment which inquires for the best prediction of prognosis if appropriate treatment is obtained. The third task was a series of open-ended questions that encourage analysis of the participant's clinical decision-making process. The fourth task was the Privilege and Oppression Inventory (POI), an assessment which elicits for cultural and social awareness related to perceived privilege and oppression of particular culture groups. The fifth and final task was to complete a participant demographic form. Each of these tasks is discussed in further detail in this chapter.

After completion of the assessments, participants were thanked for participation. The participants were invited to enroll in a lottery drawing for a gift card. To enroll, participants were asked to provide an email address to which the gift card was sent. One lottery drawing was scheduled per week of data collection; this totals six drawings over six weeks of data collection. However, there were no participants who provided emails during the first three weeks of data collection. Therefore one gift card was sent to a random participant for the remaining three weeks of data collection. Three gift cards

were sent in total. Enrollment in the lottery drawing was optional and disclosure of email address was confidential and therefore not linked to survey responses.

Video Content

The study used video recorded clients to represent a more realistic counseling session. Previous research studies investigating clinical decision-making report the use of written case summaries as a limitation to the research and suggest video components (Guanipa & Woolley, 2000; Gushue & Constantine, 2007; Wisch & Mahalik, 1999). Participants of previous studies report lack of visual representation of the mock clients as a limitation (Hays et al., 2009; Hays et al., 2010). The client script for this study was based on the previous research of Hays at al. (2009) and Hays at al. (2010). The client presents with general mood disorders symptoms to include insomnia, crying spells, and shifts in mood (depressed, anger, euphoric). The script outlines how the client experiences his/her symptoms in the context of home and work. Six mock client intake sessions were video recorded and uploaded to the website for the purpose of this study. Each video session is approximately7 minutes in length and represents an intake session at a local mental health agency. All six clients are the same age and present with the same symptomology (see Appendix D). The clients differ in cultural factors of race/ethnicity and gender. Client A is an African American female, Client B is an African American male, Client C is a Latina, Client D is a Latino, Client E is a White female, and Client F is a White male. The individuals representing the hypothetical clients were volunteers from the local university community, who responded to a request for volunteers. The primary investigator recorded sessions on a local university campus as well as in her home.

The video recorded sessions displayed only the mock client during a clinical intake interview, not a counselor. Interview questions appeared in writing at the bottom of the video screen, therefore no counselor voice was heard. These edits were intentional to allow the participant to feel as though he/she is the counselor, viewing the client from his/her own perspective, rather than the perspective of a faux counselor voice in the video.

Research Questions

The research questions of the study were replicated from previous literature (Hays et al., 2009; Hays et al., 2010). The qualitative portion of this study investigated research questions one and two; the quantitative portion of this study will investigate the second sub-question of research question two and research question three.

- ***Research question one.*** How do counselors and counselor trainees arrive at clinical diagnostic decisions?
    - *Sub-question one.* How does diagnostic variance relate to the counselors' and counselor trainees' clinical decision-making process?
    - *Sub-question two.* How are cognitive tools (if any) utilized by counselors and counselor trainees in the clinical decision-making process?
- ***Research question two.*** How do cultural factors influence the clinical decision-making process?
    - *Sub-question one.* How does a client's cultural identity influence case conceptualization?

- *Sub-question two.* What impact does the cultural match between the counselor and counselor trainee and client have on case conceptualization?

  (H_1) There is a significant relationship between the cultural match of the counselor/counselor trainee and client in the case conceptualization process.

  (H_2) There is no significant relationship between the cultural match of the counselor/counselor trainee and client in the case conceptualization process.

- ***Research question three.*** What is the relationship between cultural bias, perceived level of functioning, and prognosis in the clinical decision-making process?

  (H_3) There is a significant relationship between cultural bias, perceived level of functioning, and prognosis in the clinical decision-making process.

  (H_4) There is no significant relationship between cultural bias, perceived level of functioning, and prognosis in the clinical decision-making process.

In order to investigate the research questions, a concurrent mixed methods design was employed. The remainder of this chapter will outline the details of the qualitative method and quantitative method, respectively. The qualitative method section describes the grounded theory research tradition utilized, the role of the researcher, and the assumptions of the research team. Following the description of the research team

assumptions, the qualitative section includes descriptions of the data sources utilized to include the demographic sheet, diagnostic impressions, and interview protocol. The qualitative method section concludes with a description of the grounded theory analysis and strategies of trustworthiness. Following the qualitative methods section is the quantitative method section. The quantitative methods section outlines the variables of the study: cultural bias, level of functioning, and prognosis. The survey instruments chosen to measure the variables are discussed. The quantitative methods section concludes with a description of validity threats. The limitations of the mixed methods design chosen for this study are discussed at the end of Chapter 3.

Qualitative Method

The qualitative portion of the study was conducted from a grounded theory contextual framework. The intention was to gather data from the source of the phenomenon in order to develop potential theory for future data analysis (Corbin & Strauss, 2008). The phenomenon is defined as the clinical decision-making process. In Chapter Two, the literature reviewed outlined constructs related to clinical decision-making: prevalence rates, diagnostic variance, and cognitive tools. The primary investigator also discussed how cultural bias may be connected to clinical decision-making; however there is a lack of evidence to create a strong theory to represent the process. Hays et al. (2009) and Hays et al. (2010) utilized grounded theory methodology to create a foundation for a theory. The primary investigator of this study tested and potentially revised the preliminary theory of the relationship between cultural factors, diagnostic variance, cognitive tools, level of functioning, and prognosis in the clinical decision-making process. The first purpose of the qualitative portion of the study was to

consider how diagnostic variance relates to the counselors' and counselor trainees' clinical decision-making process. The second purpose was to explore how cognitive tools (if any) are utilized by counselors and counselor trainees in the clinical decision-making process. The third purpose was to explore how cultural factors influence the clinical decision-making process. The fourth and final purpose was to consider how a client's cultural identity may influence the given diagnosis.

Participants

The participants in this study were counselors and counselor trainees. The target sample size of 172 participants was estimated based on power analyses and planned analyses (Cohen, 1992), which will provide adequate power (0.80) and moderate effect size for $a = .05$. The target sample size was not reached in this study. The total sample size of the study was 33 participants. Further details of participant recruitment are in Chapter 4.

Data Sources

The measures in the qualitative portion of the study included the participant diagnostic impressions of the mock client, the participant responses to the structured interview protocol, and the demographic information of the participant. Each data source is included in the Appendix of this document. The qualitative data sources are discussed in detail in the following section.

Diagnostic impressions. After viewing the mock client video, the first task presented to participants was completion of diagnostic impressions using the five axis code system of the DSM-IV-TR (APA, 2000) (Appendix E). This is the system used for third-party reimbursement. On Axis I, participants were provided an opportunity to

assign mental health disorder diagnoses. Participants were provided space for a primary, secondary, and tertiary diagnosis if needed, as well as an opportunity to write-in a diagnosis under "other." Participants were provided a drop-down menu of possible diagnoses applicable to Axis I (Appendix F). The participants were informed the drop-down menu choices were a sample of possible diagnoses, but not exclusive. On Axis II, participants were provided an opportunity to assign personality disorders, as applicable. Participants were provided space for a primary, secondary, and tertiary diagnosis if needed, as well as an opportunity to write-in a diagnosis under "other." Participants were provided a drop-down menu of all possible personality disorders from the DSM-IV-TR (Appendix F). On Axis III, participants were provided an opportunity to assign medical conditions as applicable. Participants were provided space for a primary, secondary, and tertiary diagnosis if needed, as well as an opportunity to write-in a general medical condition under "other." Participants were provided a drop-down menu of all possible general medical conditions from the DSM-IV-TR (Appendix F). On Axis IV, participants were provided an opportunity to assign psychosocial stressors as applicable. Participants were provided space for a primary, secondary, and tertiary diagnosis if needed, as well as an opportunity to write-in a psychosocial stressor under "other." Participants were provided a drop-down menu of all possible psychosocial stressors from the DSM-IV-TR and provided a page number to reference the definitions (Appendix F). On Axis V, participants were provided an opportunity to assign a current level of functioning score using the Global Assessment of Functioning Scale (GAF). The GAF is considered a quantitative measure, and therefore is discussed later in this chapter, under the quantitative methods section.

Interview protocol. After the completion of the diagnostic impressions, participants completed a written structured interview protocol (see Appendix G). The questions were open-ended to allow the participant to richly describe his/her clinical decision-making process regarding the conceptualization of the mock client. Data gathered from the interview protocol were reformatted by the primary investigator into a transcript (see example transcript in Appendix H). The first page of the transcript displayed the diagnostic impressions on the five axes. The second page of the transcript included the open-ended question presented with corresponding participant responses. The reformatting included the use of line numbers and enlarged right-margins for the purpose of qualitative coding. The primary investigator was responsible for the reformatting of all 33 participant interviews. The primary investigator printed hard copies of the transcripts for qualitative coding purposes.

Demographic form. The demographic form collected information from the participant in regards to cultural, educational, and professional make-up (see Appendix I). The demographic form was the last survey to be completed by participants during the data collection process. The demographic form first inquired for cultural make-up of the participants including age, gender, race/ethnicity, and sexual orientation. The next section asked for educational make-up, including highest degree earned, practicum/internship experiences, and course completion (specifically diagnosis/treatment planning and multicultural/diversity). The final section of the demographic form inquired for professional make-up, including current credentials, clinical work setting experiences, and clinical interests held by participants. All 33 participants in the study completed the demographic sheet in its entirety.

Role of Researcher

The primary researcher served as the principal investigator in the qualitative portion of this study. The responsibilities of the primary researcher included, design and maintenance of the secured website, creation of the six mock client videos, and recruitment of potential participants. The primary researcher adhered to the following values of grounded theory (Corbin & Strauss, 2008): development of theory based on data grounded in the phenomena; phenomena are complex, belief that professionals are active participants in change; meaning is defined through action; researchers are sensitive to developing data; and researchers uphold an awareness of interrelationships between data and phenomena. The primary researcher allowed the research questions to redevelop during data collection if primary results indicate adaptation is necessary. In this study, adaptation to the research questions was not necessary. The primary researcher also served as the leader of the research team.

Research Team

In the proposal of this study, the primary investigator outlined a description of a research team to include nine researchers, including the primary researcher (also research team leader). The intention was to have eight members of the research team, both doctoral and masters-level students in a counselor education or counseling program at the same university as the primary investigator. The primary investigator emailed students to elicit for interest in participation on the research team, outlining the expectations, responsibilities, and time commitment (Appendix J). The first attempt to collect research team members was unsuccessful. The primary investigator targeted a group of 15 doctoral and masters-level students with reputations for interest in research. None of the

15 potential team members responded to the email. The second attempt to collect research team members was an email sent to the entire counseling program of the primary investigator. One masters' student and two doctoral students responded to the email with interest. The primary investigator emailed the three potential research team members for availability to conduct the first research team meeting. One of the three students responded with availability, one student reported he was no longer available to assist, and the third student never responded. The primary investigator wanted at least three members (to include herself) on the team, therefore verbally communicated with colleagues in the doctoral program to obtain one more member. One final doctoral student agreed to join the research team.

The research team consisted of three doctoral students in a counseling program, including the primary investigator. The primary investigator was a 29 year old White female in her final semester of a doctoral program. The second research team member was a 28 year old African American female in her second year of a doctoral program. The third research team member was a 48 year old White female, whom recently completed a doctoral program in counseling. The research team met twice, the first meeting was to discuss assumptions and bias related to the study topic. The second research team meeting was to reach consensus coding on the first 10 transcripts. The following sections of this chapter will outline the discussions of both the research team meetings.

Research team assumptions meeting. The three members of the research team met on Sunday May 1, 2011, at the home of the primary investigator. The primary investigator requested permission to record a discussion of preexisting assumptions

regarding clinical decision-making. The research team members agreed to be recorded during the discussion. The primary investigator asked, "From your clinical experiences, or your school experiences, what ideas do you have about clinical decision-making or diagnosis?" There was consensus among members that the diagnostic process should inform treatment for clients. There was also consensus that the process of diagnosis may be more formal or informal depending on the clinical setting. Members of the team discussed their own clinical experiences and how diagnostic procedures differed among the setting. For example, at larger mental health agencies, members discussed that diagnosis was a more formal process required at the intake session. The agency setting also was perceived by members to feel more like labeling of the client; done so from the perspective of the clinical or expert, not done collaboratively with the client. One member of the research team reports private practice experience. Within her experiences in private practice, she described the diagnostic process as more informal, used when necessary for third-party reimbursement. This member also disclosed the use of diagnosis in this setting as important when she felt unsure about the symptoms of the client and needed more guidance to inform treatment planning.

The research team researched consensus that from their experiences, clinicians may consciously or unconsciously rely upon one or two disorders in the diagnostic process. In the unconscious process it may be that counselors tend to see those symptoms more often because they are comfortable with the diagnosis. In the conscious process, it may be that counselors know what disorders are reimbursable. The members discussed the potential ethical dilemma of diagnosing for reimbursement purposes. Members disclosed that if third-party reimbursement is required in order for the client to receive

needed mental health services then perhaps the conscious process is not done in malfeasance. Two of the members discussed feeling as though there was a lack of conservativeness within the diagnostic process. The members disclosed incidents in which their clients had been given more severe diagnoses when a less severe diagnosis would have been applicable. One member discussed her concern that clients prematurely assigned more severe diagnoses may have difficulty obtaining insurance coverage in the future.

In summary of the discussion on diagnosis, members discussed concerns that implications and ethics of diagnosing are only talked about in school-learning, and not a continued area of discussion in the professional setting. The members pondered if there would be less "labeling" or favoritism of disorders if practicing clinicians were provided the opportunity to facilitate discussions on the topic. The members agreed it would be interesting to facilitate on-going discussions of the clinical decision-making process among clinicians, but in their clinical experiences had not seen this practiced.

The primary investigator also asked, "Thinking of diagnosis, what are some of your preconceived notions on diagnosing and cultural factors? Specifically the cultural factors that this study looks at are race/ethnicity and gender, but others can certainly be discussed." The research team discussed gender. Members agreed that in their experiences, females tend to be diagnosed more frequently with borderline personality disorder. Males presenting with similar symptoms tend to be diagnosed with bipolar, not a personality disorder. The members also agreed that females are more often diagnosed with depression. However, the members acknowledged frequencies may be skewed because in their experiences, females also seek mental health services at higher rates than

males. Members felt that presenting with similar symptoms, females were more likely to be diagnosed with depression and males were more likely to be diagnosed with an adjustment disorder. There was overall consensus among research team members that women tend to be over-diagnosed.

In the discussion of other cultural factors, such as race/ethnicity and sexual orientation, one member reports that she has seen, almost exclusively, members of the dominant culture (White males). She reports from her more limited clinical experience working with this population of clients she has observed more anxiety disorder diagnoses. The primary investigator reports her views on this topic are skewed heavily by the research literature. Therefore, she tends to have a bias that individuals from non-dominant cultures tend to be more severely diagnosed than individuals from the dominant cultures. The team members pondered how as researchers we could measure for where the disproportionate rates in diagnosis originate. The members did not have ideas on what a research project assessing for that information would look like. The primary investigator disclosed that she was unsure of whether her study could articulate the origination of the disproportionate rates.

After discussing assumptions and area if potential bias, the research team reviewed the data coding process to be used in this study. All members of the team had completed a doctoral-level course on qualitative research methods. Two members of the team (including the primary investigator) had assisted with the teaching of a doctoral-level course on qualitative research methods. The research team accepted responsibility to code the qualitative data using an open coding process (Patton, 2002). The team agreed to use Hays et al. (2009) and Hays et al. (2010) priori codes as a foundation to the

data analysis process. The primary investigator provided each team member a packet that included terms and definitions of diagnostic variance and cognitive tools, the preliminary codebook, and the first 10 transcripts. The primary investigator reviewed the terms and definitions, providing examples of how they might be observed in the transcripts. The research team reviewed the coding protocol to be followed in the qualitative analysis process. The coding protocol is discussed later in this chapter under the Qualitative Data Analysis section. The Qualitative Data Analysis section also describes the coding of the first three transcripts, which was done during this first research team meeting.

Research team consensus meeting. The second research team meeting occurred on Thursday May 5, 2011. The intention of this meeting was to review the remaining 7 transcripts (004E, 005D, 006C, 007A, 008B, 009D, 010B) that had been independently coded by each research team member. The primary investigator facilitated the discussion of each in-case display. The team was able to reach consensus on the current level of functioning codes and locus of attribution codes that had challenged the members during the first research team meeting. Further detail on the analysis process of the consensus meeting is discussed in the Qualitative Data Analysis section on this chapter.

Qualitative Data Analysis

The qualitative data were analyzed using an open coding process (Patton, 2002). The open-coding process allowed for the development of a thematic codebook. The primary investigator provided the research team the final codebook from a previous study (Hays et al., 2009) as the first thematic codebook (Appendix K) of this study in order to continue the progress of previous research. During the first and second research team

meetings, members of the research team created new codes and updated the thematic codebook. The new codes created are discussed later in this section.

The participant data were organized and conceptualized using in-case displays (Miles & Huberman, 1994). The in-case displays provided team members with visual structure to compare different aspects of the clinical decision-making process (Appendix L). During the initial coding process, the codes developed with room for revisions as patterns and concepts become more salient.

At the first research team meeting, the research team agreed to read each transcript, coding for priori codes from the preliminary codebook, as well as remaining open to potential new themes. After reading each transcript, the research team agreed to complete an in-case display to summarize the codes identified within the transcript. The final step in the coding process was to complete a contact summary form (Appendix M), in which research team members could relay overall themes from the transcript, as well as, not similarities and differences compared to other participants.

Analysis during research team meeting one. During the first meeting, the research team members coded the first three transcripts (Participants 001E, 002B, and 003A). Members independently coded a transcript, completed the in-case display, and contact summary form. After each transcript was coded the primary investigator led a discussion on what codes were noted and where the codes were written within the in-case displays. The research team members agreed on placement of codes on the in-case display for consistency purposes. The process of coding the first three transcripts also allowed for team members to further discuss the definitions of codes and how the themes may be identified within the transcripts. There were two codes that were noted to be the

most inconsistent among the team members: current level of functioning of the client and locus of attribution. The team members discussed what the difference between a "somewhat" and "maladaptive" functioning client was within the language of the participants. The team members also discussed what the evidence of situational locus of attribution versus dispositional location of attribution was within a transcript. Members agreed that it was possible to code both situational and dispositional locus of attribution within one transcript. The research team also agreed that when participants referenced a client needing to increase coping skills this implied individual counseling treatment (a priori code, "individual").

The research team agreed on the addition of new codes during this meeting. The members created a code "none_specified" to represent a theme in which treatment was assumed in the transcript, but no specific type of treatment was specified (e.g., group therapy, substance abuse treatment, medication management). The members created a code "neg_att_client" to represent a theme in which participants viewed clients negatively, not related to the culture of the client. The team identified a new code "tx_good" to represent a theme in which participants discussed a good prognosis dependent on the access to treatment. The team identified a new code "normalizing" to represent a theme in which participants discussed the symptoms as a normal occurrence for all humans. For example, participants felt as though most individuals feel depressed at some point in life. An updated codebook after the first research team meeting is located in Appendix N. The first research team meeting concluded with the scheduling of a second team meeting in which consensus on the remaining seven transcripts would be reached.

Analysis during research team meeting two. At the second research meeting, each team member came prepared to discuss the remaining seven transcripts for consensus coding (004E, 005D, 006C, 007A, 008B, 009D, 010B). The primary investigator led the discussion of each participant transcript, reviewing identified codes and placement on the in-case display. The team discussed potential new codes to include in the thematic codebook. The members of the team created a new code "pos_att_client" to represent a theme in which participants spoke of clients with unconditional positive regard during the clinical decision-making process. The research team members created a new code "family" to represent a theme in which participants cite family as a factor in the presenting problem and/or diagnosis. An updated codebook from the second research team meeting is displayed in Appendix O.

At the conclusion of the second research team meeting, one team member volunteered to code 10 more transcripts (011E, 012E, 013E, 014F, 015D, 016D, 017A, 018B, 019B, 020C). The primary investigator was responsible to code the remaining 13 transcripts (021E, 022D, 023E, 024B, 025D, 026E, 027A, 028E, 029E, 030E, 031B, 032F, 033F). The research team agreed to complete analysis of the 23 transcripts independently by Monday May 9, 2011. The third research team member was not available to participate in the next round of coding due to her travel schedule. There were no new codes added to the thematic codebook during the analysis of the final 23 transcripts. The frequency of the codes and further details of the qualitative findings are discussed in Chapter 4.

Trustworthiness

In qualitative research the rigor of design and analysis represent the extent to which results are credible (Patton, 2002). Lincoln and Guba (1986) compared credibility to internal validity in quantitative research. In order to maximize the credibility of the study, the researcher followed intentional steps and procedures to promote trustworthiness of results. The following trustworthiness techniques were employed in the research study: triangulation, simultaneous data collection and analysis, thick description, audit trail, and auditor.

Methods triangulation promotes the utilization of different data collection methods of the same phenomenon in order to capture a more holistic view (Patton, 2002). This study was mixed methods, which allowed for data to be collected by both qualitative and quantitative methods. Comparing the consistency of results among multiple data methods increases the rigor of the study, promoting trustworthiness. The study also utilized a research team for the coding process which represents analyst triangulation. Using a team of people to analyze the data reduces potential for single researcher bias. A research team allowed for the assessment of consistency among the data (Patton, 2002). The research team coded the first same 10 transcripts and met to discuss perceptions of how the data were coded, as previously discussed in detail in this chapter.

The study was designed to have simultaneous data collection and analysis, meaning the coding process began during the six week data collection period. This flexible process allowed for revisions of the codebook as new emerging patterns and themes were identified. A simultaneous process also allowed for the procedure to change if necessary. It is important in qualitative research to respond to the needs of the

participants in the data collection process. In this study, the three-step analysis protocol did not require changes.

All aspects of the qualitative portion of this study are thickly described in order to promote the potential for replication, increasing reliability measures. Providing thick description of the design choices represents the intellectual rigor, for example explanation or paradigm and tradition chosen. A clearly articulated purpose statement and coherent research questions allow potential readers to understand the development of the study. When the procedure is thickly described the potential for replication increases reliability of the study. It is important to thickly describe the coding process, allowing the reader to understand how themes and patterns emerged. The researcher kept documentation of the study in an audit trail, which represents the system used in the investigation. The audit trail serves as an important measure of trustworthiness as it is physical evidence of the qualitative study. An auditor reviewed the audit trail to confirm the researcher has done what she said was done in the investigation. The auditor provides a check-and-balance or quality assurance in the qualitative research process. In this study, the auditor was a 29 year old White female. She is enrolled in a doctoral program of counseling. The auditor completed a doctoral level course in qualitative methods. She has experience as a primary investigator for qualitative research projects. In her function as auditor, she was provided the audit trail binders by the primary investigator. The auditor reviewed the audit trail binders for transcripts, contact summary sheets, and in-case displays. The auditor ensured all documents were present for the 33 participants in the study. She also reviewed the raw data from the study, ensuring the accuracy of reports.

This study was concurrent mixed methods, which means the qualitative investigation occurs in unison with the quantitative investigation. The current section outlined the qualitative method aspects of the study; the following section will describe the quantitative method. The following section will outline the qualitative design, define the variables used, describe the instruments used, and address validity threats to the study.

Quantitative Method

The quantitative portion of this study was non experimental survey research. The survey measures were embedded into the website developed for the study. The quantitative portion of this study allowed for numerical measures of cultural bias and counselor perceptions of client's functioning. Quantitative data were used in conjunction with qualitative data to thickly describe the clinical decision-making process and the potential relationship between counselor cultural bias and diagnosis.

Participants

As described earlier in this chapter, the participants in this study were counselors and counselor trainees. The target sample size of 172 participants was estimated based on power analyses and planned analyses (Cohen, 1992), which will provide adequate power (0.80) and moderate effect size for $a = .05$. The target sample size was not reached in this study. The total sample size of the study was 33 participants. Further details of participant recruitment are in Chapter 4.

Variables

The four variables measured in the quantitative portion of this study were cultural match of client and participant, the current level of functioning of the client, the potential

prognosis of the client, and the counselor's cultural bias. The degree of cultural match between the client and participant was measured by comparing the presented race/ethnicity and gender of the client with the self-reported race/ethnicity and gender of the participant. The current level of functioning was measured with the Global Assessment of Functioning Scale (GAF; APA, 2000). The potential prognosis of the client was measured with the Prognosis Scale (PS; Friedlander & Stockman, 1983). The cultural bias of the counselor was measured with the Privilege and Oppression Inventory (POI; Hays, Chang, & Decker, 2007). The instruments are described with more detail in the following section.

Instrumentation

The participants were presented with three quantitative survey instruments to complete during the study. In this section, each instrument is described with more detail. The completion of the quantitative surveys was required for participants to be included in the final sample for analysis. Thirty-three participants completed the study in its entirety, to include the completion of the following three quantitative measures. The results of the surveys are described in Chapter 4; the following section provides an overview of the instruments used in the study.

Global Assessment of Functioning Scale. The GAF is a rating scale in which participants assess the client's lowest level of functioning within the last week (see Appendix P). Functioning is defined by the symptomology of the client's mental health illness. The rating scale is a 100-point continuum in which a rating of 1 represents the innate need to supervise due to danger of self-injurious behavior and a rating of 100 represents no symptoms of the mental health condition. The GAF represents Axis V on

the diagnostic axial system of the DSM-IV-TR. The GAF is a modification to the Global Assessment Scale (GAS; Endicott, Spizer, Fleiss, & Cohen, 1976). The GAS demonstrates moderate parallel-form reliability (r = .76). There are no further reliability measures available for the GAF. The limitations from a lack of reliability and validity are discussed in Chapter 5.

Prognosis Scale. The PS is a rating scale in which participants assess the client's prognosis (see Appendix Q). Prognosis is defined as the expected highest level of functioning the participant predicts for the client if prescribed treatment is accessed. The scale is a 10-point continuum in which a rating of 1 represents a prognosis of no symptoms (superior functioning) and a rating of 10 represents the innate need to supervise the client due to danger of self-injurious behavior. The PS utilizes the same categorical descriptions as the GAF. The rating scales are reversed and altered. For example, a PS rating of 1 (superior functioning) is equivalent to a GAF score in the range of 91-100. There is no available information on the reliability or validity of the PS. The resulting limitations from a lack of reliability and validity are discussed in Chapter 5.

Privilege and Oppression Inventory. The POI is a 39-item self-report assessment that measures the level of awareness the participant has for privilege and oppression associated with cultural factors to include: race/ethnicity, gender, sexual orientation, and religion (see Appendix R). On this self-report assessment each item is rated on a 6-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (6). The POI consists of four sub-scales: White privilege awareness, heterosexism awareness, Christian privilege awareness, and sexism awareness. A higher score on the POI indicates participants hold less bias cultural attitudes, and therefore have more awareness

for privilege and oppression in American society. The POI demonstrates high internal consistency (a = .95-.96; Hays et al., 2007; Hays et al., 2010) and high test-retest reliability (r = .91, p <.01; Hays et al., 2007). The current study demonstrates high internal consistency as well, (a = .97).

The POI demonstrates strong content validity and satisfactory internal consistency between subscales. Convergent validity tests between POI and previously established multicultural counseling inventories were statistically significant at the .01 alpha level. Analyses between the four subscales of the POI and racial attitude inventories demonstrated statistically significant correlations (r = .17-.69). These correlations suggest the POI is not as impacted by social desirability as compared to other multicultural assessments. (Hays et al., 2007)

The GAF, PS, and POI were the three quantitative surveys utilized in this study. The previous section described the instruments. The results of each survey from this study are discussed in detail in Chapter 4. The following section describes the validity threats to this study, which were important for the researcher to identify and address.

Validity Threats

The researcher made intentional decisions in the design of the study in order to minimize the impact of internal and external validity threats. Internal validity threats represent study design issues or participant experiences that impact the degree to which inferences from the study are accurate (Creswell, 2009). External validity threats represent how the population sampling may limit the generalizability of the study (Creswell). In order to increase the accuracy of inferences drawn from the data collected, the researcher addressed the following internal validity threats: selection,

instrumentation, attrition, experimenter effects, and subject effects. In order to increase the generalizability of the data collected in the study, the research addressed potential limitations in external validity threats. Both internal and external validity threats are discussed in this section.

In order to address selection validity threats computer technology randomly assigned one of the six mock client videos to each participant in the study. The random assignment occurs when a participant agrees to the informed consent document and proceeds to the study via the Internet website. The limitations of this randomized method are discussed in more detail in Chapter 5. Selection bias limitations in the study included the recruitment methods. There may be unintentional similarities among counselors and counselor trainees that choose to be involved with this project. For example, individuals interested in diagnosis or those who knew the primary researcher may have been more inclined to participate. Recruitment method one targeted CACREP counseling programs, which resulted in more counselor trainees than counselors in the sample. The use of mock clients may also represent an instrumentation validity threat to the study, as they are not clients genuinely experiencing the symptoms, but healthy individuals acting in the role of client. The extent of this validity threat was revealed when one participant made reference to the mock client maintaining poor eye contact. The participant was unsure whether it was intentional or whether the client needed to be reading a script to continue the session.

Utilizing the Internet based system to collect data was intended to reach a larger, more randomized sampling population. To encourage participants to complete the time intensive procedure process incentives were available in a weekly raffle. However, even

with these incentives participation remained a serious concern at Week 3 of data collection when only one participant had completed the study. To address this limitation the primary investigator expanded recruitment method one to include another round of CACREP programs and utilized recruitment method two, to contact ACA division presidents. Despite these accommodations, the time commitment remained an attrition threat to the study. The website survey system accounted for 53 participants to start the survey portion of the study and only 33 of those participants successfully completed the study. This attrition rate does not account for how many participants agreed to informed consent and watched the client video but then did not proceed to the survey portion of the study. The researcher had intended for the attrition threat to be addressed in the one-time orientation of the design, whereby after completing the task the participant will no longer be required to assist; no follow-up or post test is required.

To minimize the experimenter effects of the study, the interview questions were presented in a structured interview protocol. All participants were asked the same interview questions in identical order. The questions were designed as open-ended in order to limit the influence of researcher bias. The participants in the study may change their behavior as a response to the research (i.e. subject effect). As with all research studies, the Hawthorne Effect (desirable behavior) may influence the data collected. In order to minimize subject effect, the participants were informed of confidentiality and their identity was not connected to their survey answers.

External validity factors influence to what degree the results of the study are generalizable to other people (population external validity) and to what degree the results can be generalized based on the context or environment of the study (ecological external

validity). To maximize the population external validity (generalizability to counselors), the participants represented a random sampling of counselors and counselor trainees from across the United States. The researcher also calculated Cohen's power and effect size to identify the sample size required to achieve statistical generalizability. The researcher did not successfully obtain the sample size required to confidently report quantitative statistical generalizability.

To maximize the ecological external validity, the study included both counselors and counselor trainees as participants. By including counselor trainees, the study extends to investigate the effectiveness of teaching clinical decisional making skills in the counseling curriculum. There was an uneven distribution of counselors and counselor trainees in this study.

Potential Contributions

This study contributes to the limited counseling literature on clinical decision-making. There are many interactional layers in the profession that are impacted by the clinical decision-making process (e.g. diagnostic variance, cognitive tools, cultural factors). The counseling profession relies on third-party reimbursement. Third-party reimbursement requires clinical diagnosis of clients by counseling professionals. Clinical diagnoses determine treatment goals, which in turn impact client outcomes. Misdiagnosis of clients may negatively impact the treatment outcomes as goals may not be addressing the actual mental health disorder of the client. Disproportionate diagnostic rates among various cultural groups may result in overdiagnosis or underdiagnosis of particular mental health disorders. Again, clients of diverse cultures may not experience

optimal treatment outcomes as goals may not be addressing the actual mental health disorder of the client.

This study tested and revised previously developed theory of counselor and counselor trainees' clinical decision-making process (Hays et al., 2009; Hays et al., 2010). The study has potential to contribute to the literature on how diagnostic variance and cognitive tools relate to the clinical decision-making process. The study may also inform multicultural competent diagnostic procedures training for counselors and counselor trainees, as relationships between cultural bias, level of functioning, and prognosis are explored both qualitatively and quantitatively.

Summary

This concurrent mixed methods study seeks to understand the clinical decision-making process of counselors and counselor trainees. The variables of this study are diagnostic variance, cognitive tools, cultural factors, level of functioning, prognosis, and cultural bias. The qualitative and quantitative exploration of these variables in relationship to the clinical decision-making process of counselors and counselor trainees was investigated in this study. The results of this mixed methods study are detailed in the following chapter.

CHAPTER FOUR

RESULTS

The purpose of this study was to investigate the clinical decision-making process of counselors and counselor trainees. The study considered diagnostic variance, cognitive tools, and cultural factors as variables that potentially influence the clinical decision-making process. This study used mixed methods to collect qualitative and quantitative data associated with the clinical decision-making process of counselors and counselor trainees. The qualitative method was structured in the research tradition of grounded theory. The quantitative method was a nonexperiemental survey design. This chapter outlines the results of the study, beginning with participant recruitment information and participant demographic information. Following the participant demographic information, the qualitative findings for research questions are reported to include frequency results for each thematic code. Following the qualitative findings, the quantitative findings are discussed, starting first with an overview of the results for the GAF, PS, and POI. Then, quantitative research questions and hypotheses are presented with the results of the statistical analysis.

Description of the Sample

The target population for the study was counselors and counselor trainees. Participants were recruited via two methods. The first method to recruit participants was to email program coordinators of counseling programs from a randomized list of CACREP programs and asked for the invitational email to be distributed to their students. The second method to recruit participants was to email the presidents of ACA divisions

and asked for the invitational email to be distributed to their members. Both methods of recruitment are described in this section.

Recruitment Method 1: CACREP Programs

The first method of recruitment resulted in two rounds of randomized CACREP programs invited to participate in the study. The researcher compiled a randomized list of 84 CACREP counseling programs from www.cacrep.org. The researcher conducted an Internet search of those 84 programs to find email addresses for the program coordinators or department chairs. Of the 84 programs, the researcher was able to obtain 77 email addresses for program coordinators or department chairs. During Week 1 of data collection the first round of CACREP programs (n = 77) were emailed an invitation to participate in research email to forward to their students. Of the 77 programs contacted, three emails were returned undeliverable. From the 74 successfully sent emails, five programs responded to confirm the invitational email had been forwarded to students enrolled in their counseling programs. One program coordinator reported she was unable to forward the email due to their university IRB guidelines. The researcher was unable to accurately report how many of the 68 remaining programs forwarded the invitational email to their students enrolled in a counseling program. During Week 3 of data collection the five confirmed participating programs and the 68 unconfirmed participating programs were sent a reminder to participate in research email to forward to their students enrolled in a counseling program.

At Week 3 of data collection there were very few participants in the study. The researcher created a second list of randomized CACREP programs. The researcher conducted an Internet search of those 83 programs to find email addresses for the

program coordinators or department chairs. Of the 83 programs, the researcher was able to obtain 76 email addresses for program coordinators or department chairs. During Week 3 of data collection the second round of CACREP programs (n = 76) were emailed an invitation to participate in research email to forward to their students. Of the 76 programs contacted, one email was returned undeliverable. From the 75 successfully sent emails, three programs responded to confirm the invitational email had been forwarded to students enrolled in their counseling programs. The researcher was unable to accurately report how many of the 72 remaining programs forwarded the invitational email to their students enrolled in a counseling program. During Week 5 of data collection the three confirmed participating programs and the 72 unconfirmed participating programs were sent a reminder to participate in research email to forward to their students enrolled in a counseling program.

During Week 3 of data collection the researcher reviewed the two randomized lists of CACREP programs and noted 31 programs to which she had personal contacts on faculty. The researcher contacted the personal contacts of the 31 programs and received confirmation that the participation email had been sent to students enrolled in each program, respectively. In total, 149 CACREP counseling program coordinators or department chairs received the invitational email to participate in the clinical decision-making study. Thirty-nine of the 149 programs confirmed distribution of the email to their students. The low participation rate in the study informed the decision to utilize a secondary recruitment method: contacting ACA division presidents.

Recruitment Method 2: ACA Divisions

The American Counseling Association (ACA) no longer sells randomized email list-servs for research purposes. Therefore, during Week 3 of data collection the researcher contacted the 18 ACA division presidents individually to request the distribution of the invitational email to their members. One ACA division expressed willingness to share the invitational email with their members ($n = 330$). Two ACA division presidents expressed interest in sharing the invitational email with their members; however the researcher never received email confirmation of the distributions. One ACA division responded that a study of diagnosis was not appropriate for their area of concentration in counseling. The remaining 14 ACA division presidents did not respond to the researcher.

An ACA division, Association of Counselor Education and Supervision (ACES) facilitates an unmoderated list-serv to which messages can be posted, CESNET. During Week 4 of data collection the researcher posted the invitation to participate in the study to CESNET. The email confirmation sent from CESNET reports the message was posted to 1,745 members.

Summary of Recruitment Methods

There were two recruitment methods in this study. The first recruitment method involved two randomized lists of CACREP programs. In this method, a total of 149 CACREP programs were invited to participate in the study. The second recruitment method involved ACA divisions. In this method, one ACA division confirmed distribution of the invitational email to its members. Also within this method, an invitation to participate in the study was posted to the unmoderated list-serv, CESNET,

which is facilitated by the ACA division, ACES. Accurate response rates for this study are not able to be calculated, a limitation discussed in Chapter 5. Using these two methods of recruitment, 53 participants agreed to the study's informed consent and began the clinical decision-making study via the Internet website. Of the 53 participant who began the study, 33 successfully completed the qualitative interview protocol and quantitative surveys. The remaining 20 participants reviewed the video and completed the five axial diagnostic system, but did not proceed to the qualitative interview protocol and remaining quantitative surveys (PS and POI). Participants with any missing data were not included in the sample. The demographics of the total sample in the study (n = 33) are described in the following section.

Participant Demographic Information

The sample in this study represented 33 participants. The participants consisted of 27 women and 6 men with a median age of 29 years and mode age 24 years (range = 31). The mean age for participants in this study was 31.55 years with a standard deviation of 8.73. The ages of this sample were unevenly distributed, leptokurtic (.49), and positively skewed (1.187; see Figure 1).

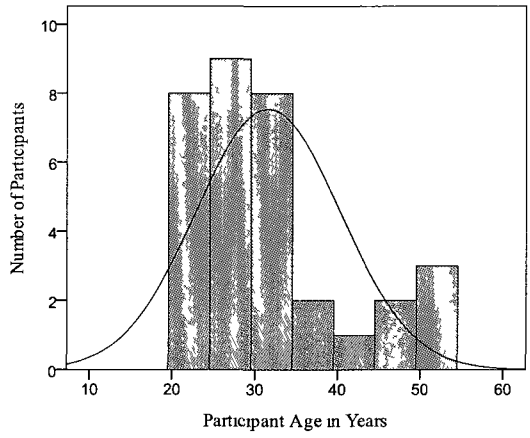

Figure 1. Distribution for the ages of participants.

Participants were also provided the opportunity to identify race/ethnicity and sexual orientation information on the demographic form. All 33 participants reported this demographic information. Participants identified with the following racial/ethnic categories: Northern European/White non-Hispanic (n = 28), African American (n = 3), Hispanic/Latino (n = 1), and biracial/multiracial (n = 1; see Table 2). Participants also disclosed sexual orientation information: heterosexual (n = 29), gay/lesbian (n = 2), and bisexual (n = 2).

Table 2

Race/Ethnicity of Participants

	Frequency	Percent
Northern European/White non-Hispanic	28	84.8
African American	3	9.1
Hispanic/Latino	1	3.0
Biracial/multiracial	1	3.0

The majority of participants (64%) in the study represent counselor trainees currently enrolled in a masters' in counseling program (n = 21). The remaining 36% of participants are counselors who report completion of the masters' degree in counseling with 30% currently enrolled in a doctoral program (n = 10) and 6% not currently enrolled in school (n = 2). The majority of participants (97%) attended or are currently attending a CACREP approved masters' in counseling program (n = 32). The participants provided information regarding course completions and practicum/internship experiences to assess training level (see Table 3). Many participants report the completion of a diagnosis and treatment planning course (n = 25), while the remaining participants (n = 8) did not complete or have not yet completed a diagnosis and treatment planning course. Most participants (n = 29) report the completion of a multicultural/diversity counseling course, while the remaining (n = 4) did not complete or have not yet completed a multicultural/diversity counseling course. Seventeen participants (52%) report attendance of a multicultural workshop, whereas 16 participants (48%) report not attending such a workshop. Fifteen participants report attendance at a multicultural

workshop within the last 12 months at varying rates: attendance at one workshop (n = 6), attendance at two workshops (n = 7), and attendance at three workshops (n = 2). An equal number of participants have completed or are currently enrolled in a practicum/internship experience (n = 12) and (n = 12), respectively. The remaining participants (n = 9) have not yet completed a practicum/internship experience.

Table 3

Participant Course Completion and Experiences

	Frequency	Percent
Completion of master's level Diagnosis and Treatment Planning Course	25	75.8
Completion of masters' level Multicultural/Diversity Course	29	87.9
Completion of masters' level Practicum/Internship Experience	12	51.5
Current enrollment in masters' level Practicum/Internship Experience	12	51.5

The participants reported the amount of counseling experience, if any, before the completion of a master's degree in counseling; the mean is 10.67 months (range = 120). Fifteen participants report no experience in counseling prior to the completion of a master's degree in counseling. Participants report a mean of 11.91 months of experience after completion of a master's degree in counseling (range = 72). Eighteen participants report no experience in counseling after completion of a master's degree, which is to be expected as many participants are currently enrolled in a counseling program.

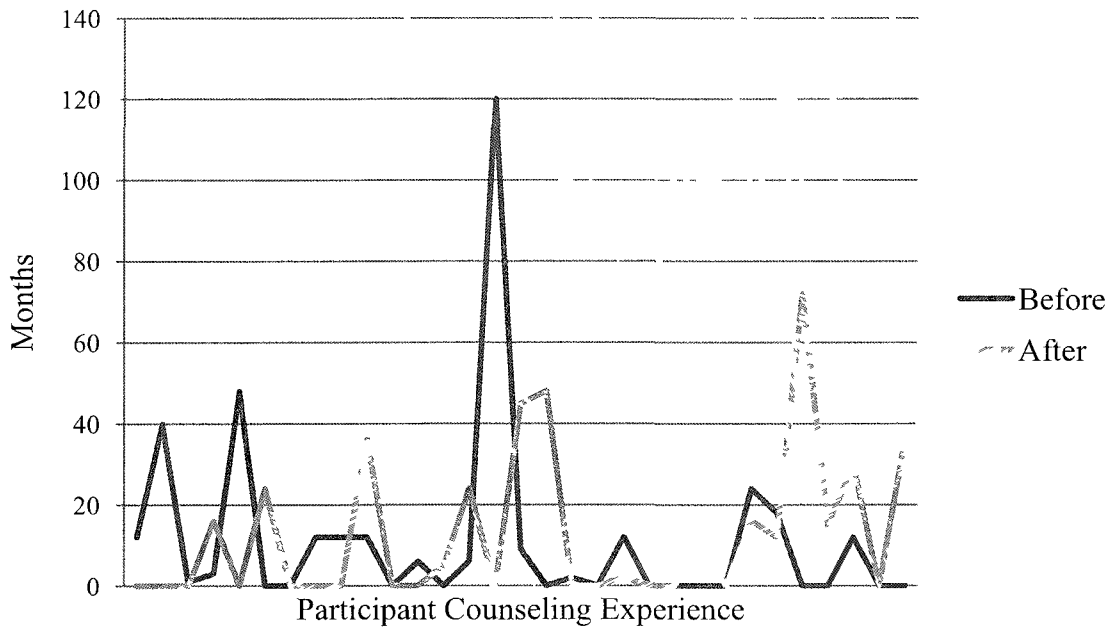

Figure 2. Counseling experience before and after the completion of the master's program.

Participants currently providing counseling services reported client caseload information. Nineteen participants reported a current caseload of clients, to include participants counseling clients at a practicum/internship site. The mean number of clients seen per week is 5.97 (range = 60). Of the 19 participants currently counseling clients, 10 report diagnosing clients at a mean of 1.03 clients per week (range = 10). The participants hold a diverse selection of credentials (see Figure 3): National Certified Counselor (NCC) (n = 6), Licensed Professional Counselor (LPC) (n = 5), Chemical Dependency Counseling Assistant (CDCA) (n = 2). The following credentials are reported at a rate of n = 1, respectively: Counselor Trainee (CT), Qualified Mental Health Provider (QMHP), Qualified Mental Retardation Provider (QMRP), Registered Social

Service Technician (RSST), Licensed Addictions Counselor (LAC), Limited Licensed Professional Counselor (LLPC), Limited Licensed Professional Counselor-School (LPCC-S), Certified Forensic Counselor (CFC), and Associate Professional Counselor (APC). A variety of provisional credentials are expected as many participants represent counselor trainees across the United States and each state utilizes state-specific licensure guidelines.

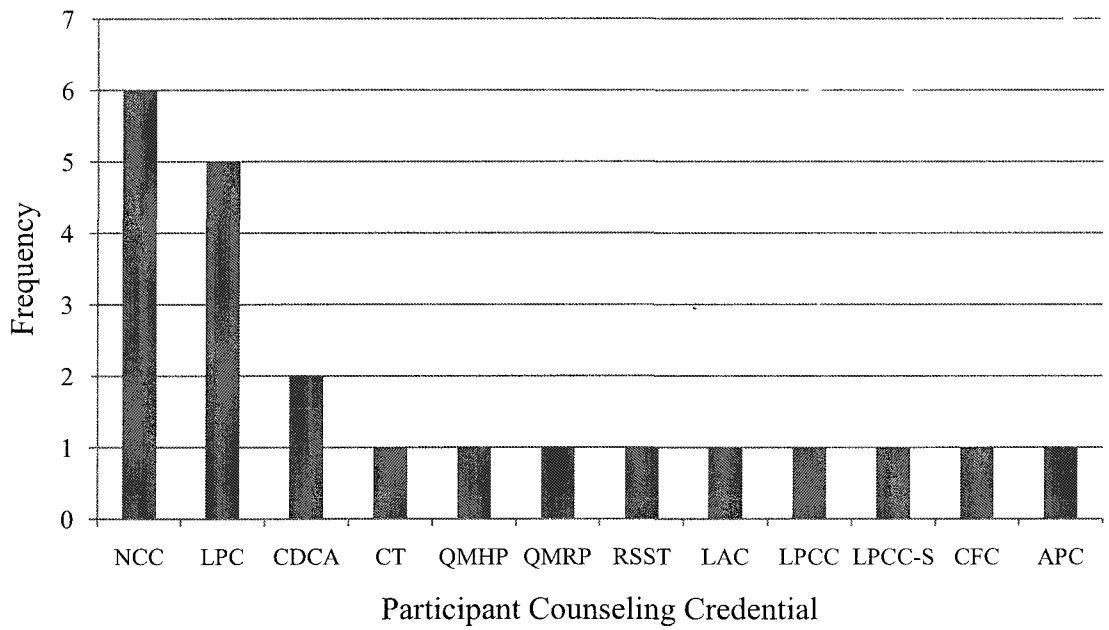

Figure 3. Participant reported counseling credentials.

Twenty-nine participants report a diverse current work setting in the counseling industry, some report more than one current work setting. The majority currently provide counseling services in a community mental health setting (n = 14). Some participants currently provide counseling services in a university/college setting (n = 9). A few

participants currently provide counseling services in a school setting (n = 4). A few participants currently provide counseling services in a hospital setting (n = 3). A few participants report academic settings as a currently work setting to include research (n = 2) and counselor education (n = 1). The remaining settings are reported at a rate of n =1: vocational rehabilitation, correctional facility, federal government, and residential setting. All 33 participants report a variety of clinical interests (up to four different clinical interests per participant) to include: children/adolescents (n = 7), general mental health outpatient (n = 6), lesbian/gay/bisexual/transgender/questions (LGBTQ) issues (n = 4), trauma (n = 4), crisis/suicide assessment/hospitals (n = 4), family/couples (n = 3), multicultural/diversity issues (n = 2), disabilities/intellectual disabilities (n =2), group work (n = 2), college students/academic advising (n = 2), and substance abuse/addictions (n = 2). The remaining clinical interests were reported at a rate of n = 1, respectively: forensic/criminal justice, older people, DBT, eating disorders, self-injurious behaviors, intimate partner violence, global health issues, vocational rehabilitation, grief/loss/bereavement, personality disorders, supervision, faith-based counseling, research, assessment, gender/women's issues, expressive therapy, and career counseling. One participant of the 33 total participants did not report a clinical interest.

Summary of Participant Demographics

The majority of this sample consisted of European American/White non-Hispanic heterosexual females. Counselor trainees represent 64% of the participants in the study. Counselors represent 36% of the participants in the study. Overall, the majority of the participants are affiliated with a CACREP counseling program (n = 32). Most participants have completed a diagnosis and treatment planning course (75.8%) and a

multicultural/diversity course (87.9%). The participants in this study report lower rates of counseling experience in the field, before and after the completion of the master's degree in counseling. The average amount of counseling experience before completion of the master's degree is 10.67 months. The average amount of counseling experience after completion of the master's degree is 11.91 months.

The purpose of the mixed methods study was to investigate the clinical decision-making process of counselors and counselor trainees. The findings are reported in the remainder of this chapter. The qualitative and quantitative findings are discussed in separate sections, each highlighting the results of the research questions affiliated with the method. The qualitative findings section describes the results for research question 1 and its two sub-questions and research question 2 and the first of its two sub-questions. The quantitative findings section describes the scoring of the instruments used in the study, the results for the remaining sub-question under research question 2, and the results for research question 3.

Qualitative Findings

The qualitative portion of this mixed methods study was designed to address two overarching research questions and three sub-questions. Participants answered 14 open-ended interview questions. The research team coded the participant transcripts of these 14 open-ended questions. The results of the grounded theory coding process to answer the research questions appear in the following section. The frequency counts for each code are presented in this section. Frequency counts for each code were accomplished in SPSS, 19.0 for Windows (SPSS, 2010).

Research Question 1

Research question 1 states, "how do counselors and counselor trainees arrive at clinical diagnostic decisions?" This research question is divided into two sub-questions. The sub-questions consider two variables of the clinical decision making process: diagnostic variance and cognitive tools. The overarching research question considers the overall process of how counselors and counselor trainees arrive at clinical diagnostic decisions.

Participants identified overall themes on how they came to clinical diagnostic decisions. The three axial codes associated with overall decision making include: changes in diagnostic decisions, certainty of diagnostic decisions, and attitude of counselor. The axial code changes in diagnostic decisions represents how a diagnostic decision changed during the clinical decision making process, as well as, if the counselor considered other diagnostic possibilities. The axial code of certainty of diagnostic decisions represents how confident the counselor reports he or she is regarding the diagnostic decision. The axial code attitude of counselor represents the overall attitude of the counselor towards the client. A visual display of the frequencies and percentages of these variables is located in Table 4. Participants discussed changes in the diagnostic decision for the hypothetical client. A very small percentage (9%; $n = 3$) of participants transitioned from a more severe to a less severe diagnosis. For example, participant 025D cited an original diagnosis of major depressive disorder; however, reconsidered reporting lack of duration of symptom information. Participant 025D decided to diagnose a less severe depressive disorder NOS as a result. Only one participant (3%) transitioned from a less severe to a more severe diagnosis as a final diagnostic decision

was made for the client. This participant (026E) discussed a diagnosis of adjustment disorder then moved towards major depressive disorder, recurrent, moderate. In discussion of her final diagnostic decision, participant 026E changed the diagnosis to major depressive disorder, recurrent, severe with psychotic features.

During the diagnostic decision process, participants reported knowledge of differential diagnosis. A majority of participants (70%) listed other possible diagnoses that might be appropriate for the client, but did not display advanced thought processes to rule out these potential disorders ($n = 23$). For example, participants listed 1-3 other possible diagnoses that could fit the symptomology presented; however did not provide further insight to what information was missing from the clinical data to rule out the other potential disorders. A small percentage of participants (15%) discussed a possible diagnosis that would need to be ruled out and supported the claim with missing clinical data required to support the diagnostic decision ($n = 5$). For example, participant 008B suggests ruling our antisocial personality disorder, citing more information about the client's criminal history and legal issues at work is required to make this diagnostic decision. No participants identified the desire to defer diagnosis completely to avoid unnecessary labeling, meaning all participants diagnosed the client.

Within the overall themes on how counselors and counselor trainees came to clinical diagnostic decisions, the axial code certainly of their diagnostic decision was discussed. The research team coded for indications of the participant's level of certainty. A slight majority of participants (61%) report certainty for the diagnosis assigned due to the information presented in the case ($n = 20$). The research team coded for certain-information when participants linked certainty for the diagnosis to specific information

presented by the client. For example, participant 001E references her certainty of the diagnosis (major depressive disorder, recurrent, severe with psychotic features) because of symptom information provided by the client, "depressed mood, feelings of worthlessness." A small percentage of the participants (12%) report certainty for the diagnosis assigned due to their own clinical and/or personal experience ($n = 4$). The research team coded certain-experience when participants connected certainty for the diagnosis with his or her own clinical and/or personal experience. Participant 004E displayed certainty due to personal experience during the interview protocol, stating, "my impressions aided in the diagnosing process." A few participants (15%, $n = 5$) identified uncertainty for the diagnosis assigned to the client due to the information as presented in the case. The research team coded uncertain-information when participants identified uncertainty due to information missing from the clinical data. For example, participant 005D reports, "I don't feel like there was enough information presented to formulate a proper diagnosis." Regardless of the participant's uncertainty due to the information, two Axis I diagnoses were assigned (major depressive disorder, recurrent, moderate and generalized anxiety disorder) and one Axis II diagnoses was assigned (avoidant personality disorder). No participants identified uncertainty for the diagnosis assigned to the client due to their own clinical and/or personal experience, meaning, when participants were uncertain it was due only to lack of information, not limitations in experience.

There were participants who expressed a gradual shift in their level of certainty as they answered the 14 open-ended interview questions. The research team coded for changes in certainty by reviewing the original certainty of the diagnosis to the expressed

certainty as the interview ended. Twelve participants (36%) become more comfortable with the diagnosis assigned throughout the interview, which the research team coded as progressive certainty. The research team coded progressive certainty when participants expressed more confidence in the diagnostic decision as the interview progressed. For example, participant 008B originally discussed two possible rule out diagnoses, but at the end of the interview becomes more certain of a major depressive disorder, recurrent, moderate diagnosis reporting "the criteria" presented confirm the diagnostic decision. At the end of the interview, participant 008B no longer discussed the other possible disorders originally discussed during the interview. Six participants (18%) become less certain or comfortable with the assigned diagnosis throughout the interview, which the research team coded as regressive uncertainty. Participant 020C demonstrated regressive uncertainty throughout the interview protocol, originally reporting a diagnosis with certainty due to clinical data provided; but at the end of the interview cites she is only "25%" certain of her diagnostic decision of adjustment disorder, with mixed disturbance of emotions and conduct.

In the overall process of arriving at a diagnostic decision, participants revealed attitudes towards diagnosis as a construct, as well as attitudes towards the client. Only one participant (3%) disclosed positive attitudes of diagnosis, citing it is a helpful process in counseling. No participants disclosed negative attitudes of diagnosis, in which they would avoid diagnosis and see the process as pathologizing. The research team coded attitudes towards the client within the transcripts. A few participants (9%; $n = 3$) demonstrated unconditional positive regard for the client, which was coded as holding positive attitudes of the client. Participant 026E demonstrated a positive attitude toward

the client, describing the client as "willing to work on difficulties, intelligent." Participant 026E also continued to demonstrate empathy for the client, describing how the client is "experiencing a great deal of pain." It was more common for participants to hold negative attitudes of the client (unrelated to cultural factors) (21.2%, $n = 7$). For example, participant 023E described the same client (Client E) as neglectful. And again, participant 004E reports Client E was not "a person I would want to be around." Apart from negative attitudes, a majority of participants (49%) described clients to be lying or denying symptoms, coded as perceived client resistance ($n = 16$). Participant 009D demonstrated reports of client resistance stating, "He may be minimizing on some level." Another example of client resistance was coded in the transcript of participant 032F, "He really hasn't been taking responsibility for his action and is blaming others."

Table 4

Participant Differential Diagnosis, Level of Certainty, and Attitude

	Definition	Frequency	Percent
Diagnosis Change-Less Severe	Transitioned from a less severe to a more severe diagnosis	3	9.1
Diagnosis Change-More Severe	Transitioned from a more severe to a less severe diagnosis	1	3.0
Diagnosis-Consideration	Listed possible diagnoses considered, but not advanced thought processes to rule out	23	69.7
Diagnosis-Rule Out	Discussed a rule out diagnosis	5	15.2
Diagnosis-Defer	Deferred a more severe diagnosis to avoid unnecessary labeling	0	0

Certainty-Information	Reported certainty for diagnosis due to information presented in case	20	60.6
Certainty-Experience	Reported certainty for diagnosis due to clinical or personal experience	4	12.1
Uncertainty-Information	Reported uncertainty for diagnosis due to information presented in case	5	15.2
Uncertainty-Experience	Reported uncertainty for diagnosis due to clinical or personal experience	0	0
Progressive Certainty	Became more comfortable with diagnosis throughout interview	12	36.4
Regressive Uncertainty	Became less comfortable with diagnosis throughout interview	6	18.2
Diagnosis-Positive Attitude	Reported fondness for diagnosing, saw diagnosing as helpful	1	3
Diagnosis-Negative Attitude	Reported diagnosing as pathologizing	0	0
Positive Attitude of Client	Viewed client with unconditional positive regard, described warmly	3	9.1
Negative Attitude of Client	Viewed client negatively, not related to the culture of the client	7	21.2
Perceived Client Resistance	Perceived client as denying or lying about symptoms; unwilling to share symptoms	16	48.5

Research question 1 was an overarching inquiry of how participants came to a diagnostic decision, described by diagnostic considerations, level of certainty, and attitudes of the process and client. Research question 1 is divided into two sub-questions that consider the role of diagnostic variance and utilization of cognitive tools in the

clinical decision-making process. The sub-questions are discussed in the following sections.

Sub-question 1. Sub-question 1 states, "how does diagnostic variance relate to the counselor's and counselor trainees' clinical decision making process?" In order to provide a sense of the variance in diagnostic decisions, the frequency rates of disorders assigned on Axis I and Axis II are provided. Following the frequencies of disorders diagnosed, the general medical conditions suggested on Axis III and the psychosocial and environmental stressors listed on Axis IV are summarized. After the Axial diagnostic impressions findings are shared, the qualitative coding frequencies of the four types of diagnostic variance are discussed.

Participants report a variety of diagnostic impressions on Axis I, Axis II, Axis III, and Axis IV of the DSM-IV-TR. On each Axis, participants were provided space to list primary, secondary, and tertiary diagnoses as needed. Participants were also provided an "other" space under each Axis for any other comments or diagnoses.

All 33 participants provided at least one diagnosis on Axis I. Diagnoses involving depressive symptoms were the most frequently assigned disorders on Axis I. Eleven participants diagnosed the hypothetical clients with major depressive disorder, recurrent, moderate (296.32). Five participants diagnosed the hypothetical clients with major depressive disorder, recurrent severe with psychotic features (296.34). Four participants diagnosed the hypothetical clients with major depressive disorder, recurrent, mild (296.31). One participant diagnosed a hypothetical client with major depressive disorder, recurrent, severe without psychotic features (296.33). Four participants diagnosed the hypothetical clients with depressive disorder NOS (311). One participant commented

that dysthymic disorder (300.4) needed to be ruled out in the future. In total, 26 depressive disorders were diagnosed or considered on Axis I.

A variety of adjustment disorders were assigned on Axis I. Nine participants diagnosed the hypothetical clients with adjustment disorder, with mixed anxiety and depressed mood (309.28). Two participants diagnosed the hypothetical clients with adjustment disorder, with depressed mood (309.0). One participant diagnosed the hypothetical client with adjustment disorder, with mixed disturbance of emotions and conduct (309.4). One participant reported consideration of adjustment disorder, unspecified (309.9). In total, 13 adjustment disorders were diagnosed or considered on Axis I.

Some participants diagnosed anxiety disorders on Axis I. Six participants diagnosed the hypothetical clients with generalized anxiety disorder (300.2). One participant diagnosed the hypothetical client with anxiety disorder to a general medical condition (293.84). One participant diagnosed the hypothetical client with anxiety disorder NOS (300.00). In total, eight anxiety disorders were diagnosed or considered on Axis I.

A few participants diagnosed alcohol-induced disorders on Axis I. Two participants diagnosed the hypothetical clients with alcohol-induced anxiety disorder (291.89). One participant diagnosed the hypothetical client with alcohol-induced psychotic disorder with hallucinations (291.3). One participant diagnosed the hypothetical client with alcohol-induced mood disorder (291.89). One participant designated that alcohol abuse needed to be ruled out. In total, five alcohol-related disorders were diagnosed or considered on Axis I.

A few participants diagnosed other mood disorders on Axis I. Two participants diagnosed the hypothetical clients with posttraumatic stress disorder (309.81). One participant diagnosed the hypothetical client with bipolar I disorder, single manic episode, moderate (296.02). In total, three other mood disorders were diagnosed on Axis I.

Many participants consider V-codes on Axis I as well. The most frequently diagnosed V-code was occupational problem (V62.2) (n = 15). Four participants cited relational problem NOS (V62.81). Two participants reported relational problem related to a mental disorder or general medical condition. In total, 21 v-code diagnoses were assigned on Axis I.

In summary of Axis I, 22 different diagnoses were assigned or considered for rule out. Diagnoses ranged in severity from the least severe V-code of occupational problem, to the most severe of major depressive disorder, recurrent, severe with psychotic features. A visual representation of the frequencies of disorders assigned on Axis I is displayed in Table 5.

Table 5

Summary of Axis I Diagnoses

	Frequency				
	Primary	Secondary	Tertiary	Rule Out	Consider-ation
Mood Disorders					
Major depressive disorder, recurrent, moderate (296.32)	11	-	-	-	-
Major depressive disorder, recurrent, severe with psychotic features (296.34)	5	-	-	-	-
Major depressive disorder, recurrent, mild (296.11)	1	2	1	-	-
Depressive disorder, NOS (311)	3	-	1	-	-
Posttraumatic stress disorder (309.81)	-	1	1	-	-
Major depressive disorder, recurrent severe without psychotic features (296.33)	1	-	-	-	-
Dysthymic disorder (300.4)	-	-	-	-	1
Bipolar I disorder, single manic episode, moderate (296.02)	-	-	1	-	-
Alcohol-induced mood disorder (291.89)	-	1	-	-	-
Psychotic Disorders					
Alcohol-induced psychotic disorder with hallucinations (291.3)	-	1	-	-	-
Adjustment Disorders					
Adjustment disorder, with mixed anxiety and depressed mood (309.28)	4	1	3	-	-
Adjustment disorder, with depressed mood (309.0)	2	-	-	-	-
Adjustment disorder, with mixed disturbance of emotions and conduct (309.4)	2	-	-	-	-
Adjustment disorder, unspecified (309.9)	-	-	-	-	1

Anxiety Disorders					
Generalized anxiety disorder (300.2)	1	5	-	-	-
Alcohol-induced anxiety disorder (291.89)	-	2	-	-	-
Anxiety disorder to a general medical condition (293.84)	-	-	1	-	-
Anxiety disorder NOS (300.00)	1	-	-	-	-
V-Codes					
Occupational problem (V62.2)	6	7	-	-	-
Relational problem NOS (V62.81)	2	1	-	-	-
Relational problem related to a mental disorder or general medical condition	-	-	2	-	-
Substance Related					
Alcohol Abuse	-	-	-	1	-

Six participants diagnosed one or more personality disorders on Axis II. Participants 002B and 004E diagnosed three personality disorders for their clients, respectively. Participants 022D and 023E diagnosed two personality disorders for their clients, respectively. Participants 005D and 011E diagnosed one personality disorder for their clients, respectively. Three male non-dominant race/ethnicity clients were diagnosed with personality disorders. Three female dominant race/ethnicity clients were diagnosed with personality disorders. Four hypothetical clients were diagnosed with avoidant personality disorder (301.82). Three hypothetical clients were diagnosed with dependent personality disorder (301.6). Two hypothetical clients were diagnosed with antisocial personality disorder (301.7). Two hypothetical clients were diagnosed with

paranoid personality disorder (301.0). One hypothetical client was diagnosed with personality disorder NOS (301.9). In total, five different personality disorders were diagnosed to the hypothetical clients. None of the participants who diagnosed personality disorders explained the decision in their responses of the interview protocol. A summary in Table 6 is provided below to provide visual representation of the frequencies of personality disorders diagnosed on Axis II.

Table 6

Summary of Axis II Diagnoses

	Frequency		
	Primary	Secondary	Tertiary
Avoidant personality disorder	4	-	-
Dependent personality disorder	-	2	1
Antisocial personality disorder	1	-	1
Paranoid personality disorder	1	1	-
Personality disorder NOS	-	1	-

Three participants cited one or more general medical conditions on Axis III. Two participants identified *symptoms, signs, and ill-defined conditions*. One participant identified *diseases of the nervous system and sense organs*. One participant identified *endocrine, nutritional, and metabolic diseases and immunity disorders*. One participant identified *injury and poisoning*. In total, four different general medical conditions were

assigned on Axis III. A summary of the frequencies of the general medical conditions on Axis III are display in Table 7.

Table 7

Summary of General Medical Conditions Assigned on Axis III

	Frequency	Percent
Symptoms, signs, and ill-defined conditions	2	6.1
Diseases of the nervous system and sense organs	1	3.0
Endocrine, nutritional, and metabolic diseases and immunity disorders	1	3.0
Injury and poisoning	1	3.0

Thirty-two participants (97%) assigned at least one psychosocial and environment stressor on Axis IV. The most frequently cited psychosocial stressor was *occupational problems* ($n = 32$). Many participants were assigned *problems related to interaction with legal system/crime* ($n = 14$). Some participants cited *problems with primary support group* ($n = 9$). Eight hypothetical clients were assigned to have a *problem related to social environment*. Four hypothetical clients were assigned *economic problems*. One hypothetical client was assigned *other psychosocial and environment problems*. In total, six different psychosocial and environmental stressors were assigned on Axis IV. A summary of the frequencies are presented in Table 8.

Table 8

Summary of Psychosocial and Environmental Stressors Assigned on Axis IV

	Frequency	Percent
Occupational problems	32	97
Problems related to interaction with legal system/crime	14	42.4
Problems with primary support group	9	27.3
Economic problems	4	12.1
Other psychosocial and environment problems	1	3.0

Research question 1, sub-question 1 considers how diagnostic variance influences the clinical decision-making process. It is evident from the frequencies of axial diagnoses discussed above that the counselors and counselor trainees in this study differed in their diagnostic decisions. In fact, of the 33 cases in this study (all of which include clients presenting with identical symptoms) no clients were diagnosed across the four axes the same. Diagnostic variance accounts for how counselors may arrive at different diagnostic decisions (Gigerenzer, 2002; Hays et al., 2009). There are four categories of diagnostic variance: *natural variance, information variance, observation/interpretation variance,* and *criterion variance* (Gigerenzer; Hays et al., 2009). All 33 participants answered 14 open-ended interview questions. The research team analyzed these transcripts for occurrences and coded for diagnostic variance. A majority of participants (70%) report information variance in the clinical decision-making process (n = 23). The research team coded information variance when participants

referenced limitations in the clinical data presented by the client, or limitations in their ability to ask for more information. For example, when participant 033F discussed her diagnostic decision she reported, "All I received were initial impression based on only the intake to base the diagnosis on." Another example of information variance was represented by participant 031B when she discussed what might make it difficult for her to get additional information from the client: "The client seems verbal and willing to talk. I do not foresee any difficulties in learning more about him, as long as I do not make this an information gathering relationship and focus instead on warm rapport." Counselors and counselor trainees cited many areas in which they would like more information provided about the client, or the client's environment (see Table 9). The majority (55%, $n = 18$) of counselors and counselor trainees want more information about the client's home and work environment, and his or hers social functioning within those settings. Participants cited the following as insufficient data available in the session: duration and frequency of symptoms, treatment history (e.g., family, medical, and substance abuse), psychosis, and trauma.

Table 9

Areas Cited as Insufficient Data

	Frequency	Percent
Environmental factors	18	54.5
Duration, frequency of symptoms	12	36.4
Substance use and/or substance abuse treatment	9	27.3
Medical treatment history	9	27.3
Psychosis	8	24.2
Family history	6	18.2
Treatment history, unspecified	4	12.1
Trauma	3	9.1

The research team coded criterion variance when participants used different criteria to diagnose or reported similar criteria can fit multiple diagnoses. Some participants (30%) report criterion variance in the clinical decision-making process (n = 10). For example, participant 025D discussed how symptoms related to depression may also be seen in adjustment disorder or dysthymic disorder. Likewise, participant 016D reported the client's spending of money on a shopping spree could be a symptom of bipolar disorder; but diagnosed the client with major depressive disorder, recurrent, moderate. The research team coded data as observation variance when participants interpreted the same symptoms differently. Some participants (27%) reported observation variance in the clinical decision-making process (n = 9). For example,

participant 029E reported, "I was also curious why she kept touching her lips. It made me question if she had body image issues." Only one participant (3%) reported natural variance in the clinical decision-making process (see Table 10).

Table 10

Diagnostic Variance Identified by Participants

	Frequency	Percent
Information variance	23	69.7
Criterion variance	10	30.3
Observation variance	9	27.3
Natural variance	1	3.0

Sub-question 2. Sub-question 2 states, "how are cognitive tools (if any) utilized by counselors and counselor trainees in the clinical decision process?" Cognitive tools represent "mental shortcuts that reduce the complexity and difficulty of judgment tasks" (Smith & Agates, 2004, p. 32). Cognitive tools are employed consciously or unconsciously by counselors and counselor trainees during the clinical interview, potentially impacting the diagnostic decision. All 33 participants answered 14 open-ended questions. The transcripts of those open-ended questions were analyzed by the research team. The research team coded four cognitive tools used by participants within the transcripts: representativeness, anchoring, availability, and vividness (see Table 11).

The axial code representativeness alludes to clinical judgments based on probabilities of a similar experience (Arkes, 1991). Representativeness refers to knowledge of base rates of particular disorders (Favley et al., 2005; Friedlander & Stockman, 1983). A majority of participants (82%) identified representativeness within the criterion (n = 27), meaning participants displayed rigid use to the DSM-IV-TR criteria and/or understanding of differential diagnosis. The research team coded representativeness-criteria when participants connected presented symptoms with criteria for the assigned diagnosis. For example, participant 008B reported certainty of major depressive disorder, recurrent, moderate due to "symptoms, duration, consistency" and emphasized again later in the interview "the criteria" as the single most important factor in the diagnostic decision. A smaller percentage of participants (30%) identified representativeness within the client's culture (n = 10), meaning participants acknowledged likelihood that certain disorders belong to certain cultural groups. The research team coded for representativeness-culture when participants connected culture and diagnoses. For example, participant 006C reported, "My client was Latina. I suppose alcoholism and socioeconomic status are things to consider." Participant 006C fails to reflect this awareness thoroughly in the diagnostic decision, and therefore this statement is also coded for potential cultural bias (described later in this chapter).

The axial code anchoring is the process in which clinical judgments are based on salient information shared by the client early in the clinical interview. Researchers suggest when employing anchoring, counselors and counselor trainees may be unable to accommodate for further clinical information shared during the clinical interview beyond the original salient data shared (Friedlander & Stockman, 1983; Hays et al., 2009;

Tversky & Kahneman, 1974). A majority of participants (82%) identified anchoring within their clinical decision-making process (n = 27). The research team coded anchoring in the data when participants' final judgments were linked to original statements in the transcript. For example, participant 001E reports initial impressions of depression due to "the consistent crying, hearing of voice, depressed mood, unable to focus, feelings of worthlessness, recurrent thoughts of death, flat affect." When the participants is asked to consider the degree to which those initial impressions of the client weighed into her diagnostic decision, she reported, "I would imagine heavily considering [depression] is what I diagnosed her with." Another example of anchoring is demonstrated by participant 003A, who reported initial impressions of the client: "She presented as down and seemed to have a weight on her shoulders. Her vocal inflection was generally flat and depressed." Later in the transcript participant 003A reported the initial impression, "gave me a sense that she might be depressed. Looking up her symptoms in the DSM confirmed it for me."

The axial code availability is the process by which clinical judgments are based on the familiarity of the symptoms (Friedlander & Stockman, 1983; Tversky & Kahneman, 1974). Availability asserts that diagnoses are established based on the ease in which a counselor can compare symptoms with criterion of disorders (Dumont & Lecomte, 1987; Hays et al., 2009). The majority of participants (70%) identified availability-broad (n = 23), meaning a broad range of symptoms were integrated into the diagnostic decision. The research team coded availability-broad when participants listed four or more symptoms within their summarization of symptoms that led to a diagnostic decision. For example, participant 005D summarized the client's symptoms: "Client

reported being depressed, feeling others were critical of his work, not wanting social interactions at home, spending time drinking, wanting to be alone, and past history of suicidal ideation and plan." Fewer participants (15%, $n = 5$) identified subcode availability-context, in which symptoms were familiar or commonly associated with certain environmental stressors. For example, participant 006C identified anxiety as an appropriate response to the client's pending court case. A few participants (9%, $n = 3$) identified the subcode availability-experience, in which symptoms were familiar due to the clinical and/or personal experience of the participant. For example, participant 029E cited the potential for body image issues with Client E; this participant also cited her specialized population with whom she works is adolescents. It may be that participant 029E saw symptoms of body image issues because of her familiarity due to her experience with adolescents. Only one participant (3%) identified availability-academic, in which symptoms were familiar due to classroom learning and/or academic training. In this example, participant 004E connected her counseling course experience to identifying the symptoms of depression.

The axial code vividness refers to the influence a more salient or intensive symptom may have on a diagnostic decision (Hays et al., 2009). A majority of the participants in this study (73%) identified vividness in their clinical decision-making process ($n = 24$). The research team coded vividness in the response to the interview protocol question of a salient or intense symptom presented by the client. For example, participant 013E cited vividness of "past trauma and drug use, hearing voices." The vividness symptoms were reflected in the secondary Axis I diagnosis of posttraumatic stress disorder. Many participants reflected the symptoms of depression as the salient or

intense aspect of the case. A small portion of participants (18%) report that salient criteria did not heavily influence their diagnostic decision ($n = 6$). For example, participant 021E reported no salient or intense symptoms impacted her diagnostic decision, "not at all".

Table 11

Cognitive Tools Identified by Participants

	Definition	Frequency	Percent
Representativeness Criteria	Likelihood that a criterion belongs to a certain diagnosis	27	81.8
Representativeness Culture	Likelihood that certain disorders belong to certain cultural groups	10	30.3
Anchoring	Earlier clinical data hold more weight in final decision	27	81.8
Availability-Broad	Integrated broad range of symptoms	23	69.7
Availability-Experience	Diagnosis made based on clinical and/or personal experience of clinician	5	15.2
Availability-Context	Symptoms reflected common responses for certain environmental stressors	3	9.1
Availability-Academic	Diagnosis made based on general cluster of symptoms learned in academic training	1	3.0
Vividness	More salient/intense criteria influenced diagnostic decision	24	72.7
No Vividness	No salient/intense criteria influenced diagnostic decision	1	3.0

In summary of how counselors and counselor trainees make clinical decisions, diagnostic variance and cognitive tools were identified themes impacting diagnostic decisions. As Figure 4 displays, client data is presented to counselors and counselor trainees. The axial codes of diagnostic variance (information, criteria, observation, and natural) and cognitive tools (anchoring, representativeness, vividness, and availability) were identified as influential to the clinical decision-making process. Level of certainty of also plays a role in the final diagnostic decision. Research question 1 considered how counselors and counselor trainees make clinical decisions. The clinical decision-making process was described by diagnostic consideration, level of certainty, attitudes of diagnosis and client, diagnostic variance, and utilization of cognitive tools.

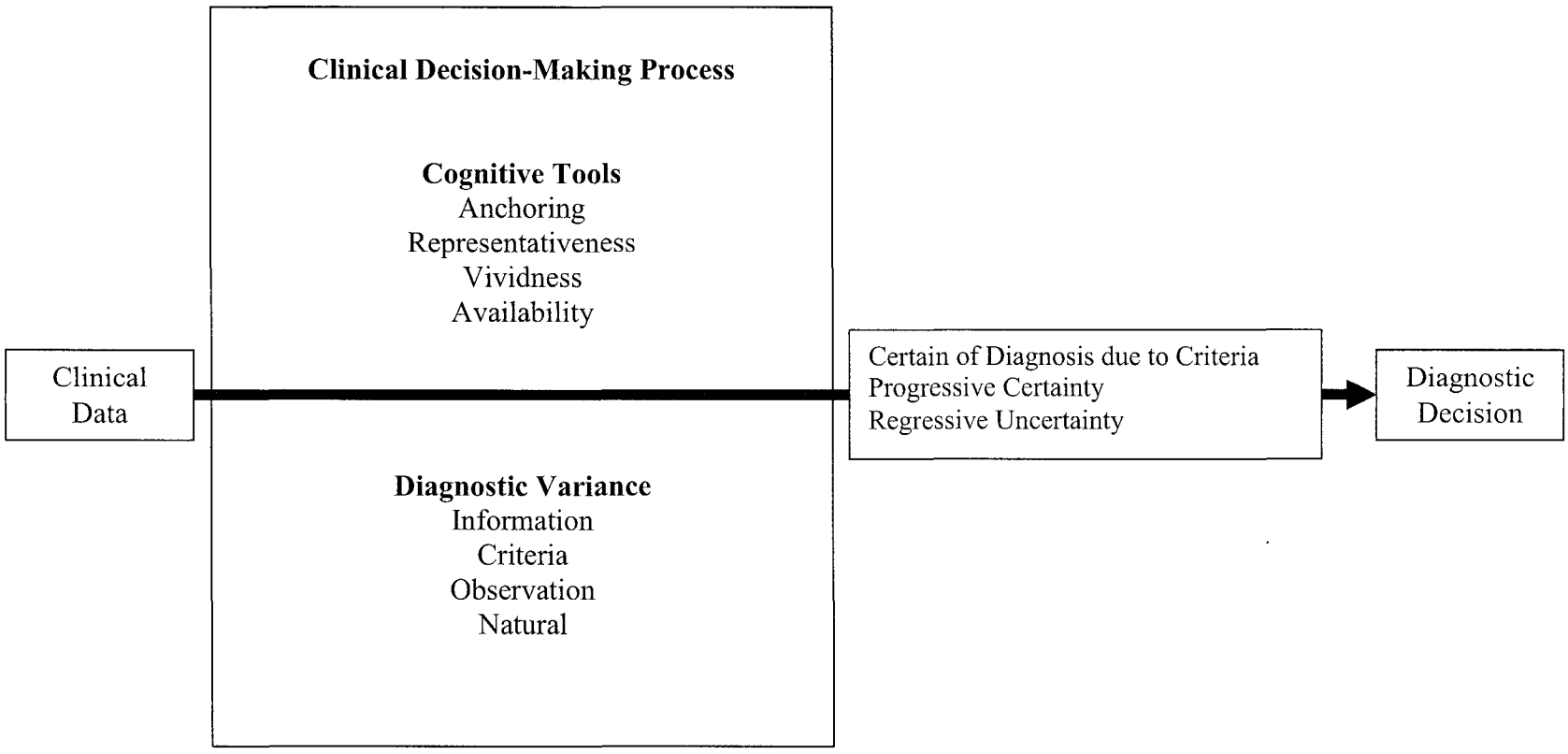

Figure 4. Developing theory of the clinical decision-making process.

A preliminary theory was developed and displayed in Figure 4. Research question 2 considers the potential influence of cultural factors in the clinical decision-making process and is discussed in the following section. Cultural factors may assist to further develop the theory of clinical decision-making.

Research Question 2

Research question 2 states, "how do cultural factors influence the clinical decision-making process?" This research question is divided into two sub-questions. Sub-question 1 is measured qualitatively and therefore described in this section. Sub-question 2 of research question 2 is measured quantitatively and therefore are described later in Chapter Four. The overarching question inquires for how cultural factors influence the clinical decision-making process.

All 33 participants answered 14 open-ended questions in which they described their clinical decision-making process. Throughout the transcripts, the research team identified instances in which cultural factors were discussed in terms of bias held by participants (see Table 12). The research team coded participant statements as bias when cultural factors were referenced separate from the client's presenting problem or the participant's diagnostic decision. The most frequently cited bias among participants was gender bias (27%, $n = 9$). The axial code gender bias was coded by research team members when participants' referenced issues related to gender. For example, participant 014F reported, "Particularly because he is a male I am more inclined to believe that he is not exaggerating his symptoms." Another example of gender bias was coded in the transcript of participant 011E, "She is a female and such she speaks out her emotions better than what a male client would do." The axial code SES bias was identified by

research team members when participants' referenced bias related to SES. Some participants referenced socioeconomic status (SES) bias (18%, $n = 6$). For example, participant 024B reported, "The client appeared to be relatively high functioning; middle class and wholesome." The axial code race/ethnicity bias was coded by research team members when participants referenced race/ethnicity A few participants referenced race/ethnicity (12%, $n = 4$). For example, when participant 005D responded to a question on the interview protocol (What might make it difficult to get this additional information?), the participant reported the client may not be willing to share information, "he needs to present as a strong, macho male." The research team also coded race/ethnicity bias in the transcript of participant 018B, "Client may be used to being judged or observed, as an African American, which could be exacerbating his symptoms."

Table 12

Participants' Citations of Cultural Bias

	Frequency	Percent
Gender Bias	9	27.3
Socioeconomic Status Bias	6	18.2
Race/ethnicity Bias	4	12.1
Heterosexism Bias	4	12.1
Age Bias	1	3.0
Spirituality Bias	1	3.0
Family Bias	0	0

The axial code heterosexism bias (12%, $n = 4$) was identified by research team members when participants referenced bias related to sexual orientation. For example, participant 027A reported, "She has children and has a partner (rather than a spouse) this may indicate history of relational problems." Participant 027A reported biased assumptions from the neutral language of *partner*. Other participants assumed non-dominant sexual orientation of the client due to the use of neutral language. For example, participant 032F reported the client "identified as homosexual." The research team coded this statement as bias because participant 032F identified the client to be gay, but did not further discuss potential implications to the presenting problem with this information. The axial code age bias was coded by research team members when one participant referenced bias related to age. For example, participant 030E reported of her client, "She

seems immature for her age, she never stated her age but she did say she had a partner she lived with. Her mannerisms and way of speaking reminded me of a teenager though." The axial code spirituality bias was referenced by one participant. Participant 018B referenced church, but did not view religion as helpful to the client. No participants referenced family bias.

Research question 2 represents the analysis of how cultural factors influence the clinical decision-making process of counselors and counselor trainees. In the overarching question analysis the research team coded for instances of cultural bias in the clinical-decision making process, finding gender bias to be the most prevalent bias. In sub-question 1 of research question 2, the research team coded for how the client's cultural identity influenced the case conceptualization.

Sub-question 1. Sub-question 1 states, "how does a client's cultural identity influence case conceptualization." All 33 participants answered 14 open-ended questions related to their clinical decision-making process. Two questions in particular inquired for information specific to how cultural factors influence the presenting problem and diagnostic decision. The most frequently considered cultural factor influencing the presenting problem and/or diagnostic decision was gender (68%, $n = 22$). The axial code gender was identified by research team members when participants referenced gender in consideration of the presenting problem and/or diagnostic decision. For example, participant 007A demonstrates awareness of gender in the client's presenting problem, "She is also a female, and although she is a manager, she may not be as respected." Participant 009D also demonstrated awareness of gender in relationship to the Latino culture, "If this client falls more in line with the traditional Latino culture and line of

thought concerning male expression of emotion, then the client's symptoms must be very severe of his functioning severely impacted for him to seek counseling and to speak about what he's going through with a stranger."

At a similar frequency, the cultural factor of race/ethnicity was considered influential to the presenting problem and/or diagnostic decision (61%, $n = 20$). The axial code race/ethnicity was coded in transcripts when participants demonstrated awareness of race/ethnicity impacting the presenting problem and/or diagnostic decision. For example, participant 007A demonstrated awareness for the impact of race/ethnicity in relationship to the client's presenting problem: "She's African American, and depending where her job is located, she may be under appreciated by her co-workers." Participant 015D also demonstrated accommodation for race/ethnicity in the client's presenting problem. Participant 015D reported the Latino culture, "Puts high expectations on occupational success and ability to provide for the family. A situation that threatens that success/ability is likely to produce a high level of anxiety and depression." Participant 018B reported, "As a member of the dominant culture, I have to be careful to be aware of the client's culture and how he might present his symptoms differently than someone of my culture. I want to avoid over pathologizing the client's experience by taking into account some of the stereotypical… he probably faces that I do not." The research team coded participant 018B as demonstrating significant awareness for other cultures.

The remaining cultural factors were less frequently considered influential to the presenting problem and/or diagnostic decision. Five participants reported family of origin as influential to the presenting problem and/or diagnostic decision. The axial code of family was coded by research team members when participants referenced family of

origin as important consideration in the presenting problem and/or diagnostic decision. For example, participant 023E reported from the clinical data presented, "It is obvious that in the client's culture performance is very important. Failing is not an option." Participant 025D also demonstrated awareness for how family of origin impacts presenting problems, "There is a strong family component to the client's description. Client reports feeling better when spending time with his family and worrying about being a poor role model. Sometimes the family is more important than the individual."

Three participants reported the axial code age as influential to the presenting problem and/or diagnostic decision. For example, participant 028E discussed the important of being open to non-stereotypical diagnoses for someone middle-aged, "I took care to not eliminate diagnoses that might not be stereotypical." And, three participants reported the axial code sexual orientation as influential to the presenting problem and/or diagnostic decision. The research team coded awareness for sexual orientation for participants who assumed non-dominant sexual orientation and further considered the potential cultural implications in the presenting problem and/or diagnostic decision. For example, participant 007A reported, "Client also mentioned that she had a partner—if that partner is female, she may also be struggling with identity issues."

Forty-two percent of participants (n = 14) reported that the client's cultural identity was not influential to the presenting problem and/or diagnostic decision. The research team coded the axial code none, when participants specifically referenced that no cultural consideration were made in the conceptualization of the presenting problem and/or diagnostic decision. For example, participant 001E reported, "I did not consider any [cultural factors] given that she presented as an individual who was part of the

'dominant' culture." A few participants (12%, $n = 4$) reported there was not enough information presented about the client to determine his or her culture. The research team coded axial code not enough information when participants demonstrated awareness that culture is not always visible. For example participant 003A reported, "We do not have enough information about the client's culture to determine what may be important." Table 13 presents a summary of frequencies for cultural factors relevant to presenting problem and/or diagnostic decision.

Table 13

Cultural Factors Relevant to Presenting Problem and/or Diagnostic Decision

	Frequency	Percent
Gender	22	66.7
Race/ethnicity	20	60.6
Family	5	15.2
Age	3	9.1
Sexual Orientation	3	9.1
No Cultural Factors Influential	14	42.4
Not Enough Cultural Information	4	12.1

Developing Theory of the Clinical Decision-Making Process

This study tested and revised a preliminary theory of clinical decision-making (Hays et al., 2009; Hays et al., 2010). Clinical decision-making represents a complex process in which counselors interpret clinical data as presented by clients and make diagnostic decisions as appropriate. This study employed grounded theory qualitative data analyses to identify what themes of clinical decision-making are prevalent in the process for counselors and counselor trainees. A visual representation of the developing theory of the clinical decision-making process is displayed in Figure 5.

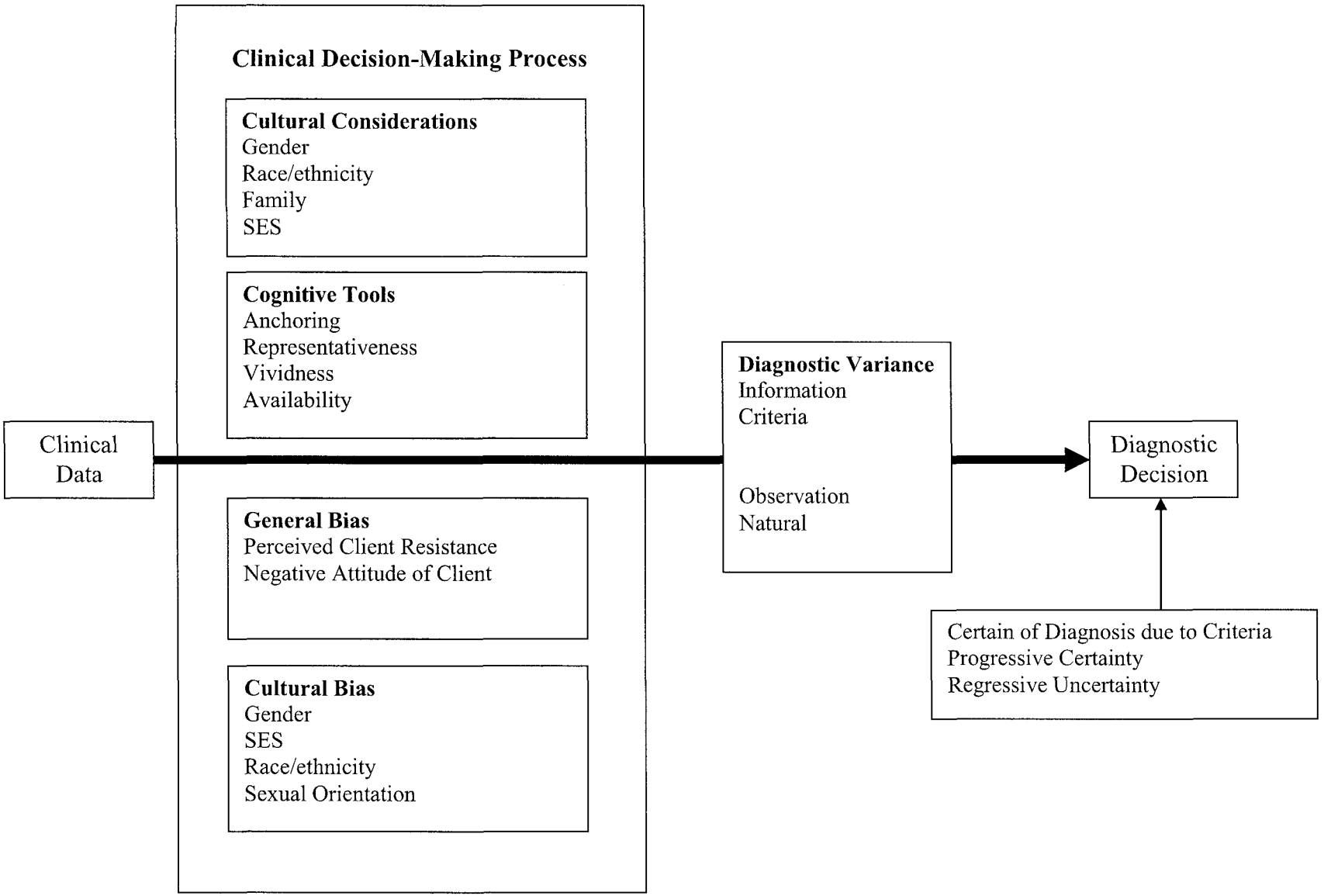

Figure 5. A developing theory of the clinical decision-making process of counselors and counselor trainees.

The developing theory demonstrates that when presented with identical symptomology, counselors and counselor trainees arrive at different diagnostic decisions. The arrival at different diagnostic decisions is accounted for through diagnostic variance, specifically information variance, criterion variance, and observation. Information variance is the most prevalent form of diagnostic variance accounting for differences in diagnostic decisions. Meaning, what clinical data are shared by the client or asked for by the counselor or counselor trainee seems to be very important in arriving at a diagnostic decision. After being presented with symptomology, counselors and counselor trainees employ cognitive tools (consciously or unconsciously) to interpret the clinical data. The most prevalent cognitive tools utilized are anchoring, representativeness, vividness, and availability. Salient or intense symptoms (vividness) presented early in the clinical session become the symptoms counselors and counselor trainees adhere to when making a diagnostic decision (anchoring). Also, the symptoms counselors and counselor trainees are drawn to are ones in which they are familiar (availability). When reviewing symptoms, counselors and counselor trainees focus on how the symptoms can be translated into criteria (representativeness).

The clinical decision-making process is also influenced by the race/ethnicity and gender of the client. Many counselors and counselor trainees are considering cultural factors when conceptualizing the presenting problem and diagnostic decision. Gender is considered slightly more frequently than race/ethnicity in the decision-making process. Family and SES were also considered by counselors and counselor trainees as they conceptualized the problems presented by the client and made a diagnostic decision.

To some degree, counselors' and counselor trainees' clinical decision-making process is impacted by their own cultural bias. Specifically, gender, SES, race/ethnicity, and sexual orientation bias influence the perceptions and cognitive processes of counselors and counselor trainees as they arrive at diagnostic decisions. Some counselors and counselor trainees are further impacted by a personal negative attitude of the client.

Overall in the clinical decision-making process, counselors and counselor trainees are certain of their diagnostic decisions due to the symptoms presented and criteria of the disorder(s). To a lesser degree, counselors and counselor trainees become more certain of their diagnostic decision throughout the clinical decision-making process. Many counselors and counselor trainees consider other possible diagnoses, but not an in-depth consideration of differential diagnoses.

The theory of the clinical decision-making process of counselors and counselor trainees as presented in this section requires further testing and revisions, as this study is not without its limitations. In order to confidentially generalize this theory to a larger population of counselors and counselor trainees a much larger sample population is required. Other internal and external validity threats serve as limitations to this study. The limitations are described in Chapter 5.

This section presented the qualitative findings within the grounded theory design of the study. The results for research question 1 and its sub-questions, as well as research question 2 and its first sub-question were described. The remainder of the chapter will report the findings of the quantitative method, a nonexperimental survey design. An overview of the scoring responses for the instruments is presented. Then the remaining research questions and hypotheses are presented with the results of the statistical analysis.

Scoring Responses on the Quantitative Instruments

The quantitative portion of this mixed methods study utilized three measurements. (1) The Global Assessment of Functioning Scale (GAF; APA, 2000) measured the current level of functioning of the client as perceived by the participant. (2) The Prognosis Scale (PS; Friedlander & Stockman, 1983) measured the potential level of functioning of the client if treatment is accessed as perceived by the participant. (3) The Privilege and Oppression Inventory (POI; Hays et al., 2007) measured for cultural bias of each participant. The scoring responses for the three quantitative instruments utilized in this study are described in the following section.

The variable of current client level of functioning was measured with the GAF. The GAF is a 100 point scale divided into 10 categorical ranges. The maximum score available is a 100, which represents superior functioning absent of all mental health symptoms. The minimum score available is a 0, which represents extreme debilitation due to mental health symptoms resulting in danger of severely hurting self or others. The mean score on the GAF in this study was 55.70 (SD = 9.76; range = 42). This score is described as "moderate symptoms" and "moderate difficulty in social, occupation, or school functioning." The highest GAF score given to a client in this study was 75, which describes mental health symptoms displayed by an individual as "expectable reactions to psychological stressors." The lowest GAF score assigned to a client in this study was 33, which describes an individual's functioning as majorly impaired in several areas, to include work and home. The GAF scores were unevenly distributed, platykurtic (.314), and negatively skewed (-.678) (see Figure 6). This uneven distribution indicates

inconsistency in the assessment of client functioning; with a slight tendency to rate clients as lower functioning.

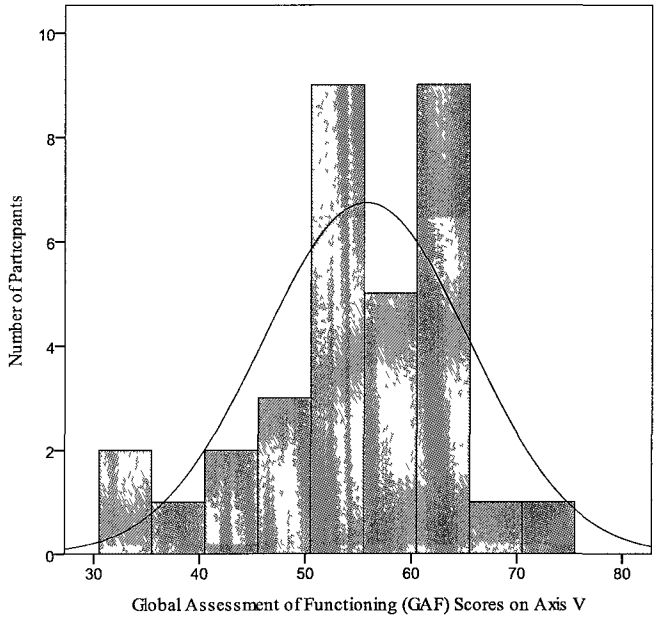

Figure 6. Distribution of GAF scores.

The variable of prognosis (expected client level of functioning if treatment is accessed) was measured with the PS. The PS is a 10 point scale divided into 10 categorical descriptions. The PS utilizes identical categorical descriptions from the GAF. The maximum score of 10 represents extreme debilitation due to mental health symptoms resulting in danged or severely hurting self or others. The minimum score of 1 represents superior functioning, absent of all mental health symptoms. The mean score on the PS in this study was 2.94 (*SD* = 1.64; range = 6). A score of 3 represents "minimal symptoms may be present by no more than slight impairment in functioning." An individual with

this score would experience "everyday" worries that "sometimes get out of hand." The highest PS score assigned to a client in this study was a 7 ($n = 2$), which represents "major impairment in several areas." The lowest PS score assigned to a client in this study was a 1 ($n = 4$), which represents superior functioning absent of all mental health symptoms. An individual with a score of 1 is described to be "sought out by others because of his/her warmth and integrity." The PS scores were unevenly distributed, mesokurtic (.925), and positively skewed (1.24) (see Figure 7). This uneven distribution indicates inconsistency of the participants' assessment of client prognosis. The positive skew indicates a tendency to rate better prognoses.

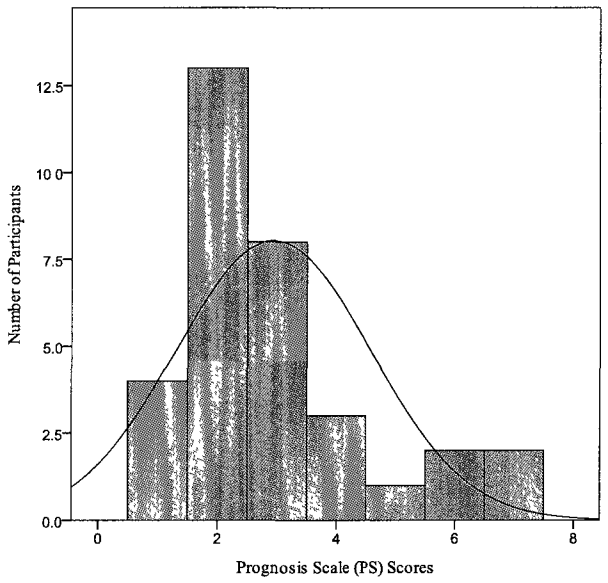

Figure 7. Distribution of PS scores.

The scoring of the POI was accomplished in SPSS, 19.0 for Windows (SPSS, 2010). One of the variables collected for use in this research study was cultural bias as

measured by the POI. The complete POI consists of 39 items. Each item is rated on a 6-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (6). Two of the items are reverse scored (Items 31 and 35). The maximum score available on the POI is 6 and the minimum is 1. A higher score on the POI indicates participants hold less biased cultural attitudes, and therefore have more awareness for privilege and oppression in American society. All 33 participants in the study completed the POI. The mean score for the POI in this study was 4.72 (*SD* = .940; range = 4.03). The POI scores were unevenly distributed, leptokurtic (1.95), and negatively skewed (-1.42) (see Figure 8). This distribution indicates the participants' self-report of cultural awareness is clustered near a score of 5.0.

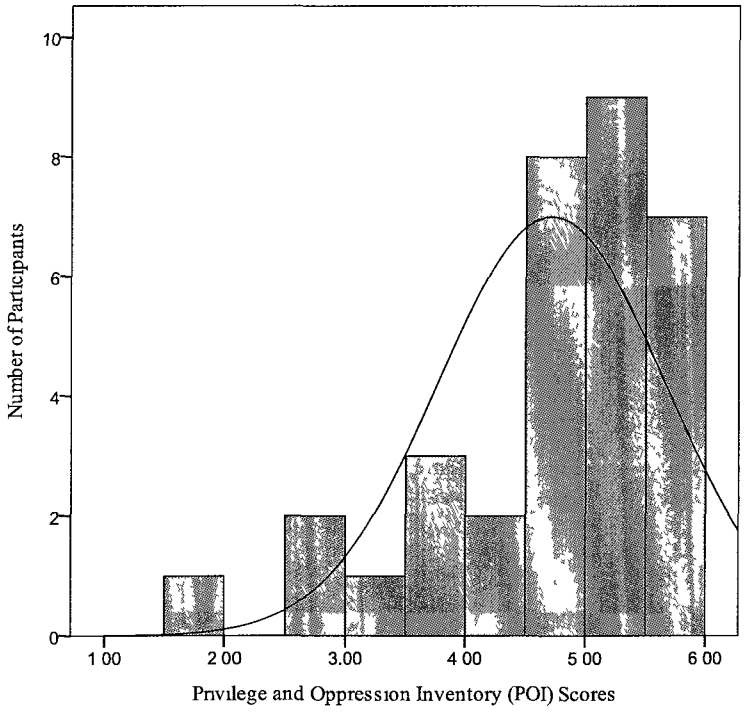

Figure 8. Distribution of POI scores.

The POI consists of four sub-scales: White privilege awareness, heterosexism awareness, Christian privilege awareness, and sexism awareness. The mean score for the White privilege awareness subscale in this study was 4.46 (SD = 1.09). The mean score for the heterosexism awareness subscale in this study was 5.02 (SD = .936). The mean score for the Christian privilege awareness subscale in this study was 4.69 (SD = 1.21). The mean score for the sexism awareness subscale in this study was 4.79 (SD = 1.00).

Statistical Assumptions

The data set was screened by the researcher for normality using SPSS 19.0 (SPSS, 2010). The subject variables of participant cultural factors (race/ethnicity and gender) were tested for normality with the dependent variables of cultural bias and level of functioning (GAF, PS, and POI). The sample size is less than 50 samples; therefore the Shapiro-Wilk Test is most appropriate (Meyers, Gamst, & Guarino, 2006). Results of the test indicate that groups are not normally distributed ($p > .05$). Due to violated assumptions of normality of this sample, statistical findings of this study should be reviewed with discretion.

Quantitative Findings

The quantitative portion of this mixed-methods study was designed with two research questions. The results of the detailed statistical analyses of those two questions are described in the following section. The analytical procedure for each question and results of the analysis for each hypothesis will be presented in the following section.

Research Question 2, Sub-Question 2

Research question 2, sub-question 2 states, "What impact does the cultural match between the counselor and counselor trainee and client have on case conceptualization?"

There are two cultural factors to consider in this question: race/ethnicity and gender. The relationship between the client's race/ethnicity and whether race/ethnicity was considered by the participants in the case conceptualization was analyzed. The relationship between the client's gender and whether gender was considered by the participant in the case conceptualization was also analyzed.

Test of Hypothesis 1

Hypothesis 1 states that counselors from the dominant culture are less likely to consider cultural factors when making clinical decisions. The analysis consisted of a Chi-Square cross-tabulation of the degree of cultural match of the participant-client pairing and whether race/ethnicity was considered in the case conceptualization. The analysis also consisted of a Chi-Square cross-tabulation of the degree of cultural match of the participant-client pairing and whether gender was considered in the case conceptualization. For the consideration of race/ethnicity, the cross-tabulation was statistically significant (χ^2 (1, n = 33) = 5.54, p = .019). Therefore, for race/ethnicity, Hypothesis 1 was supported. For the consideration of gender, the cross-tabulation was not statistically significant (χ^2 (1, n = 33) = .062, p = .803). Therefore, for gender, Hypothesis 1 was not supported.

Research Question 3

Research question 3 states, "What is the relationship between cultural bias, perceived level of functioning, and prognosis in the clinical decision-making process?" The relationship between cultural bias (as measured by the POI) and perceived level of functioning (as measured by the GAF) was analyzed. The relationship between cultural bias (as measured by the POI) and prognosis (as measured by the PS) was analyzed. The

relationship between perceived level of functioning (as measured by the GAF) and prognosis (as measured by the PS) was analyzed.

Test of Hypothesis 3

Hypothesis 3 stated counselors demonstrating higher levels of cultural awareness will perceive client level of functioning and prognosis more favorably. A correlational analysis was conducted using the participant's POI score and GAF score. The correlation was not statistically significant ($r = -.086$, $p = .636$). A correlational analysis was conducted using the participant's POI score and PS score. The correlation was not statistically significant ($r = .070$, $p = .700$). A correlational analysis was conducted using the participant's GAF score and PS score. The correlation was not statistically significant ($r = -.224$, $p = .210$). Hypothesis 3 is not supported.

Additionally, a series of analyses of variance assessing the relationship between participants' cultural factors (race/ethnicity and gender) and cultural bias and perceived level of functioning in clinical decision making were performed (see Table 14). Data indicated a main effect of race/ethnicity and POI scores, $p = .011$, partial $\eta^2 = .33$. No other analyses were statistically significant.

Table 14

Analysis of Variance for Three Key Variables and Participant Race/ethnicity and Gender

Variable and Source	*df*	*F*	*P*	η^2	Power
POI					
Race/ethnicity	3	4.52	.011	.33	.83
Gender	1	0.00	.963	.00	.05
Race/ethnicity x Gender	1	0.00	.981	.00	.05
GAF					
Race/ethnicity	3	0.29	.832	.03	.10
Gender	1	0.61	.440	.02	.19
Race/ethnicity x Gender	1	0.12	.737	.00	.06
PS					
Race/ethnicity	3	0.91	.451	.09	.22
Gender	1	1.03	.319	.04	.17
Race/ethnicity x Gender	1	0.12	.783	.00	.06

The quantitative findings of this study are incorporated into the developing theory of the clinical decision-making process of counselors and counselor trainees (Figure 9). The statistically significant relationship between degree of cultural match and consideration of race/ethnicity are integrated into the model, as related to cultural considerations. Also, the statistically significant relationship between race/ethnicity and

POI scores are integrated into the model, as related to cultural bias demonstrated in the clinical decision-making process.

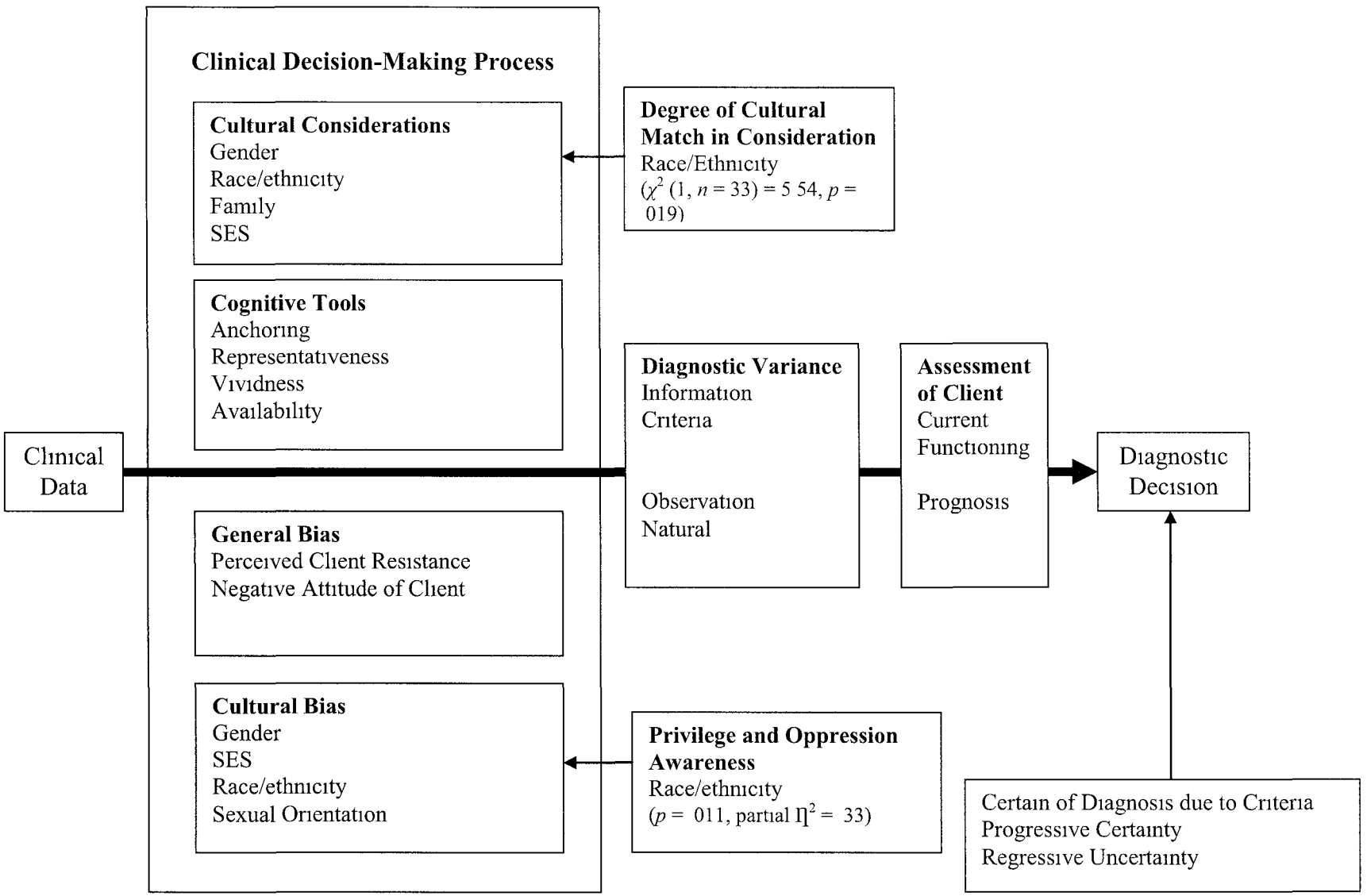

Figure 9 Developing theory of clinical decision-making process with cultural implications

Summary

The results of this study indicate seven main findings. First, findings indicate that provided the same clinical data, counselors and counselor trainees arrive at different diagnostic decisions. Second, differences in diagnostic decisions are accounted for by all four types of diagnostic variance. Third, counselors and counselor trainees rely on a variety of cognitive tools when making clinical decisions. Fourth, counselors and counselor trainees reference cultural bias within their clinical decision-making process. Fifth, some counselors and counselor trainees consider cultural factors when processing diagnostic decisions. Sixth, cross-tabulations of counselor-client pairs indicate degree of race/ethnicity match as a statistically significant indicator that race/ethnicity will be considered in the clinical decision-making process. However, there was no statistically significance that degree of gender match indicates gender will be considered in the clinical decision-making process of counselors and counselor trainees. Finally, there were no statistically significant correlations between POI, GAF, and PS scores. However, an analysis of variance indicates a statistically significant relationship between POI scores and participant race/ethnicity.

In the next chapter, the results of this study are discussed in relationship to the current literature on clinical decision-making. Specifically the relationship between the current findings and the preliminary theory of Hays et al. (2009) and Hays et al. (2010) are discussed. The limitations of the study are discussed in more detail Chapter 5. The following chapter also outlines the potential implications for counselors and counselor training programs. Suggestions for future research are explored.

CHAPTER FIVE

DISCUSSION

The purpose of this mixed methods research study was to investigate the clinical decision-making process of counselors and counselor trainees. In particular, the role of diagnostic variance and use of cognitive tools was explored. The study also analyzed the potential influence of cultural bias and degree of cultural match on the clinical decision-making process. Correlational analyses between cultural bias, level of functioning, and prognosis were reviewed to further explore the clinical decision-making process. A random sample of counselors and counselor trainees were invited to participate in the study and received the link to the Internet-based survey. In total, 33 counselor and counselor trainee participants completed the study ($n = 33$).

The majority of this sample consisted of European American/White non-Hispanic heterosexual females. Counselor trainees represent 64% of the participants in the study. Counselors represent 36% of the participants in the study. Overall, the majority of the participants are affiliated with a CACREP counseling program ($n = 32$). Most participants have completed a diagnosis and treatment planning course (75.8%) and a multicultural/diversity course (87.9%). The participants in this study report lower rates of counseling experience in the field, before and after the completion of the masters' degree in counseling. The average amount of counseling experience before completion of the masters' degree is 10.67 months. The average amount of counseling experience after completion of the masters' degree is 11.91 months.

The results of this study indicate seven main findings. First, findings indicate that provided the same clinical data, counselors and counselor trainees arrive at different

diagnostic decisions. Second, differences in diagnostic decisions are accounted for by all four types of diagnostic variance. Third, counselors and counselor trainees rely on a variety of cognitive tools when making clinical decisions. Fourth, counselors and counselor trainees reference cultural bias within their clinical decision-making process. Fifth, 85% of counselors and counselor trainees in the study considered at least one cultural factor when processing diagnostic decisions. Sixth, cross-tabulations of counselor-client pairs indicate degree of race/ethnicity match as a statistically significant indicator that race/ethnicity will be considered in the clinical decision-making process. However, there was no statistically significance that degree of gender match indicates gender will be considered in the clinical decision-making process of counselors and counselor trainees. Finally, there were no statistically significant correlations between POI, GAF, and PS scores. However, an analysis of variance indicates a statistically significant relationship between POI scores and participant race/ethnicity.

Relationship of Findings to Prior Studies

In consideration of how counselors and counselor trainees arrive at clinical diagnostic decisions, the researcher analyzed participant responses for changes in decisions, certainty of decisions, and attitudes of the process. Overall, counselors and counselor trainees remained consistent in the level of severity of the diagnosis throughout the clinical decision-making process. For the most part (61%), counselors and counselor trainees were certain about their diagnostic decisions due to the information presented by the client. The clinicians did not rely on their own experience when making the diagnostic decision. Although, it should be noted that the sample of counselors and counselor trainees in this study averaged less than one year of clinical experience before

and after the completion of the masters' degree in counseling. It may be that counselors and counselor trainees could not rely on their own experience to be certain of the diagnosis because they lack the experience overall. For 36% of the participants, there was increased certainty of their decision as time progressed. Only 18% of participants display regressive uncertainty of their diagnostic decision as time progressed. Therefore, it seems counselors and counselor trainees are certain and remain certain about their diagnostic decisions. This is not consistent with the previous study (Hays et al., 2009), in which many participants reported uncertainty of their final diagnostic decision.

For the counselors and counselor trainees in this study, 70% consider a multitude of disorders during their clinical decision-making process. However, this consideration is limited to a simple listing of other possibilities, not a displayed advanced thought process of why the other possible disorders are not suitable for the client. Only 15% of the counselors and counselor trainees were able to articulate the advanced thought process of what clinical data were needed to rule out possible disorders. The findings associated with diagnostic considerations should be analyzed with caution, as there are limitations to the structured interview protocol methodology. It may be that some participants were more willing or able to articulate diagnostic considerations through written dialogue. With consideration of the potential limitations, in the clinical decision-making process there is limited ability to educationally differentiate diagnoses. Overall in the process, counselors and counselor trainees are certain of diagnostic decisions, but do not display a deeper level of consideration of possibilities.

The counselors and counselor trainees in this study did not express, with significance, positive ($n = 1$) or negative attitudes ($n = 0$) towards the system of

diagnosing clients. There was no instance of deferring diagnosis to avoid unnecessary labeling of the client. Overall, it seems as though counselors and counselor trainees are willing to diagnose mental health disorders; however participants completing a study on clinical decision-making may assume the expectation is to diagnose. Although participants did not display attitudes towards the system of diagnosing, there was evidence of a positive or negative attitude toward the client. A small percentage of counselors and counselor trainees (9%) directly expressed a positive attitude of the client, demonstrating unconditional positive regard for the client. For example, a participant described the client as "warm." A few counselors and counselor trainees (21%) expressed a negative attitude in general of the client, unrelated to any specific cultural factor. For example, a participant reported of the client, "she does not seem like a person I would want to be around."

In the overarching view of how counselors and counselor trainees arrive at clinical diagnostic decisions, it seems decisions are relatively certain due to information (more so than clinical experience) and do not fluctuate in severity of the final diagnostic decision. It may be this consistency in the process is due to limited consideration of differential diagnosing in the clinical decision-making process. It should be noted that overall, counselors and counselor trainees are willing and able to diagnose. As established in the literature (Gigerenzer, 2002), there is variance among the diagnostic decisions of counselors and counselor trainees. The diagnostic variance within this study is discussed in the following section.

Diagnostic Variance and the Clinical Decision-Making Process

Consistent with previous research (Hays et al., 2009; Hays et al., 2010) when presented with identical symptomology, counselors and counselor trainees assign a multitude of mental health disorders on both Axis I and Axis II; a few general medical conditions on Axis III; and a variety of psychosocial and environmental stressors on Axis IV. Through qualitative analysis, the researcher is able to account for the variance in diagnostic decisions among the counselors and counselor trainees in the study. To varying degrees, all four types of diagnostic variance were present in the study. Each category of diagnostic variance is discussed in the following section.

Information variance. The amount of clinical data the client is willing to share with the clinician during the clinical interview, as well as what the clinician is willing to ask of the client is representative of information variance (Gigerenzer, 2002). In this study, information variance was the most predominant type of diagnostic variance influencing the clinical decision-making process ($n = 23$). As consistent with established research (Brammer, 1997; Hays et al., 2009), diagnostic decisions are significantly impacted by the clinical data shared and collected during the counseling session. Counselors and counselor trainees cited many areas in which they would like more information provided about the client, or the client's environment. The majority (55%, $n = 18$) of counselors and counselor trainees want more information about the client's home and work environment, and his or her social functioning within those settings. Consistent with previous research (Hays et al., 2009) participants cited the following as insufficient data available in the session: duration and frequency of symptoms, treatment history (e.g., family, medical, and substance abuse), psychosis, and trauma. It appears

that many counselors and counselor trainees (49%) also perceive the client as resistant (denying or lying about symptoms). The finding of client resistance is consistent with previous theory (Hays et al., 2009). This blame orientated view of the client may negatively impact the clinical decision-making process of counselors and counselor trainees.

Criterion variance. Previous research on clinical decision-making (Hays et al., 2009) reports that participants "alluded to the subjective nature of the diagnostic process" (p. 10). Criterion variance was prevalent in this study as well. Participants referenced how some criteria fit multiple diagnoses. Counselor and counselor trainees in the current study also cited the use of different criteria when making a diagnostic decision. The subjectivity of the GAF scores and inconsistencies between GAF and PS were also noted by the researcher of this study. Participants would reference a good prognosis for the client, but not demonstrate that progress empirically between the GAF and PS ratings. At times ($n = 3$), participants who reported good prognosis rated the client's prognosis as worse on the PS than the current level of functioning given on the GAF. Or, participants ($n = 3$) who reported good prognosis rated the client's prognosis (PS score) as equivalent to the current level of functioning score on the GAF. Overall, there are inconsistencies with ratings on the GAF and PS surveys. It may be that counselors and counselor trainees are not making thoughtful decisions when assigning GAF and PS scores during the clinical decision-making process. These findings may also be reflective of the lack of reliability and validity of the survey instruments. Further research is required to make more confident assertions of these findings.

Observation variance. Consistent with previous research (Hays et al., 2009) observation variance was coded in this study. It should also be noted how observation variance was referenced differed between the current study and previous research (Hays et al., 2009). In the previous study, participants commented on their own incompetence and uncertainty with diagnosis; citing a more "competent" professional, such as a psychiatrist would know better than them (Hays et al, 2009). In this study, observation variance was referenced with specific nonverbal observations and verbal statements the client made and the difference among counselors and counselor trainees during interpretation. For example, 11 participants made clinical decisions of the Northern European female client; however only one of the 11 participants referenced the client "touching her lips" with frequency indicating a possible "body image" issue. One participant specifically interpreted the client's shopping day as sounding "a bit manic." The study supports previous research that states observation variance influences the clinical decision-making process; as well as the final diagnostic decision (Dumont & Lecomte, 1987; Hays et al., 2009).

Natural variance. This study did not yield many citations ($n = 1$) of natural variance in the clinical decision making process, which is consistent with previous research (Hays et al., 2009). Natural variance refers to the origin of the mental disorder to include manifestation of symptoms, or how cultures express symptoms differently (Gigerenzer, 2002). In this study, the research team was able to code the locus of attribution of symptoms from the perspective of the counselors and counselor trainees. The researcher is not able to confirm a causal relationship between locus of attribution and the diagnostic decision, which may be an example of natural variance. This study

can report locus of attribution rates and suggest further exploration of the area. Thirty-two participants were coded to identify a locus of attribution. Locus of attribution is defined as the origination or manifestation of symptoms (Hays et al., 2009). Thirteen participants referenced a situational locus of attribution, in which symptoms are responses to external factors in the client's life. Twelve participants referenced dispositional locus of attribution, in which symptoms are responses to internal/biological factors of the client. Seven participants referenced evidence that alluded to both situational and dispositional locus of attribution. Overall, counselors and counselor trainees demonstrate variability in perception of locus attribution and it remains unclear how natural variance impacts the clinical decision-making process.

This study further supports the previous theory (Hays et al., 2009) that diagnostic variance is an influential factor in the clinical decision-making process of counselors and counselor trainees. There is consistency between Hays et al. (2009) and this study that information variance, observation variance, and criterion variance are representative in the clinical decision-making process. This study is unable to clarify the role of natural variance and possible relationship with locus of attribution, but provides evidence of the potential influence, and therefore support for further research of the construct.

Diagnostic variance represents one aspect of the first overarching research question, "how do counselors and counselor trainees arrive at clinical diagnostic decisions?" The other variable considered in this question is how cognitive tools were utilized. The following section reviews the cognitive tools cited in this study and the relationship of the current findings compared to previous literature.

Cognitive Tools and the Clinical Decision-Making Process

Counselors and counselor trainees consciously or unconsciously utilize cognitive tools as they process clinical data (Friedlander & Stockman, 1983; Hays et al., 2009; Tversky & Kahneman, 1974). This study further supports previous studies investigating how and what tools are used by helping professionals to conceptualize the complexity of problems presented in the context of counseling (Hays et al., 2009; Smith & Agate, 2004). The four cognitive tools referenced in the current study: anchoring, representativeness, availability, and vividness are consistent with the previous theory developed by Hays et al. (2009).

Anchoring. In the study, anchoring was the most prevalent cognitive tool utilized by counselors and counselor trainees in their clinical decision-making process. The majority of participants (82%) referenced how initial impressions or symptoms presented by clients were the symptoms utilized in the final diagnostic decision. Anchoring was utilized at a much higher prevalence rate in this study compared to the original theory presented by Hays et al. (2009). The danger of such high rates of anchoring is the potential that counselors and counselor trainees may not accommodate for further clinical information shared in the counseling interview (Friedlander & Stockman, 1983; Hays et al., 2009; Tversky & Kahneman, 1974). In this study, participants anchored to the depressive symptoms presented first during the clinical interview and few accommodated for the substance use information shared later in the clinical interview. This study affirms anchoring as popular cognitive tool used in the clinical decision-making process of counselors and counselor trainees.

Representativeness. A majority of participants in the study (82%) report their diagnostic decision was based in the representativeness of criteria for a particular disorder in the DSM-IV-TR. According to previous theory (Hays et al., 2009) this is consistent with the rigid adherence of the diagnostic criteria. This study does not support Arkes' (1991) theory of clinical judgments based on probabilities of a similar experience; as the participants of this study did not rely on their own personal experiences, but if the symptoms fit the criteria of a particular disorder. Only 30% of participants in this study referenced knowledge of base rates of particular disorders for cultural groups. This is consistent with previous studies (Falvey et al., 2005; Friedlander & Stockman, 1983). In the clinical decision-making process it seems counselors and counselor trainees rely more on the implications of diagnostic criteria and do not incorporate their knowledge of the disorders among differing populations.

Availability. Hays et al.'s (2009) previous study found that availability due to clinical experience was a popular cognitive tool used in the clinical decision-making process. This study was not able to support that particular form of availability, as the participants were not representative of an experienced population of counselors and counselor trainees. The participants of this study cited at higher frequency (70%) the use of availability-broad, in which a large range of symptoms were used in the clinical decision-making process. The use of availability-broad is consistent with the use of the tool representativeness-criteria. The counselors and counselor trainees of this study focused strongly on the use of symptoms to meet criteria for disorders. Very few participants in this study utilized information from the client's environment or the context of the situation when arriving at a diagnostic decision. The study does continue to

support the use of availability as a cognitive tool in the clinical decision-making process, as consistent with previous research (Dumont & Lecomte, 1987; Friedlander & Stockman, 1983; Hays et al., 2009; Tversky & Kahneman, 1974).

Vividness. Dumont and Lecomte (1987) cautioned counselors that when clients present one symptom more intensely it may mislead to the amount of consideration to give that symptom in the diagnostic decision. As consistent with previous theory (Hays et al., 2009) the use of vivid criterion leads to the diagnostic decisions of counselors and counselor trainees in this study. Seventy-three percent of participants report a salient symptom described by the client heavily weighed into their diagnostic decision. Only one participant clearly articulated that although salient information was important in the overall context of the client's life, it was not influential on her diagnostic decision of the client. The participants of this study are very consistent with the theory of Dumont and Lecomte (1987) who warn that counselor trainees or counselors with little experience may become distracted by salient aspects of the client story that are not necessarily related to the conceptualization of a mental health diagnosis.

In consideration of how counselors and counselor trainees arrive at clinical decisions, this study supports previous literature and theory that diagnostic variance and cognitive tools play a role in the decision-making process. In particular, three forms of diagnostic variance are prevalent in the process: information, observation, and criterion. There are also four cognitive tools that are consistently utilized by counselors and counselor trainees: anchoring, representativeness, availability, and vividness. The second overarching research question of this study considered how cultural factors

influence the clinical decision-making process of counselor and counselor trainees, which is discussed in the following section.

Cultural Factors

The second overarching research question of this study considered how cultural factors influence the clinical decision-making process. The research team qualitatively coded for the references of cultural bias in general and references of cultural bias attached to the presenting problem and/or diagnostic decision. Cross-tabulations of culturally matched and unmatched pairs describe the potential influence in the case conceptualization. The influence of cultural factors is discussed in this section.

In the discussion of the clinical decision-making process, 30% of participants referenced gender bias, unrelated to the presenting problem and/or diagnostic decision. Socioeconomic status (SES) also presented in some cases (18%). In the case of SES bias, there were perceptions that a client would have a good prognosis related to assumed middle-class status. Race/ethnicity bias, unrelated to the presenting problem and/or diagnostic decision, was less prevalent in the study. Twelve percent of counselors and counselor trainees in the study referenced race/ethnicity bias. Similarly, 12% of participants displayed heterosexism bias within their clinical decision-making process. Only one participant made reference to age bias, assuming an individual should have a good prognosis because of perceptions of middle-agedness.

The first sub-question of the overarching question considering cultural factors, inquired to how a client's cultural identity influences the case conceptualization. To investigate, the research team coded for considerations of cultural factors within the presenting problem and/or diagnostic decision. As consistent with the previous theory

(Hays et al., 2010), gender was the most considered cultural factor within the presenting problem and/or diagnostic decision (67%). Also consistent with the previous theory, race/ethnicity was the second most considered cultural factor (61%). Overall, this study should more equivalent rates of consideration of gender and race/ethnicity than compare to the previous theory of Hays et al. (2010). There are still a fairly large portion of participants (42%) who report cultural factors are not a consideration when conceptualizing a client's presenting problem and/or the diagnostic decision.

Other cultural factors were considered, but at much less prevalence which is consistent with previous theory from Hays et al. (2010). Age and sexual orientation were considerations at the same rate (9%) within the presenting problem and/or diagnostic decision. Sexual orientation was cited in cases where the client was assumed to be gay or lesbian because of the reference to a partner rather than specifying husband or wife. As consistent with the previous study (Hays et al., 2010), participants did not understand the term partner as interchangeable with the term spouse.

A new code was identified for consideration in the theory of clinical decision-making. In this study, 15% of participants referenced family as cultural factor for consideration within the presenting problem and/or diagnostic decision. Specifically, participants referenced how the client's family of origin may be impacting his or her concern of potential job loss. These participants felt the client was responding to an expectation to be a contributing, functional member of a family. These references were made without discussion of race/ethnicity or gender, but only the family of origin. The researcher would like to include the new code for further inquiry in future studies of the clinical decision-making process.

Another new code added for consideration in the theory of clinical decision-making references instances in which participants reported there was not enough information provided to determine the culture of the client (12%). The research team differentiated this type of statement from "no cultural factors considered in the presenting problem and/or diagnostic decision" because it displayed higher level of cultural awareness. These participants did not assume visible cues from cultural factors.

Degree of cultural match. The construct cultural match implies the degree in which client and counselor are similar or dissimilar in their cultural make-up (Hays et al., 2010; Jones, 1982; Whaley, 2001). In previous research (Hays et al., 2010), cross-tabulations resulted in a statistically significant relationship between degree of cultural match and consideration of both cultural factors of gender and race/ethnicity. The degree of cultural match was calculated by reporting the client's race/ethnicity and gender and the participant self-reported race/ethnicity and gender. In this study, cross-tabulations demonstrated a statistically significant relationship between cultural match and race/ethnicity; however there was no statistically significant relationship between cultural match and gender. The researcher was prepared for this nonsignificant result, as the small sample size in this study limits the ability to facilitate quantitative procedures.

In review of the variables in this study, there is evidence to support the original theory of clinical decision-making as presented by Hays et al. (2009) and Hays et al. (2010). There are more significant differences in the findings related to cultural factors, however as discussed throughout this document, the current study was limited by a small sample size. The developing theory of the clinical decision-making process of counselors

and counselor trainees was presented in Chapter 4 and is summarized in the following section.

Theory of the Clinical Decision-Making Process

This study tested and revised a preliminary theory of clinical decision-making (Hays et al., 2009; Hays et al., 2010). Clinical decision-making represents a complex process in which counselors interpret clinical data as presented by clients and make diagnostic decisions as appropriate. This study employed grounded theory qualitative data analysis to identify what themes of clinical decision-making are prevalent in the process for counselors and counselor trainees. A visual representation of the developing theory of the clinical decision-making process is displayed in Figure 10.

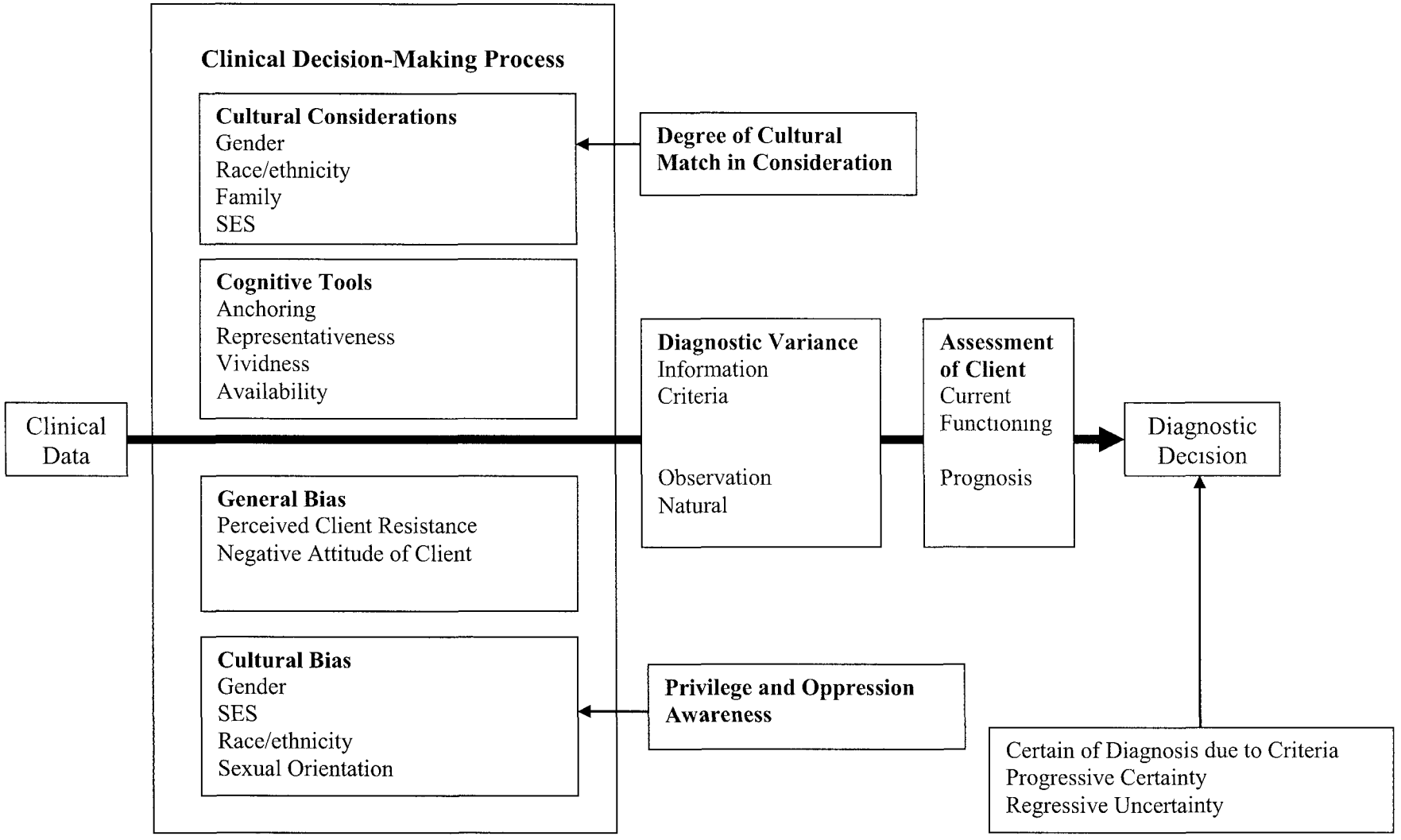

Figure 10 . Theory of the clinical decision-making process of counselors and counselor trainees.

The developing theory demonstrates that when presented with identical symptomology, counselors and counselor trainees arrive at different diagnostic decisions. The arrival at different diagnostic decisions is accounted for through diagnostic variance, specifically information variance, criterion variance, and observation. Information variance is the most prevalent form of diagnostic variance accounting for differences in diagnostic decisions, meaning, what clinical data are shared by the client or asked for by the counselor or counselor trainee seems to be very important in arriving at a diagnostic decision. After being presented with symptomology, counselors and counselor trainees employ cognitive tools (consciously or unconsciously) to interpret the clinical data. The most prevalent cognitive tools utilized are anchoring, representativeness, vividness, and availability. Salient or intense symptoms (vividness) presented early in the clinical session become the symptoms counselors and counselor trainees adhere to when making a diagnostic decision (anchoring). Also, the symptoms counselors and counselor trainees are drawn to are ones in which they are familiar (availability). When reviewing symptoms, counselors and counselor trainees focus on how the symptoms can be translated into criteria (representativeness).

The clinical decision-making process is also influenced by the race/ethnicity and gender of the client. Many counselors and counselor trainees consider cultural factors when conceptualizing the presenting problem and diagnostic decision. Gender is considered slightly more frequently than race/ethnicity in the decision-making process. Family and SES were also considered by counselors and counselor trainees as they conceptualized the problems presented by the client and made a diagnostic decision. The

degree of cultural match within the therauptic dyad may also by related to the willingness of counselors and counselor trainees to accommodate for cultural differences.

To some degree, counselors' and counselor trainees' clinical decision-making process is impacted by their own cultural bias. Specifically, gender, SES, race/ethnicity, and sexual orientation bias influence the perceptions and cognitive processes of counselors and counselor trainees as they arrive at diagnostic decisions. Some counselors and counselor trainees are further impacted by a personal negative attitude of the client. Bias expressed by counselors and counselor trainees during the clinical decision-making process may be accounted for in self-reported cultural awareness.

Overall in the clinical decision-making process, counselors and counselor trainees are certain of their diagnostic decisions due to the symptoms presented and criteria of the disorder(s). To a lesser degree, counselors and counselor trainees become more certain of their diagnostic decision throughout the clinical decision-making process. Many counselors and counselor trainees consider other possible diagnoses, but not an in-depth consideration of differential diagnoses. Counselors and counselor trainees are able to assess the current level of functioning and prognosis of a client, however demonstrate inconsistencies between these ratings. It is unclear where the inconsistencies originate: the limitations of the instruments or the limitations of the participants to assess client functioning.

The theory of the clinical decision-making process of counselors and counselor trainees as presented in this section requires further testing and revisions, as this study is not without its limitations. In order to confidentially generalize this theory to a larger population of counselors and counselor trainees a much larger sample population is

required. Other internal and external validity threats serve as limitations to this study. The limitations are described in the following section.

Limitations

Several limitations should be taken into consideration when interpreting the results of the study. Internal validity threats represent study design issues or participant experiences that impact the degree to which inferences from the study are accurate (Creswell, 2009). External validity threats represent how the population sampling may limit the generalizability of the study (Creswell, 2009). As previously discussed, internal validity threats were considered and addressed in the design of the study, however not all limitations were preventable. Internal validity limitations such as selection bias, attrition, experimenter effects, and subject effects are discussed in this section. Following the description of internal validity threats, the external validity threats are discussed.

Selection Bias

In order to address selection validity threats, the researcher proposed the computer technology would randomly assign one of the six mock client videos to each participant in the study. However, after three weeks of data collection it became apparent to the researcher that there were not any completed cases for the White male client. The researcher contacted the website developer who reported that the sixth video (the White male client) had not been successfully posted to the website. Therefore, the White male client was not in the randomized mix of mock client videos for the entire six weeks of data collection. At the end of the six week data collection period there was only one completed case of the White male client. The researcher contacted the website developer

and asked for a seventh week of data collection in which the only video option would be the White male client.

Selection bias limitations in this study include the recruitment methods as well. There may be unintentional similarities among counselors and counselor trainees that choose to be involved with the project. Recruitment method one targeted CACREP counseling programs, which resulted in more counselor trainees than counselors in the sample. Recruitment method two targeted larger pools of counselors and counselor trainees, however there is no means to assess how many individuals in this larger sampling pool actually received the email. Between both recruitment methods, the researcher is unable to calculate accurate response rates. There is limited confirmation from CACREP program directors that the invitational email was in fact sent to counselor trainees. The researcher is unable to assess an estimate of how many individuals were invited to participate overall between both requirement methods.

Attrition

The procedural methods of this study required participants to make a significant time commitment (approximately 45 minutes). The survey database used in the study (Survey Monkey) accounts that 54 individuals watched the video and proceeded to answer questions from the survey. However only 61% of those who started the survey completed the procedure in its entirety. The remaining 31% watched the video and provided the diagnostic assessment on the five axes, however quit the study before starting the open-ended questionnaire. The researcher is unable to account for how many individuals signed informed consent and watched the video, but did not continue into the survey portion of the procedure because the survey was embedded into the website and

therefore not connected to calculate. During Week 3 of data collection after the sixth video was found to be missing from the website, the website developer enabled the system to send the researcher and email when a video was viewed. For example on April 29, 2011 the researcher received notification that six videos had been viewed. However, on April 29, 2011 Survey Monkey does not report any participants in the study. Therefore, the six individuals who watched the client session videos never moved on to the survey portion of the study. To provide an overall sense for the response rate in this study, the researcher can review the data collection from April 17-May 4, 2011. During this timeframe of data collection, the researcher can account for 51 individuals who watched a client video. Of the 51, 21 individuals (41%) continued to the survey portion of the procedure. From those 21 individuals, 14 completed the survey. Therefore from the original start of the study in this timeframe of data collection 27% completed the study in its entirety.

Experimenter Effects

Experimenter effects account for the validity threats related to the researcher. To minimize the experimenter effects in this study, the questions on the interview protocol were listed in identical order. The questions were designed as open-ended in order to limit the influence of researcher bias. Despite these efforts, the researcher's bias may have influenced outcomes. To some degree, a research team moderated for the primary investigator's influence.

Subject Effects

The participants in the study may change their behavior as a response to the research (i.e. subject effect). As with all research studies, the Hawthorne Effect (desirable behavior) may influence the data collected. In order to minimize subject effect, the participants were informed of confidentiality and their identity was not connected to their survey answers. The POI is a self-report instrument of cultural bias and participants may have answered questions influenced by social desirability.

Instrumentation

A limitation in instrumentation to note is the use of drop-down menu options in the diagnostic protocol. The drop-down menu options provided a list of possible mood and anxiety disorders; but was not reflective of all possible Axis I diagnoses. Axis II presented all personality disorders, but did not reflect other Axis II disorders, such as mental retardation. Axis III and Axis IV were representative of all the possible categorical labels for those Axes. The researcher utilized the drop-down menu options for the axial diagnoses in order to be more user-friendly to potential participants. However, accommodating with drop-down menu options may have influenced the participant. Participants may have chosen from the options rather than utilizing the DSM-IV-TR for all possible disorders.

Another limitation of instrumentation to consider is the mock client videos. The mock client videos were created by the researcher. The mock clients are not real clients with the symptoms presented, but actors. The actors read from scripts, which was apparent to some participants in the study. For example one participant commented on whether the client was not willing to make eye contact on purpose, or if the actor was

reading a script. The videos also differ with nonverbal ques. For example, the actors all presented well-groomed, but did not wear identical shirts/clothing. The tone and pitch of the actors in the videos were not identical throughout the reading of the script. Although the actors were provided general instructions to use a sad tone of voice when discussing family and an angry tone of voice when discussing work, there were inconsistencies in the nonverbal behavior.

Two of the quantitative surveys used in this study represent limitations. The GAF, which is based on the GAS demonstrates moderate parallel-form reliability (r = .76). There is no further reliability measures available for the GAF, which threatens the validity of the results of the study related to the GAF. The PS utilizes the same categorical descriptions as the GAF. The rating scales are reversed and altered. There is no available information on the reliability or validity of the PS and therefore it threatens the validity of the results of the study related to the PS. It may be that the inconsistencies of the GAF and PS scores in this study are due to the limitations of the instrumentation, rather than the participants.

The structured interview protocol presented to the participants in electronic format also serves as a limitation to the study. Written responses to the interview protocol questions are limited by the ability or willingness of participants to elaborate. The primary researcher was unable to ask follow-up questions of the participants. In-person interviewing allows for more flexibility for the interviewee to articulate thought-processes or clarify statements. The instrumentation limitations are important to consider in the replication or adaptation of this study.

External Validity

External validity factors influence to what degree the results of the study are generalizable to other people (population external validity) and to what degree the results can be generalized based on the context or environment of the study (ecological external validity). External validity threats can occur when findings are inappropriately generalized to the general population from the sample size (Creswell, 2009). Both types of external validity limitations pertinent to this study are described in this section.

Population external validity. To maximize the population external validity (generalizability to counselors), the participants represented a random sampling of counselors and counselor trainees from across the United States. The researcher also calculated Cohen's power and effect size to identify the sample size required to achieve statistical generalizability. This mixed methods study was designed specifically to reach a larger sample size than the previous studies (Hays et al., 2009; Hays et al., 2010). Hays et al. (2009) and Hays et al. (2010) utilized purposeful sampling in which research team members found and interviewed counselor and counselor trainees, for a total sample size of 41 participants. This study was developed to reach a national sample via the Internet. However, it was unsuccessful in reaching 41 or more participants. There are only 33 participants in the study and 172 participants were required to utilize power effect size. The small sample size limits the generalizability of the study.

Ecological external validity. To maximize the ecological external validity, the study included both counselors and counselor trainees as participants. By including counselor trainees, the study extends to investigate the effectiveness of teaching clinical decisional making skills in the counseling curriculum. There is a limitation in the uneven

distribution of counselors and counselor trainees in this study. However, the research is able to discuss possible implications for counselors and counselor trainee programs. The implications are described in the following sections.

Implications for Counselor Trainee Programs

The presented theory on the clinical decision-making process of counselors and counselor trainees is not without its limitations, as discussed in the previous section. However, there are many components of the findings that are consistent with previous research in the helping profession. This study represented more counselor trainees than counselors, and therefore the implications of the study may be more beneficial for counselor trainee programs to consider.

Clinical Judgment

The DSM-IV-TR allows for structure in the diagnostic process, a streamlined system that third-party reimbursement organizations deem appropriate to employ (APA, 2000). However, it specifies the importance of clinical judgment in cooperation with the categorical diagnostic system. The presented theory from this study suggests that counselor trainees are relying more on the criteria than their own clinical judgment. This is consistent with previous literature in which matching symptoms demonstrated lower levels of clinician interpretation (Falvey et al., 2005). Counselor educators teaching a course on diagnosis may consider the infusion of clinical judgment into the curriculum. Research literature on cognitive tools be may presented to students as supplemental reading to traditional diagnosis text.

Also consistent between this study and previous work is the sense of overconfidence in the diagnostic decisions of counselor trainees (Smith & Agate, 2004).

In the preliminary theory developed by Hays et al. (2009), there was a more equal distribution of counselors and counselor trainees in the sample, as well as a higher tendency to more thoroughly consider other possible diagnoses. Congruently, in the present study in which the sample captures more counselor trainees, there is a higher tendency to be confident in the diagnostic decision without more thorough consideration of other possible disorders. Counselor educators may facilitate discussion in class regarding certainty of diagnosis as it relates to experience and clinical data presented.

Dumont and Lecomte (1987) postulated the importance of curriculum that teaches inferential reasoning skills, as well as the possible clinical judgment errors associate with these skills. Twenty-five years later the helping profession continues to be challenged to develop programs that challenge trainees to develop critical reasoning skills to employ in the clinical decision-making process. It is vital for counselor education curriculum to respond to the need for increasing cognitive complexity skills, as research demonstrates those skills will not necessarily develop with experience (Brammer, 1997; Garb, 1998; Hillerbrand & Claiborn, 1990). Learning clinical judgment skills will positively impact other areas of the clinical decision-making process as well. For example, Sue and Sue (2008) connected clinical judgment skills with the incorporation of multicultural competence skills. This study demonstrated how cultural factors impact the clinical decision-making process, and therefore need to be considered in the implications for counselor training programs.

Multicultural Competence

Counseling curriculum responded to the rapid cultural changes in American society with the incorporation of multicultural and diversity education as a core element

in the CACREP standards (CACREP, 2009). The presented theory of the clinical decision-making process illuminates how cultural considerations may assist counselor trainees to make more informed diagnostic decisions. Previous research indicates that multicultural counseling competence education also increased awareness, knowledge, and skills when working with diverse clients for counselor trainees (Constantine, 2001). Research indicates experiential activities further promote diversity skills in the classroom (Smith et al., 2006). It seems as though counselor educators need to specifically connect the multicultural education with the clinical judgment education to promote the clinical decision-making skills. Counselor educators may be more successful with teaching culturally appropriate diagnosis if multicultural competencies are included within the diagnosis and treatment planning course.

Consistent with previous literature (Guanipa & Woolley, 2000; Hays, et al., 2010) this study demonstrates counselors and counselor trainees were more likely to consider the cultural factor of gender in the clinical decision-making process. It may be that gender represents a cultural factor that counselors and counselor trainees are more comfortable broaching and/or conceptualizing. Researchers suggest broaching behavior demonstrates a commitment to exploring diversity and diversity's potential impact on presented problems (Day-Vines et al., 2007). The developing theory of the clinical decision-making process indicates the importance of broaching race/ethnicity as well when making diagnostic decisions. Previous research indicates that sometimes other sociopolitical factors are assumed based on race (Moscou, 2008). An example of the potential misuse or misunderstanding was demonstrated when a participant of this study determined the African American female client was denying a substance problem in fear

that receiving treatment would result in the removal of her children from the home by social services. In contrast, the White female client was assumed to be middle-class and perceived to be well-adjusted. Both female clients were presented well-dressed and read the same script. As consistent with previous literature, harsher assumptions were made of those from non-dominant cultures (Hays et al., 2010; Jenkins-Hall & Sacco, 1991; Trierweiler et al., 2005). Experiential activities in a diagnosis course may assist to illuminate how perceptions of clients may differ due to cultural differences. For example, counselor educators may consider showing videos of culturally different clients in class and facilitating discussions of personal perceptions as well as knowledge of prevalence rates for that particular population.

From the developing theory of the clinical decision-making process there is indication that counselor educators have an opportunity to challenge the clinical judgment skills and multicultural awareness of counselor trainees. The researcher of this study suggests the infusion of clinical judgment awareness and cultural awareness in the curriculum of diagnosis and treatment planning. By increasing the awareness of counselor trainees to these factors counselor educators may promote a more intentional and culturally competent clinical decision-making process.

Implications for Future Research

The researcher of this study presented several limitations, which impact the overall generalizability of the findings. Specifically, the small sample size of this study is a concern for the utilization of the theory on a larger scale. The researcher designed this study to overcome sample size limitations and of previous research (Hays et al., 2009; Hays et al., 2010), however was not successful. This design did accommodate for other

limitations of previous research of clinical decision-making (Arkes, 1991; Falvey, 2001; Guanipa & Woolley, 2000; Gushue & Constantine, 2007; Hays et al., 2009; Hays et al., 2010; Lopez, 1989; Wisch & Mahalik, 1999) by presenting clinical data more authentically with video recorded intake sessions and allowing accessibility of the videos through the Internet. Future studies may structure the videos to control for variability. For example, the actors could wear identical outfits. It may be best to record one video session and ask the other actors to match the nonverbal of the original recording. Likewise, it may behoove future research studies to film the video sessions at one time, allowing all the actors to observe each other. Future research may consider other instrumentation for rating current level of functioning and prognosis, as the GAF and PS utilized in this study reflect limited reliability and validity.

Hillerbrand and Claiborn (1990) suggested it was difficult to measure the cognitive processes of counselors and counselor trainees. The mixed methods approach designed by Hays et al. (2009) and Hays et al. (2010) allowed researchers to respond to this challenge and formulate a developing theory on the clinical decision-making process. This current study improved upon the design with the inclusion of technology. For future research it is imperative to find more fruitful participant recruitment methods in order to obtain a sample size congruent with Power and effect as suggested by Cohen (1992). Due to the time-commitment associated with the qualitative portion of the study, it may be that potential participants may need to feel more connected to the research (e.g., know the researcher). Rather than a randomized sampling of counselors and counselor trainees, it may behoove future research method designs to rely on purposeful sampling of accessible groups of counselors and/or counselor trainees.

Another strategy to reduce the time-commitment of this study would be to limit the variables of interest. Future research designs may limit the scope of the study to cultural considerations. The diagnostic variance and cognitive tools data are saturated and consistent in the literature. If future research concentrates on degree of cultural match, cultural consideration, and cultural bias it will reduce the interview protocol questions and therefore may reduce the overall time commitment required to be a participant in the study.

Future research on the topic of clinical decision-making may become more popular in the next few years as the helping profession is introduced to the newest (fifth) edition of the DSM. The release of the new manual may renew this area of interest, which has not been prevalent in the profession recently. New dialogue among helping professionals on how diagnostic decisions are made, as well as what factors influence the process, may encourage more participation in studies such as the one presented in this document.

Future research may continue to consider the origination of disproportionate prevalence rates among different populations. This study suggests clinician bias does impact the clinical decision-making process. It remains unclear if there is bias in the DSM diagnostic system. Future research may consider to what degree clinician bias and/or bias in the diagnostic system impact clinical decisions. Specifically, researchers may investigate if both types of bias impact the clinical decision-making process or if there is an interactional effect.

Conclusions

This study sought to explore the clinical decision-making process of counselors and counselor trainees. The diagnostic variance of clinical decisions, as well as the cognitive tools utilized to interpret clinical data were explored. Cultural factors and cultural bias were investigated for potential influence in the clinical decision-making process of counselors and counselor trainees. Qualitative data analyses assisted in the testing and revision of a previous theory of clinical decisions (Hays et al., 2009; Hays et al., 2010) and were presented in this study. The developing theory demonstrates how diagnostic variance accounts for the arrival at different diagnostic decisions, and which cognitive tools are more heavily relied upon by counselors and counselor trainees in the process.

The theory also demonstrates the potential for cultural factor consideration in the clinical decision-making process to allow counselors and counselor trainees to make more culturally educated diagnostic decisions. From this theory, counselors and counselor trainees can see the possible negative influence cultural bias and negative attitudes of the client may have on the clinical decision-making process. Although the findings in this study are limited by sample size, with continued replication of this research design, this developing theory has the potential to serve as a framework for training multicultural competent counselors in the clinical decision-making process.

CHAPTER SIX

MANUSCRIPT

Cultural Bias in the Clinical Decision-Making Process: Implications for Counselor Educators

To be submitted to

Counselor Education and Supervision

Abstract

This grounded theory investigated the clinical decision-making process of counselors and counselor trainees. Qualitative analyses revealed that provided identical symptomology, counselors and counselor trainees arrive at different diagnostic decisions. Race/ethnicity and gender were also investigated in relation to the clinical decision-making process. Results indicate that cognitive tools, consideration of cultural factors, and clinical cultural bias impact diagnostic decisions and account for diagnostic variance among counselors and counselor trainees. Implications for counselor educators and future research are discussed.

Cultural Bias in the Clinical Decision-Making Process: Implications for Counselor Educators

The process of clinical decision-making incorporates how counselors gather information from clients, what they attend to, and the tools used to interpret collected data. From that clinical interpretation, counselors articulate diagnostic impressions, or assign diagnostic labels to clients from the *Diagnostic and Statistical Manual for Mental Disorders* (DSM-IV-TR; American Psychiatric Association (APA), 2000). Thus, DSM-IV-TR specifies the importance of clinical judgment (clinical decision-making) in cooperation with the categorical diagnostic system, a system that third-party reimbursement organizations deem appropriate to employ (APA, 2000). The counselor also considers what treatments will be appropriate and assesses what the prognosis of the client may be if access to prescribed treatments occurs. Generally, acknowledgement of the disorder leads to the establishment of treatment plans and outcome goals related to the symptomology of the diagnostic impression (APA, 2000). Treatment objectives aim to reduce unwanted symptoms of the diagnosed serious mental illness, or provide behavioral guidelines to promote client wellness (APA, 2000).

At its core, clinical decision-making is dependent upon the characteristics and knowledge base of the counselor (Dumont & Lecomte, 1987). These individual differences are categorized as diagnostic variance, the notion that counselors arrive at clinical decisions via various methods and means (Dumont & Lecomte). These methods and means are categorized as cognitive tools, or heuristic principles (Tversky & Kahneman, 1974). Since the establishment of heuristic principles, researchers continued to develop, define, and modernize the principles as cognitive tools utilized by counselors

in the diagnostic process (Arkes, 1991; Dumont & Lecomte, 1987; Ellis, Robbins, Schult, Ladany, & Banker, 1990; Friedlander & Stockman, 1983; Hays, McLeod, & Prosek, 2009). The clinical decision-making process is unique to each counselor; therefore, it is possible for counselors to diagnose differently, a construct referred to as diagnostic variance. While diagnostic variance can lead to appropriate diagnosis, it often results when the counselor cognitively processes client data incorrectly, referred to as clinical error.

Diagnostic variance may result when counselors systematically diagnose differently, which can be differentiated into four categories: *natural variance*, *information variance*, *observation/interpretation variance*, and *criterion variance* (Gigerenzer, 2002; Hays et al., 2009). *Natural variance* refers to the origin of the mental disorder. This type of variance considers how the symptoms have manifested over time (Gigerenzer, 2002). This type of variance influences clinical decisions when expressed symptoms do not fully meet the criterion of a diagnosis according the DSM-IV-TR. The remaining three categories of diagnostic variance are largely dependent upon the therapeutic alliance, counselor level of expertise, and counselor theoretical orientation. *Information variance* represents the amount of information (clinical data) the client is willing to share with the clinician during the clinical interview (Gigerenzer, 2002). Information variance also represents the amount and type of clinical data the counselor asks the client to share during the interview process. *Observation/interpretation variance* represents the individual differences of counselors in the interpretation process of clinical decision-making. Each counselor views the same symptoms with some level of variability. Counselors adhere to a unique perspective rooted in personal experiences and

interactions in society. *Criterion variance* represents the varying use of criteria in order to formulate a diagnosis in the DSM-IV-TR (Hays et al., 2009). Andrews, Anderson, Slade, and Sunderland (2008) proposed the amount of criteria for many disorders are cumbersome to clinicians, which represents a component of criterion variance. The resulting complexity is deemed impractical and may contribute to this category of diagnostic variance. In order to support clinicians during the diagnostic process, the DSM-IV-TR includes diagnostic decision trees, which serve as a means to reduce criterion variance. However, these structured models are difficult to employ in the empathic clinical interview (Andrews et al., 2008).

Cultural Considerations

The U.S. population continues to racially and ethnically diversify as a culturally mosaic society (U.S. Census Bureau, 2009). This diversification impacts how counselors serve clients with mental health concerns (Constantine, Hage, Kindaichi, & Bryant, 2007; Constantine, Kindaichi, Arorash, Donnelly, & Jung, 2002; Gushue, Constantine, & Sciarra, 2008; Hays, McLeod, & Prosek, 2010). Counselor training programs have responded to the need to better serve an increasingly diverse population by incorporating multicultural competencies into curriculum standards (Council for the Accreditation of Counseling and Related Educational Program [CACREP], 2009; Sue, 1992). Previous research indicates counselor trainees with lower self-reported multicultural competence overlook or distort important client information during the clinical interview (Constantine, 2001; Gushue & Carter, 2000). Constantine and colleagues (2007) maintained helping professionals are afforded an opportunity to increase cultural

awareness in society; however, this may only be achieved if professionals are culturally competent.

Cultural bias, judging others by standards related to one's own culture, interferes in the therapeutic process when counselors are not knowledgeable or skilled to work with clients from diverse cultural backgrounds (Hays & McLeod, 2010; Hays et al., 2010; McAuliffe, 2008). With awareness of potential cultural bias, counselors and counselor trainees need to be prepared to diagnose and counsel clients from differing racial/ethnic and gender backgrounds (Gushue et al., 2008). There is evidence that culture may influence the way in which a client interprets a mental health problem, responds to stress, or displays symptoms (Constantine & Ladany, 2000; Eriksen, Kress, Dixon, & Ford, 2010).

Findings in the research literature reveal disproportionate prevalence rates of mental health diagnoses for race/ethnicity and gender. It is important for counselors to be knowledgeable of these discrepancies in order to promote culturally competent critical judgment of our diagnostic system and clinical decision-making process. For example, there is consistency among the research literature of disproportionate prevalence rates among the African American population. The research literature indicates African Americans are overdiagnosed with schizophrenia, or more severe diagnoses, and underdiagnosed with affective disorders as compared to the dominant White culture (Hays et al., 2010; Jones & Gray, 1986, Neighbors, Trierweiler, Munday, Thompson, Binion, & Gomez, 1999; Snowden & Cheung, 1990; Strakowksi et al., 1997; Trierweiler, Neighbors, Munday, Thompson, Binion, & Gomez, 2000; Whaley, 2001). Further, there are fewer studies indicating prevalence rates of the Latino population. This may be a

consequence of Latinos seeking mental health services less frequently than compared to other racial/ethnic groups such as African Americans and Northern European Americans (Snowden & Cheung, 1990). It is documented that Latinos are diagnosed with schizophrenia 1.5 times the rate of the dominant White ethnic group culture (Delbello, Lopez-Larson, Soutullo, & Strakowski, 2001).

In consideration of gender, according to the DSM-IV-TR, males are reported to be more frequently diagnosed with substance-related disorders compared to female counterparts (APA, 2000). Females tend to be diagnosed under the categorical dimension of mood and anxiety disorders (Eriksen & Kress, 2008). It is documented that males are also disproportionately diagnosed with factitious disorder, although researchers criticize the methods of this data collection (APA, 2000; Hartung & Widiger, 1998). Females are diagnosed twice as often with major depressive disorder compared to males (Hartung & Widiger). It is suggested, but not supported in DSM-IV-TR statistical reports, that females have higher rates of post-traumatic stress disorder (Breslau et al., 1991as cited in Hartung & Widiger).

Purpose of the Study

The purpose of the study was to investigate how diagnostic variance among counselors and counselor trainees related to the clinical decision-making process and what, if any, cognitive tools are used in the process. The study also considered how, if at all, cultural factors of counselors, counselor trainees, and clients influenced the case conceptualization and prognosis of clients. The study tests and revises a grounded theory of clinical decision-making and degree of match between counselors, counselor trainees, and clients developed by Hays et al. (2010).

Method

Participants and Procedure

The target population for the study was counselors and counselor trainees. Participants were recruited via two participant sources: program coordinators of counseling programs from a randomized list of CACREP programs as well as presidents of ACA divisions and requested to distribute an invitational email to students/members. The participant recruitment methods did not allow for calculation of an accurate return rate. After agreement of the informed consent document, participants were linked to view 1 of 6 client videos. Participants completed a diagnosis using the 5- axis system of the DSM-IV-TR (APA, 2000). All participants completed a 14 question open-ended structured interview protocol. Finally, participants disclosed demographic information.

Participants ($N = 33$) identified with the following racial/ethnic categories: White non-Hispanic ($n = 28$), African American ($n = 3$), Hispanic/Latino American ($n = 1$), and biracial/multiracial ($n = 1$). Participants also disclosed sexual orientation information: heterosexual ($n = 29$), gay/lesbian ($n = 2$), and bisexual ($n = 2$). The majority of participants (64%) in the study represent counselor trainees currently enrolled in a masters' in counseling program ($n = 21$). The remaining 36% of participants are counselors who report completion of the masters' degree in counseling with 30% currently enrolled in a doctoral program ($n = 10$) and 6% not currently enrolled in school ($n = 2$). Many participants report the completion of a diagnosis and treatment planning course ($n = 25$), while the remaining participants ($n = 8$) did not complete or have not yet completed a diagnosis and treatment planning course. Most participants ($n = 29$) report

the completion of a multicultural/diversity counseling course, while the remaining (n = 4) did not complete or have not yet completed a multicultural/diversity counseling course.

Research Team

The research team consisted of two doctoral students and one counselor educator. All members of the team had completed a doctoral-level course on qualitative research methods. Further, two members of the team (including the primary investigator) had assisted with the teaching of a doctoral-level course on qualitative research methods. Researchers may be considered instruments themselves as a research team's personal and professional experiences may influence the data analysis, it was important to address researcher bias to maximize trustworthiness (Patton, 2002).

There was consensus among members that the diagnostic process should inform treatment for clients and could be more formal or informal depending on the clinical setting. Members of the team discussed their own clinical experiences and how diagnostic procedures differed among the setting. For example, at larger mental health agencies, members discussed that diagnosis was a more formal process required at the intake session. There was an assumption among team members that clinicians may consciously or unconsciously rely upon one or two disorders in the diagnostic process. In the unconscious process it may be that counselors tend to see those symptoms more often because they are comfortable with the diagnosis. In the conscious process, it may be that counselors know what disorders are reimbursable. The members discussed the potential ethical dilemma of diagnosing for reimbursement purposes. One member of the research team had familiarity with diagnosis variance terminology; she provided verbal and written information to the remaining members. In discussion of cultural factors, common

assumptions included a tendency for non-dominant cultures to be overdiagnosed or pathologized than compared to the dominant culture.

Data Sources

Video content. The study used video recorded clients to represent a more realistic counseling session. Previous research studies investigating clinical decision-making report the use of written case summaries as a limitation to the research and suggest video components (Guanipa & Woolley, 2000; Gushue & Constantine, 2007; Wisch & Mahalik, 1999). Participants of previous studies report lack of visual representation of the mock clients as a limitation (Hays et al., 2009; Hays et al., 2010). The client script for this study was based on previous research (Hays at al., 2009; Hays at al., 2010). The client presents with general mood disorders symptoms to include insomnia, crying spells, and shifts in mood (depressed, anger, euphoric). The script outlined how the client experiences his or her symptoms in the context of home and work. Six mock client intake sessions were video recorded and uploaded to a website (www.paulsandersdesign.com/cdm) for the purpose of this study. Each video session is approximately seven minutes in length and represents an intake session at a local mental health agency. All six clients are the same age and present with the same symptomology. The clients differ in cultural factors of race/ethnicity and gender. The clients were actors who volunteered to represent their race/ethnicity and gender in the study. Client A is an African American female, Client B is an African American male, Client C is a Latina, Client D is a Latino, Client E is a White female, and Client F is a White male. The video recorded sessions displayed only the mock client during a clinical intake interview, not a counselor. Clinical interview questions appear in writing at the bottom of the video

screen, therefore no counselor voice is heard. These edits were intentional to allow the participant to feel as though he/she is the counselor, viewing the client from his/her own perspective, rather than the perspective of a faux counselor voice in the video.

Interview protocol. After the completion of the diagnostic impressions (five axes using DSM-IV-TR), participants completed a written structured interview protocol replicated from previous studies (Hays et al, 2009; Hays et al., 2010). The questions were open-ended to allow the participant to richly describe his or her clinical decision-making process regarding the conceptualization of the mock client. Specifically, the protocol inquired for any contributing factors towards the diagnostic decision, to include salient symptoms, cultural factors, and limitations to the assigned diagnosis. For example, "How would you summarize the symptoms used to arrive at your diagnosis/diagnoses?" and "What aspects of the case did you use to arrive your diagnosis/diagnoses?"

Demographic form. Participants then completed a demographic form , which inquired for cultural make-up of the participants including age, gender, race/ethnicity, and sexual orientation. The demographics also included educational and professional experiences, including highest degree earned, practicum/internship experiences, course completion (specifically diagnosis/treatment planning and multicultural/diversity), current credentials, clinical work setting experiences, and clinical interests held by participants.

Data Analysis

Qualitative data were analyzed using an open coding and axial process (Patton, 2002). The primary investigator provided the research team the final codebook from a

previous study (Hays et al., 2009) to provide an a priori codebook for the present study. The research team consensus coded the first 10 transcripts during the first research team member, and then divided the remaining 23 transcripts for independent coding during the second research team meeting. During the first and second research team meetings, members of the research team created new codes and updated the codebook. Participant data were organized and conceptualized using within-case displays (Miles & Huberman, 1994). The within-case displays provided team members with visual structure to compare different aspects of the clinical decision-making process. During the initial coding process, the codes developed with room for revisions as patterns and concepts become more salient and were collapsed into axial codes. Descriptive data were analyzed using SPSS 19.0 (SPSS, 2010).

Results

Diagnostic Variance

Results indicated that provided identical symptoms, counselors and counselor trainees arrived at different diagnostic decisions (see Table 1). On Axis I, 22 different diagnoses were assigned or considered for rule out. Diagnoses ranged in severity from the least severe V-code of occupational problem, to the most severe of major depressive disorder, recurrent, severe with psychotic features. A variety of personality disorders were assigned on Axis II as well. Three participants noted medical issues contributing to the presenting problem (symptoms, signs, and ill-defined conditions; diseases of the nervous system and sense organs; endocrine, nutritional, and metabolic diseases and immunity disorders; and injury and poisoning). Several participants (n = 32) assigned one or more psychosocial and environmental stressors on Axis IV: occupational problems

(n = 32), problems related to interactions with legal/crime (n = 14), problems with primary support group (n = 9), economic problems (n = 4), and other psychosocial and environment problems (n = 1). Researchers identified three types of diagnostic variance: information variance, criterion variance, and observation variance.

Information variance. The amount of clinical data the client is willing to share with the clinician during the clinical interview, as well as what the clinician is willing to ask of the client is representative of information variance (Gigerenzer, 2002). In this study, information variance was the most predominant type of diagnostic variance influencing the clinical decision-making process (n = 23). For example, a participant reported, "All I received were initial impression based on only the intake to base the diagnosis on." Counselors and counselor trainees cited many areas in which they would like more information provided about the client, or the client's environment. The majority (55%, n = 18) of counselors and counselor trainees want more information about the client's home and work environment, and his or hers social functioning within those settings. Participants cited the following as insufficient data available in the session: duration and frequency of symptoms, treatment history (e.g., family, medical, and substance abuse), psychosis, and trauma. It appears that many counselors and counselor trainees (49%) also perceive the client as resistant (i.e., denying or lying about symptoms).

Criterion variance. Previous research on clinical decision-making (Hays et al., 2009) reports that participants "alluded to the subjective nature of the diagnostic process" (p. 10). Criterion variance was prevalent in this study as well (30%; n = 10). Participants referenced how some criteria fit multiple diagnoses. For example, one participant

discussed how symptoms related to depression may also be seen in adjustment disorder or dysthymic disorder. Likewise, another participant reported the client's spending of money on a shopping spree could be a symptom of bipolar disorder; but diagnosed the client with major depressive disorder, recurrent, moderate. Counselor and counselor trainees in the current study also cited the use of different criteria when making a diagnostic decision.

Observation variance. Consistent with previous research (Hays et al., 2009) observation variance was coded in this study. Observation variance represents how counselors interpret clinical data differently. In this study, observation variance (27%) was referenced with specific nonverbal observations and verbal statements the client made and the difference among counselors and counselor trainees during interpretation. For example, 11 participants viewed the session with the White female client; however only 1 of the 11 participants referenced the client "touching her lips" with frequency indicating a possible "body image" issue.

Cognitive Tools

Participants employed a variety of cognitive processes in the clinical decision-making process. These tools were used consciously or unconsciously by the counselors and counselor trainees in order to conceptualize the clinical data as presented by the client. These tools influenced the diagnostic variance among counselors and counselor-trainees clinical decisions.

Representativeness. The cognitive tool representativeness alludes to clinical judgments based on probabilities of a similar experience (Arkes, 1991). Representativeness refers to knowledge of base rates of particular disorders (Favley et al.,

2005; Friedlander & Stockman, 1983). A majority of participants (82%) identified representativeness within the criterion (n = 27), meaning participants displayed rigid use to the DSM-IV-TR criteria and/or understanding of differential diagnosis. For example, one participant reported certainty of major depressive disorder, recurrent, moderate due to "symptoms, duration, consistency" and emphasized again later in the interview "the criteria" as the single most important factor in the diagnostic decision. A smaller percentage of participants (30%) identified representativeness within the client's culture (n = 10), meaning participants acknowledged likelihood that certain disorders belong to certain cultural groups. For example, one participant reported, "My client was Latina. I suppose alcoholism and socioeconomic status are things to consider."

Anchoring. The cognitive tool anchoring is the process in which clinical judgments are based on salient information shared by the client early in the clinical interview. Researchers suggest when employing anchoring, counselors and counselor trainees may be unable to accommodate for further clinical information shared during the clinical interview beyond the original salient data shared (Friedlander & Stockman, 1983; Hays et al., 2009; Tversky & Kahneman, 1974). A majority of participants (82%) identified anchoring within their clinical decision-making process (n = 27). For example, one participant reported initial impressions of depression due to "the consistent crying, hearing of voice, depressed mood, unable to focus, feelings of worthlessness, recurrent thoughts of death, flat affect." When the participants was asked to consider the degree to which those initial impressions of the client weighed into her diagnostic decision, she reported, "I would imagine heavily considering [depression] is what I diagnosed her with."

Availability. The cognitive tool availability is the process by which clinical judgments are based on the familiarity of the symptoms (Friedlander & Stockman, 1983; Tversky & Kahneman, 1974). Availability asserts that diagnoses are established based on the ease in which a counselor can compare symptoms with criterion of disorders Dumont & Lecomte, 1987; Hays et al., 2009). The majority of participants (70%; $n = 23$) identified availability-broad, meaning a broad range of symptoms were integrated into the diagnostic decision. For example, one participant summarized the client's symptoms: "Client reported being depressed, feeling others were critical of his work, not wanting social interactions at home, spending time drinking, wanting to be alone, and past history of suicidal ideation and plan." Fewer participants (15%, $n = 5$) identified availability-environment, in which symptoms were familiar or commonly associated with certain environmental stressors. For example, one participant identified anxiety as an appropriate response to the client's pending court case. A few participants (9%, $n = 3$) identified availability-context, in which symptoms were familiar due to the clinical and/or personal experience of the participant. For example, a participant cited the potential for body image issues with the White female client; this participant also cited her specialized population with whom she works is adolescents. It may be that this participant saw symptoms of body image issues because of her familiarity due to her experience with adolescents. Only one participant (3%) identified availability-academic, in which symptoms were familiar due to classroom learning and/or academic training. In this example, a participant connected her counseling course experience to identifying the symptoms of depression.

Vividness. The cognitive tool vividness refers to the influence a more salient or intensive symptom may have on a diagnostic decision (Hays et al., 2009). A majority of the participants in this study (73%) identified vividness in their clinical decision-making process ($n = 24$). . For example, one participant cited vividness of "past trauma and drug use, hearing voices." The vividness symptoms were reflected in the secondary Axis I diagnosis of posttraumatic stress disorder. A small portion of participants (18%) report that salient criteria did not heavily influence their diagnostic decision ($n = 6$). For example, a participant reported no salient or intense symptoms impacted her diagnostic decision, "not at all".

Cultural Considerations

Cultural awareness. Participants referenced cultural factors of the client in consideration of the presenting problem and/or diagnostic decision. Gender was the most considered cultural factor within the presenting problem and/or diagnostic decision (67%). For example, one participant demonstrated awareness of gender in the client's presenting problem, "She is also a female, and although she is a manager, she may not be as respected." Another participant demonstrated awareness of gender in relationship to the Latino culture, "If this client falls more in line with the traditional Latino culture and line of thought concerning male expression of emotion, then the client's symptoms must be very severe of his functioning severely impacted for him to seek counseling and to speak about what he's going through with a stranger."

Race/ethnicity was the second most considered cultural factor (61%). A large portion of participants (42%) reported cultural factors are not a consideration when conceptualizing a client's presenting problem and/or the diagnostic decision. For

example, a participant demonstrated awareness for the impact of race/ethnicity in relationship to the client's presenting problem: "She's African American, and depending where her job is located, she may be under appreciated by her co-workers." Another participant demonstrated accommodation for race/ethnicity in the client's presenting problem when she reported the Latino culture, "Puts high expectations on occupational success and ability to provide for the family. A situation that threatens that success/ability is likely to produce a high level of anxiety and depression."

Age and sexual orientation were considerations at the same rate (9%) within the presenting problem and/or diagnostic decision. In an example of consideration of age, a participant discussed the importance of being open to non-stereotypical diagnoses for someone middle-aged, "I took care to not eliminate diagnoses that might not be stereotypical." Sexual orientation was cited in cases where the client was assumed to be gay or lesbian because of the reference to a partner rather than specifying husband or wife. For example, a participant reported, "Client also mentioned that she had a partner—if that partner is female, she may also be struggling with identity issues."

In this study, 15% of participants referenced family as cultural factor for consideration within the presenting problem and/or diagnostic decision. Specifically, participants referenced how the client's family of origin may be impacting his or her concern of potential job loss. For example, a participant reported from the clinical data presented, "It is obvious that in the client's culture performance is very important. Failing is not an option." These participants believed the client was responding to an expectation to be a contributing, functional member of a family. These references were made without discussion of race/ethnicity or gender, but only the family of origin.

Some participants (n = 4) reported there was not enough information provided to determine the culture of the client (12%). For example a participant reported, "We do not have enough information about the client's culture to determine what may be important." The research team differentiated this type of statement from "no cultural factors considered in the presenting problem and/or diagnostic decision" because it displayed higher level of cultural awareness. These participants did not assume cultural from visual cues.

Cultural bias. Participants referenced cultural factors exclusive of the presenting problem and/or diagnosis (cultural bias). Thirty percent of participants referenced gender bias, unrelated to the presenting problem and/or diagnostic decision. For example, a male participant reported, "Particularly because he is a male I am more inclined to believe that he is not exaggerating his symptoms." Another example of gender bias was coded in the transcript of a female participant, "She is a female and such she speaks out her emotions better than what a male client would do." Socioeconomic status (SES) also presented in some cases (18%). In the case of SES bias, there were perceptions that a client would have a good prognosis related to assumed middle-class status. For example, a participant reported, "The client appeared to be relatively high functioning; middle class and wholesome."

Race/ethnicity bias, unrelated to the presenting problem and/or diagnostic decision was less prevalent in the study. Twelve percent of counselors and counselor trainees in the study reference race/ethnicity bias. For example, a participant reported "Client may be used to being judged or observed, as an African American, which could be exacerbating his symptoms." Similarly, 12% of participants displayed heterosexism

bias within their clinical decision-making process. For example, a participant reported, "She has children and has a partner (rather than a spouse) this may indicate history of relational problems." Only one participant made reference to age bias, assuming an individual should have a good prognosis because of perceptions of middle-agedness. For example, a participant reported, "She seems immature for her age, she never stated her age but she did say she had a partner she lived with. Her mannerisms and way of speaking reminded me of a teenager though."

Model of Clinical Decision-Making Process

This grounded theory data identified what variables of clinical decision-making are prevalent in the process for counselors and counselor trainees. This study tested and revised a preliminary theory of clinical decision-making (Hays et al., 2009; Hays et al., 2010). Clinical decision-making represents a complex process in which counselors interpret clinical data as presented by clients and make diagnostic decisions as appropriate. A visual representation of the developing theory of the clinical decision-making process is displayed in Figure 1.

The developing theory demonstrates that when presented with identical symptomology, counselors and counselor trainees arrive at different diagnostic decisions. The arrival at different diagnostic decisions is accounted for through diagnostic variance, specifically information variance, criterion variance, and observation. Information variance is the most prevalent form of diagnostic variance accounting for differences in diagnostic decisions. Meaning, what clinical data are shared by the client or asked for by the counselor or counselor trainee seems to be very important in arriving at a diagnostic decision. After being presented with symptomology, counselors and counselor trainees

employ cognitive tools (consciously or unconsciously) to interpret the clinical data. The most prevalent cognitive tools utilized are anchoring, representativeness, vividness, and availability. Salient or intense symptoms (vividness) presented early in the clinical session become the symptoms counselors and counselor trainees adhere to when making a diagnostic decision (anchoring). Also, the symptoms counselors and counselor trainees are drawn to are ones in which they are familiar (availability). When reviewing symptoms, counselors and counselor trainees focus on how the symptoms can be translated into criteria (representativeness).

The clinical decision-making process is also influenced by the race/ethnicity and gender of the client. Many counselors and counselor trainees are considering cultural factors when conceptualizing the presenting problem and diagnostic decision. Gender is considered slightly more frequently than race/ethnicity in the decision-making process. To some degree, counselors' and counselor trainees' clinical decision-making process is impacted by their own cultural bias. Specifically, gender, SES, race/ethnicity, and sexual orientation bias influence the perceptions and cognitive processes of counselors and counselor trainees as they arrive at diagnostic decisions. Some counselors and counselor trainees are further impacted by a personal negative attitude of the client.

Overall in the clinical decision-making process, counselors and counselor trainees are certain of their diagnostic decisions due to the symptoms presented and criteria of the disorder(s). To a lesser degree, counselors and counselor trainees become more certain of their diagnostic decision throughout the clinical decision-making process. Many counselors and counselor trainees consider other possible diagnoses, but not an in-depth consideration of differential diagnoses.

The theory of the clinical decision-making process of counselors and counselor trainees as presented in this section requires further testing and revisions, as this study is not without its limitations. In order to confidentially generalize this theory to a larger population of counselors and counselor trainees a much larger sample population is required. Other internal and external validity threats serve as limitations to this study. The limitations are described in the following section.

Discussion

Implications for Counselor Trainees and Counselor Educators

The presented theory on the clinical decision-making process of counselors and counselor trainees is not without its limitations (e.g., sample size, selection bias, and attrition). However, there are many components of the findings that are consistent with previous research in the helping profession. This study represented more counselor trainees than counselors, and therefore the implications of the study may be more beneficial for counselor trainee programs to consider.

Clinical judgment. The DSM-IV-TR allows for structure in the diagnostic process, a streamlined system that third-party reimbursement organizations deem appropriate to employ (APA, 2000). However, it specifies the importance of clinical judgment in cooperation with the categorical diagnostic system. The presented theory from this study suggests that counselor trainees are relying more on the criteria than their own clinical judgment. This is consistent with previous literature in which matching symptoms demonstrated lower levels of clinician interpretation (Falvey, Bray, & Herbert, 2005). Also consistent between this study and previous work is the sense of overconfidence in the diagnostic decisions of counselor trainees (Smith & Agate, 2004).

In the preliminary theory developed by Hays et al. (2009), there was a more equal distribution of counselors and counselor trainees in the sample, as well as a higher tendency to more thoroughly consider other possible diagnoses. Congruently, in the present study in which the sample captures more counselor trainees, there is a higher tendency to be confident in the diagnostic decision without more thorough consideration of other possible disorders.

Dumont and Lecomte (1987) postulated the importance of curriculum that teaches inferential reasoning skills, as well as the possible clinical judgment errors associate with these skills. Twenty-five years later the helping profession continues to be challenged to develop programs that challenge trainees to develop critical reasoning skills to employ in the clinical decision-making process. It is vital for counselor education curriculum to respond to the need for increasing cognitive complexity skills, as research demonstrates those skills will not necessarily develop with experience (Brammer, 1997; Garb, 1998; Hillerbrand & Claiborn, 1990). Learning clinical judgment skills will positively impact other areas of the clinical decision-making process as well. For example, Sue and Sue (2008) connected clinical judgment skills with the incorporation of multicultural competence skills. The present study demonstrated how cultural factors impact the clinical decision-making process, and therefore need to be considered in the implications for counselor training programs.

Multicultural competence. Counseling curricula responded to the rapid cultural changes in American society with the incorporation of multicultural and diversity education as a core element in the CACREP standards (CACREP, 2009). The presented theory of the clinical decision-making process illuminates how cultural considerations

may assist counselor trainees to make more informed diagnostic decisions. Previous research indicates that multicultural counseling competence education also increased awareness, knowledge, and skills when working with diverse clients for counselor trainees (Constantine, 2001). Research indicates experiential activities further promote diversity skills in the classroom (Smith, Constantine, Dunn, Dinehart, & Montoya, 2006). It seems as though counselor educators need to specifically connect the multicultural education with the clinical judgment education to promote the clinical decision-making skills.

Consistent with previous literature (Guanipa & Woolley, 2000; Hays, et al., 2010) this study demonstrates counselors and counselor trainees were more likely to consider the cultural factor of gender in the clinical decision-making process. It may be that gender represents a cultural factor that counselors and counselor trainees are more comfortable broaching and/or conceptualizing. Researchers suggest broaching behavior demonstrates a commitment to exploring diversity and diversity's potential impact on presented problems (Day-Vines et al., 2007). The developing theory of the clinical decision-making process indicates the importance of broaching race/ethnicity as well when making diagnostic decisions. Previous research indicates that sometimes other sociopolitical factors are assumed based on race (Moscou, 2008). An example of the potential misuse or misunderstanding was demonstrated when a participant of this study determined the African American female client was denying a substance problem in fear that receiving treatment would result in the removal of her children from the home by social services. In contrast, the White female client was assumed to be middle-class and perceived to be well-adjusted. Both female clients were presented well-dressed and read

the same script. As consistent with previous literature, harsher assumptions were made of those from non-dominant cultures (Hays et al., 2010; Jenkins-Hall & Sacco, 1991; Trierweiler, Muroff, Jackson, Neighbors, & Munday, 2005).

From the developing theory of the clinical decision-making process there is indication that counselor educators have an opportunity to challenge the clinical judgment skills and multicultural awareness of counselor trainees. The researcher of this study suggests the infusion of clinical judgment awareness and cultural awareness in the curriculum of diagnosis and treatment planning. By increasing the awareness of counselor trainees to these factors counselor educators may promote a more intentional and culturally competent clinical decision-making process.

References

American Counseling Association. (2005). *ACA code of ethics.* Alexandria, VA: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Andrews, G., Anderson, T. M., Slade, T., & Sunderland, M. (2008). Classification of anxiety and depressive disorders: Problems and solutions. *Depression and Anxiety, 25*, 274-281.

Arkes, H. R. (1991). Costs and benefits of judgment errors: Implications for debiasing. *Psychology Bulletin, 110*, 486-498. doi:10.1037/0033-2909.110.3.486

Brammer, R. (1997). Case conceptualization strategies: The relationship between psychologists' experience levels, academic training, and mode of clinical inquiry. *Educational Psychology Revision, 9*, 333-351.

CACREP. (2009). *Accreditation and procedures manual and application*. Alexandria, VA: Council for Accreditation of Counseling and Related Educational Programs.

Constantine, M. G. (2001). Predictors of observer ratings of multicultural counseling competence in Black, Latino, and White American trainees. *Journal of Counseling Psychology, 48*, 456-462. doi:10.1037//0022-0167.48.4.456

Constantine, M. G., & Ladany, N. (2007). Self-report multicultural counseling competence scales: Their relation to social desirability attitudes and multicultural case conceptualization ability. *Journal of Counseling Psychology, 47*, 155-164.

Constantine, M. G., Hage, S. M., Kindaichi, M. M., & Bryant, R. M. (2007). Social justice and multicultural issues: Implications for the practice and training of

counselors and counseling psychologists. *Journal of Counseling and Development, 85*, 24-25.

Constantine, M. G., Kinidachi, M., Arorash, T. J., Donnelly, P. C., & Jung, K.-S. K. (2002). Clients' perceptions of multicultural counseling competence: Current status and future directions. *The Counseling Psychologist, 30*, 407-416.

Constantine, M. G., & Ladany, N. (2000). Self-report multicultural counseling competence scales: Their relation to social desirability attitudes and multicultural case conceptualization ability. *Journal of Counseling Psychology, 47*, 155-164. doi:10.1037//0022-0167.47.2.155

Day-Vines, N. L., Wood, S. M., Grothaus, T., Craigen, L., Holman, A., Dotson-Blake, K., & Douglass, M. J. (2007). Broaching the subject of race, ethnicity, and culture during the counseling process. *Journal of Counseling & Development, 85*, 401-409.

Delbello, M. P., Lopez-Larson, M. P., Soutullo, C. A., & Strakowski, S. M. (2001). Effects of race on psychiatric diagnosis of hospitalized adolescents: A retrospective chart review. *Journal of Child and Adolescent Psychopharmacology, 11*, 95-103.

Dumont, F., & Lecomte, C. (1987). Inferential processes in clinical work: Inquiry into logical errors that affect diagnostic judgments. *Professional Psychology: Research and Practice, 18,* 433-438. doi:10.1037/0735-7028.18.5.433

Ellis, M. V., Robbins, E. S., Schult, D., Ladany, N., & Banker, J. (1990). Anchoring errors in clinical judgments: Type I error, adjustment, or mitigation?. *Journal of Counseling Psychology, 37*, 343-351. doi:10.1037/0022-0167.37.3.343

Eriksen, K., & Kress, V. E. (2008). Gender and diagnosis: Struggles and suggestions for counselors. *Journal of Counseling and Development, 86,* 152-161.

Eriksen, K., Kress, V. E., Dixon, A., & Ford, S. J. W. (2010). Multicultural diagnosis and conceptualization. In D. G. Hays & B. T. Erford (Eds.), *Developing multicultural counseling competence: A systems approach* (pp. 94-112). Upper Saddle River, NJ: Pearson Education, Inc.

Friedlander, M. L., & Stockman, S. J. (1983). Anchoring and publicity effects in clinical judgment. *Journal of Clinical Psychology, 39*, 637-643. doi:10.1002/1097-4679(198307)39:4<637::AID-JCLP2270390433>3.0.CO;2-Q

Garb, H. N. (1998). Recommendations for training in the use of the Thematic Apperception Test (TAT). *Professional Psychology: Research and Practice, 29*, 621-622. doi:10.1037/0735-7028.29.6.621.b

Gigerenzer, G. (2002). *Calculated risks: How to know when numbers deceive you.* New York: Simon & Schuster.

Guanpia, C., & Woolley, S. R. (2000). Gender biases and therapists' conceptualization of couple difficulties. *The American Journal of Family Therapy, 28*, 181-192.

Gushue, G. V., & Carter, R. T. (2000). Remembering race: White racial identity attitudes and two aspects of social memory. *Journal of Counseling Psychology, 47,* 199-210. doi:10.1037//0022-0167.47.2.199

Gushue, G. V., & Constantine, M. G. (2007). Color-blind racial attitudes and White racial identity attitudes in psychology trainees. *Professional Psychology: Research and Practice, 38,* 321-328. doi:10.1037/0735-7028.38.3.321

Gushue, G. V., Constantine, M. G., & Sciarra, D. T. (2008). The influence of culture, self-reported multicultural competence, and shifting standards of judgment on perceptions of family functioning of White family counselors. *Journal of Counseling and Development, 86*, 85-94.

Hartung, C. M., & Widiger, T. A. (1998). Gender differences in the diagnosis of mental disorders: Conclusions and controversies of the DSM-IV-TR-IV. *Psychology Bulletin, 123*, 260-278. doi:10.1037/0033-2909.123.3.260

Hays, D. G., & McLeod, A. L. (2010). The culturally competent counselor. In D. G. Hays & B. T. Erford (Eds.), *Developing multicultural counseling competence: A systems approach* (pp. 1-31). Upper Saddle River, NJ: Pearson Education, Inc.

Hays, D. G., McLeod, A. L., & Prosek, E. (2009). Diagnostic variance among counselors and counselor trainees. *Measurement and Evaluation in Counseling and Development, 42*, 3-14. doi:10.1177/0748175609333559

Hays, D. G., Prosek, E. A., & McLeod, A. L. (2010). A mixed methodological analysis of the role of culture in the clinical decision-making process. *Journal of Counseling and Development, 88*, 114-121.

Hillerbrand, E., & Claiborn, C. D. (1990). Examining reasoning skill differences between expert and novice counselors. *Journal of Counseling & Development, 68*, 684-691.

Jenkins-Hall, K., & Sacco, W. P. (1991). Effect of client race and depression on evaluations by White therapists. *Journal of Social and Clinical Psychology, 10,* 322-333.

Jones, B. E., & Gray, B. A. (1986). Problems in diagnosing schizophrenia and affective disorders among Black. *Hospital and Community Psychiatry, 37*, 61-65.

McAuliffe, G. (2008). *Culturally alert counseling: A comprehensive introduction.* Thousand Oaks, CA: Sage.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage.

Moscou, S. (2008). The conceptualization and operationalization of race and ethnicity by health services researchers. *Nursing Inquiry, 15*, 94-105.

Neighbors, H. W., Trierweiler, S. L., Munday, C., Thompson, E. E., Binion, V. J., & Gomez, J. P. (1999). The psychiatric diagnosis of African Americans: Diagnostic divergence in clinician-structured and semi-structured interviewing conditions. *Journal of the National Medical Association, 91*, 601-612.

Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Smith, J. D., & Agate, J. (2004). Solutions for overconfidence: Evaluation of an instructional module for counselor trainees. *Counselor Education & Supervision, 44*, 31-43.

Smith, T. B., Constantine, M. G., Dunn, T. W., Dinehart, J. M., & Montoya, J. A. (2006). Multicultural education in the mental health professions: A meta-analytic review. *Journal of Counseling Psychology, 53*, 132-145Snowden, L. R., & Cheung, F. K. (1990). Use of inpatient mental health services by members of ethnic minority groups. *American Psychologist, 3*, 347-355.

Snowden, L. R., & Cheung, F. K. (1990). Use of inpatient mental health services by members of ethnic minority groups. *American Psychologist, 3*, 347-355.

SPSS. (2010). SPSS Statistics Graduate Pack 19.0 for Windows (Version 19): SPSS.

Sue, D. W., & Sue, D. (2008). *Counseling the culturally diverse: Theory and practice* (5th ed.). New York: Wiley.

Trierweiler, S. J., Neighbors, H. W., Munday, C., Thompson, E. E., Binion, V. J., & Gomez, J. P. (2000). Clinician attributions associated with the diagnosis of schizophrenia in African American and non-African American patients. *Journal of Consulting and Clinical Psychology, 68*, 171-175. doi:10.1037//0022-006X.68.1.171

Trierweiler, S. J., Muroff, J. R., Jackson, J. S., Neighbors, H. W., & Munday C. (2005). Clinician race, situational attributions, and diagnoses of mood versus schizophrenia disorders. *Cultural Diversity and Ethnic Minority Psychology, 11*, 351-364.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science, 185,* 1124-1131. doi:10.1126/science.185.4157.1124

U.S. Census Bureau. (2009). *Statistical abstract of the United State: 2010* (129th Edition). Retrieved from http://www.census.gov/statab/

Whaley, A. L. (2001). A two-stage method for the study of cultural bias in the diagnosis of schizophrenia in African Americans. *Journal of Black Psychology, 30*, 167-186.

Wisch, A. F., & Mahalik, J. R. (1999). Male therapists' clinical bias: Influence of client gender roles and therapist gender role conflict. *Journal of Counseling Psychology, 46,* 51-60. doi:10.1037/0022-0167.46.1.51

Table 1

Summary of Axis I Diagnoses

	Frequency				
	Primary	Secondary	Tertiary	Rule Out	Consider-ation
Mood Disorders					
Major depressive disorder, recurrent, moderate (296.32)	11	-	-	-	-
Major depressive disorder, recurrent, severe with psychotic features (296.34)	5	-	-	-	-
Major depressive disorder, recurrent, mild (296.11)	1	2	1	-	-
Depressive disorder, NOS (311)	3	-	1	-	-
Posttraumatic stress disorder (309.81)	-	1	1	-	-
Major depressive disorder, recurrent severe without psychotic features (296.33)	1	-	-	-	-
Dysthymic disorder (300.4)	-	-	-	-	1
Bipolar I disorder, single manic episode, moderate (296.02)	-	-	1	-	-
Alcohol-induced mood disorder (291.89)	-	1	-	-	-
Psychotic Disorders					
Alcohol-induced psychotic disorder with hallucinations (291.3)	-	1	-	-	-
Adjustment Disorders					
Adjustment disorder, with mixed anxiety and depressed mood (309.28)	4	1	3	-	-
Adjustment disorder, with depressed mood (309.0)	2	-	-	-	-
Adjustment disorder, with mixed disturbance of emotions and conduct (309.4)	2	-	-	-	-
Adjustment disorder, unspecified (309.9)	-	-	-	-	1

Anxiety Disorders					
Generalized anxiety disorder (300 2)	1	5	-	-	-
Alcohol-induced anxiety disorder (291 89)	-	2	-	-	-
Anxiety disorder to a general medical condition (293 84)	-	-	1	-	-
Anxiety disorder NOS (300 00)	1	-	-	-	-
V-Codes					
Occupational problem (V62 2)	6	7	-	-	-
Relational problem NOS (V62 81)	2	1	-	-	-
Relational problem related to a mental disorder or general medical condition	-	-	2	-	-
Substance Related					
Alcohol Abuse	-	-	-	1	-

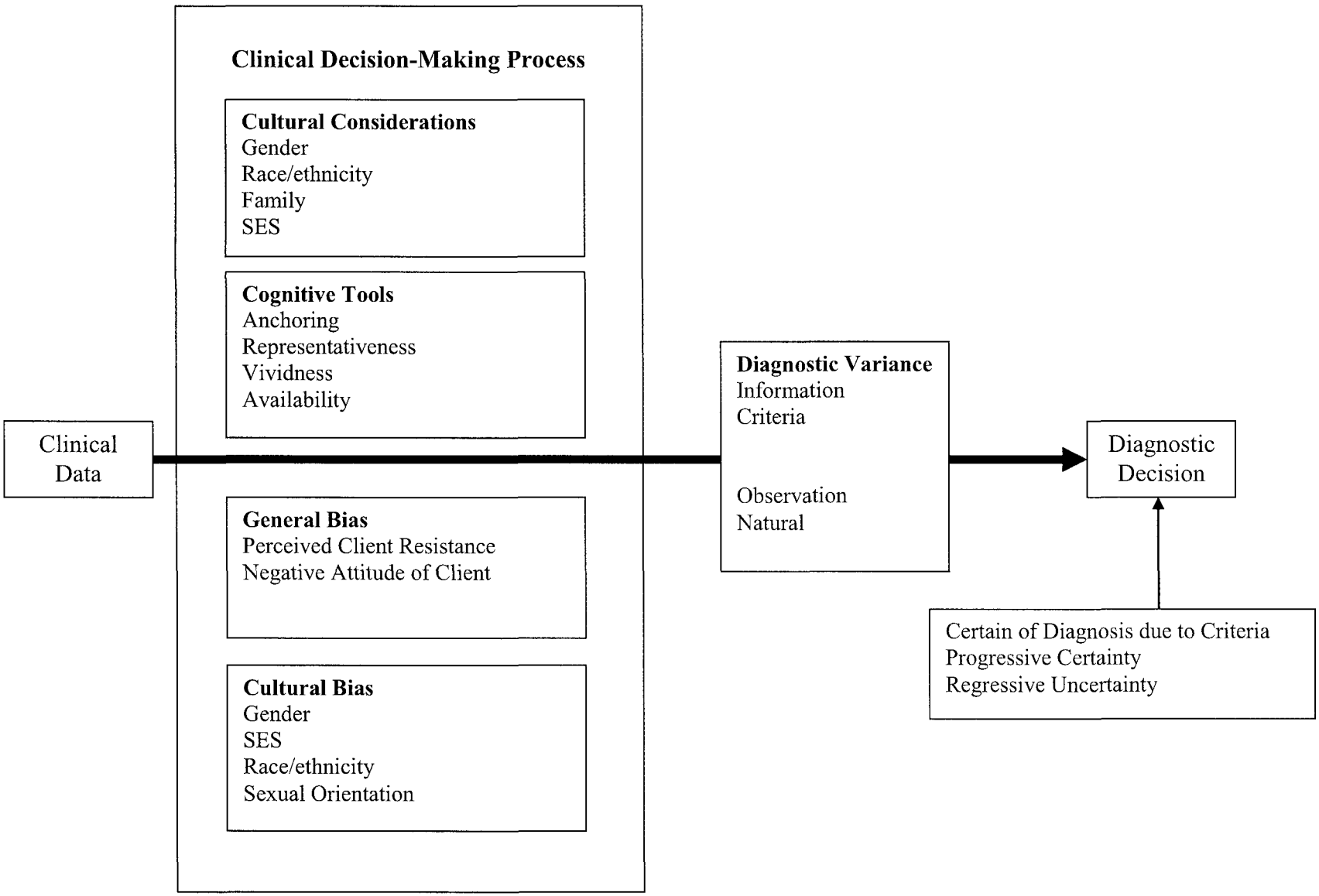

Figure 1. A developing theory of the clinical decision-making process of counselors and counselor trainees.

References

American Counseling Association. (2005). *ACA code of ethics.* Alexandria, VA: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Andrews, G., Anderson, T. M., Slade, T., & Sunderland, M. (2008). Classification of anxiety and depressive disorders: Problems and solutions. *Depression and Anxiety, 25*, 274-281.

Arkes, H. R. (1991). Costs and benefits of judgment errors: Implications for debiasing. *Psychology Bulletin, 110*, 486-498. doi:10.1037/0033-2909.110.3.486

Baker, F. M., & Bell, C. C. (1999). Issues in the psychiatric treatment of African Americans. *Psychiatric Services, 50*, 362-368.

Biernat, M., & Kobrynowicz, D. (1997). Gender- and race-based standards of competence: Lower minimum standards but higher ability standards for devalued groups. *Journal of Personality and Social Psychology, 72*, 544-557. doi:10.1037/0022-3514.72.3.544

Biernat, M., & Manis, M. (1994). Shifting standards and stereotype-based judgments. *Journal of Personality and Social Psychology, 66*, 5-20. doi:10.1037/0022-3514.66.1.5

Brammer, R. (1997). Case conceptualization strategies: The relationship between psychologists' experience levels, academic training, and mode of clinical inquiry. *Educational Psychology Revision, 9*, 333-351.

Brondolo, E., ver Halne, N., Pencille, M., Beatty, D., & Contrada, R. (2009). Coping with racism: A selective review of the literature and a theoretical and methodological critique. *Journal of Behavioral Medicine, 32*, 64-88.

CACREP. (2009). *Accreditation and procedures manual and application*. Alexandria, VA: Council for Accreditation of Counseling and Related Educational Programs.

Cannon, E., & Singh, A. A. (2010). Gender and sexism. In D. G. Hays & B. T. Erford (Eds.), *Developing multicultural counseling competence: A systems approach* (pp. 94-112). Upper Saddle River, NJ: Pearson Education, Inc.

Caplan, P. J. (1992). Gender issues in the diagnosis of mental disorder. *Women and Therapy, 12*, 71-82.

Cochran, S. D., & Mays, V. M. (2000). Relation between psychiatric syndromes and behaviorally defined sexual orientation in a sample of the U.S. population. *American Journal of Epidemiology, 151*, 516-523.

Cochran, S. D., Sullivan, J. G., & Mays, V. M. (2003). Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. *Journal of Counseling and Clinical Psychology, 71*, 53-61.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*, 155-159.

Constantine, M. G. (2001). Predictors of observer ratings of multicultural counseling competence in Black, Latino, and White American trainees. *Journal of Counseling Psychology, 48*, 456-462. doi:10.1037//0022-0167.48.4.456

Constantine, M. G. (2002). The intersection of race, ethnicity, gender, and social class in counseling: Examining selves in cultural contexts. *Journal of Multicultural Counseling Development, 30*, 210-215.

Constantine, M. G., & Ladany, N. (2007). Self-report multicultural counseling competence scales: Their relation to social desirability attitudes and multicultural case conceptualization ability. *Journal of Counseling Psychology, 47*, 155-164.

Constantine, M. G., Hage, S. M., Kindaichi, M. M., & Bryant, R. M. (2007). Social justice and multicultural issues: Implications for the practice and training of counselors and counseling psychologists. *Journal of Counseling and Development, 85*, 24-25.

Constantine, M. G., Kinidaichi, M., Arorash, T. J., Donnelly, P. C., & Jung, K.-S. K. (2002). Clients' perceptions of multicultural counseling competence: Current status and future directions. *The Counseling Psychologist, 30*, 407-416.

Constantine, M. G., & Ladany, N. (2000). Self-report multicultural counseling competence scales: Their relation to social desirability attitudes and multicultural case conceptualization ability. *Journal of Counseling Psychology, 47*, 155-164. doi:10.1037//0022-0167.47.2.155

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Day-Vines, N. L., Wood, S. M., Grothaus, T., Craigen, L., Holman, A., Dotson-Blake, K., & Douglass, M. J. (2007). Broaching the subject of race, ethnicity, and culture

during the counseling process. *Journal of Counseling & Development, 85*, 401-409.

Delbello, M. P., Lopez-Larson, M. P., Soutullo, C. A., & Strakowski, S. M. (2001). Effects of race on psychiatric diagnosis of hospitalized adolescents: A retrospective chart review. *Journal of Child and Adolescent Psychopharmacology, 11*, 95-103.

Dohernwend, B. P. (2000). The role of adversity and stress in psychopathology: Some evidence and its implications for theory and research. *Journal of Health and Social Behavior, 41*, 1-19.

Dumont, F., & Lecomte, C. (1987). Inferential processes in clinical work: Inquiry into logical errors that affect diagnostic judgments. *Professional Psychology: Research and Practice, 18,* 433-438. doi:10.1037/0735-7028.18.5.433

Ellis, M. V., Robbins, E. S., Schult, D., Ladany, N., & Banker, J. (1990). Anchoring errors in clinical judgments: Type I error, adjustment, or mitigation?. *Journal of Counseling Psychology, 37*, 343-351. doi:10.1037/0022-0167.37.3.343

Endicott, J., Spitzer, L., Fleiss, J. L., & Cohen, J. (1976). The Global Assessment Scale: A procedure for measuring overall severity of psychiatric disturbance. *Archives of General Psychiatry, 33*, 766-771.

Eriksen, K., & Kress, V. E. (2005). *Beyond the DSM-IV-TR story: Ethical quandaries, challenges, and best practices.* Thousand Oaks, CA: Sage.

Eriksen, K., & Kress, V. E. (2008). Gender and diagnosis: Struggles and suggestions for counselors. *Journal of Counseling and Development, 86,* 152-161.

Eriksen, K., Kress, V. E., Dixon, A., & Ford, S. J. W. (2010). Multicultural diagnosis and conceptualization. In D. G. Hays & B. T. Erford (Eds.), *Developing multicultural counseling competence: A systems approach* (pp. 94-112). Upper Saddle River, NJ: Pearson Education, Inc.

Favley, J. E. (2001). Clinical judgment in case conceptualization and treatment planning across mental health disciplines. *Journal of Counseling & Development, 79*, 292-303.

Falvey, J. E., Bray, T. E., & Herbert, D. J. (2005). Case conceptualization and treatment planning: Investigation of problem-solving and clinical judgment. *Journal of Mental Health Counseling, 27*, 348-372.

Feisthamel, K. P., & Schwartz, R. C. (2009). Differences in mental health counselors' diagnoses based on client race: An investigation of adjustment, childhood, and substance-related disorders. *Journal of Mental Health Counseling, 31*, 47-59.

Ford, M. R., & Widiger, T. A. (1989). Sex bias in the diagnosis of histrionic and antisocial personality disorders. *Journal of Counseling and Clinical Psychology, 57*, 301-305. doi:10.1037/0022-006X.57.2.301

Friedlander, M. L., & Stockman, S. J. (1983). Anchoring and publicity effects in clinical judgment. *Journal of Clinical Psychology, 39*, 637-643. doi:10.1002/10974679(198307)39:4<637::AID-JCLP2270390433 >3.0.CO;2-Q

Funtowicz, M. N., & Widiger, T. A. (1999). Sex bias in the diagnosis of personality disorders: An evaluation of the DSM-IV-TR-IV criteria. *Journal of Abnormal Psychology, 108*, 195-201. doi:10.1037/0021-843X.108.2.195

Garb, H. N. (1998). Recommendations for training in the use of the Thematic Apperception Test (TAT). *Professional Psychology: Research and Practice, 29*, 621-622. doi:10.1037/0735-7028.29.6.621.b

Gigerenzer, G. (2002). *Calculated risks: How to know when numbers deceive you.* New York: Simon & Schuster.

Guanpia, C., & Woolley, S. R. (2000). Gender biases and therapists' conceptualization of couple difficulties. *The American Journal of Family Therapy, 28*, 181-192.

Gushue, G. V. (2004). Race, color-blind racial attitudes, and judgments about mental health: A shifting standards perspective. *Journal of Counseling Psychology, 51,* 398-407. doi:10.1037/0022-0167.51.4.398

Gushue, G. V., & Carter, R. T. (2000). Remembering race: White racial identity attitudes and two aspects of social memory. *Journal of Counseling Psychology, 47,* 199-210. doi:10.1037//0022-0167.47.2.199

Gushue, G. V., & Constantine, M. G. (2007). Color-blind racial attitudes and White racial identity attitudes in psychology trainees. *Professional Psychology: Research and Practice, 38,* 321-328. doi:10.1037/0735-7028.38.3.321

Gushue, G. V., Constantine, M. G., & Sciarra, D. T. (2008). The influence of culture, self-reported multicultural competence, and shifting standards of judgment on perceptions of family functioning of White family counselors. *Journal of Counseling and Development, 86*, 85-94.

Hartung, C. M., & Widiger, T. A. (1998). Gender differences in the diagnosis of mental disorders: Conclusions and controversies of the DSM-IV-TR-IV. *Psychology Bulletin, 123*, 260-278. doi:10.1037/0033-2909.123.3.260

Hays, D. G., Chang, C. Y., & Decker, S. L. (2007). Initial development and validation of the Privilege and Oppression Inventory. *Measurement and Evaluation in Counseling and Development, 40*, 66-79.

Hays, D. G., & McLeod, A. L. (2010). The culturally competent counselor. In D. G. Hays & B. T. Erford (Eds.), *Developing multicultural counseling competence: A systems approach* (pp. 1-31). Upper Saddle River, NJ: Pearson Education, Inc.

Hays, D. G., McLeod, A. L., & Prosek, E. (2009). Diagnostic variance among counselors and counselor trainees. *Measurement and Evaluation in Counseling and Development, 42*, 3-14. doi:10.1177/0748175609333559

Hays, D. G., Prosek, E. A., & McLeod, A. L. (2010). A mixed methodological analysis of the role of culture in the clinical decision-making process. *Journal of Counseling and Development, 88*, 114-121.

Helms, J. E. (1984). Toward a theoretical explanation of the effects of race on counseling: A Black and White model. *The Counseling Psychologist, 13,* 695-710.

Helms, J. E. (1995). An update of Helms' White and people of color racial identity models. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (pp. 181-198). Thousand Oaks, CA: Sage.

Helms, J. E. (1996). Toward a methodology for measuring and assessing "racial" as distinguished from "ethnic" identity. In G. R. Sodowski & J. Impara (Eds.), *Multicultural assessment in counseling and clinical psychology* (pp. 143-192). Lincoln, NE: Buros Institute of Mental Measurements.

Helms, J. E., & Carter, R. T. (1991). Relationships of White and Black racial identity attitudes and demographic similarity to counselor preferences. *Journal of Counseling Psychology, 38*, 446-457. doi:10.1037/0022-0167.38.4.446

Hill, C. L., & Ridley, C. R. (2001). Diagnostic decision-making: Do counselors delay final judgments? *Journal of Counseling & Development, 79*, 98-104.

Hillerbrand, E., & Claiborn, C. D. (1990). Examining reasoning skill differences between expert and novice counselors. *Journal of Counseling & Development, 68*, 684-691.

Jenkins-Hall, K., & Sacco, W. P. (1991). Effect of client race and depression on evaluations by White therapists. *Journal of Social and Clinical Psychology, 10,* 322-333.

Jones, B. E., & Gray, B. A. (1986). Problems in diagnosing schizophrenia and affective disorders among Black. *Hospital and Community Psychiatry, 37*, 61-65.

Jones, E. E. (1982). Psychotherapists' impressions of treatment outcome as a function of race. *Journal of Clinical Psychology, 38*, 722-731. doi:10. 1002/1097-4679(198210) 38:4 <722 ::AID-JCLP2270380406>3.0.CO;2-7

Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychology Review, 80*, 237-251. doi:10.1037/h0034747

Kaplan, M. (1983). A woman's view of DSM-IV-TR-III. *American Psychologist, 38*, 786-792. doi:10.1037/0003-066X.38.7.786

Kass, F., Spitzer, R. L., & Williams, J. B. W. (1983). An empirical study of the issue of sex bias in the diagnostic criteria of DSM-IV-TR-III axis II personality disorders. *American Psychologist, 38*, 799-801. doi:10. 1037/0003-066X.38.7.799

Keenan, K., & Shaw, D. (1997). Developmental and social influences on young girls' early problem behavior. *Psychological Bulletin, 121*, 95-113.

Lawson, W. B., Hepler, N., Holladay, J., & Cuffel, B. (1994). Race as a factor in inpatient and outpatient admissions and diagnosis. *Hospital and Community Psychiatry, 45*, 72-74.

Lincoln, Y. S., & Guba, E. E. (1986). Research, evaluation, and policy analysis: Heuristics for disciplined inquiry. *Review of Policy Research, 5*, 546-565.

Lopez, S. R. (1989). Patient variable biases in clinical judgment: Conceptual overview and methodological considerations. *Psychological Bulletin, 106*, 184-203. doi:10.1037/0033-2909.106.2.184

McAuliffe, G. (2008). *Culturally alert counseling: A comprehensive introduction.* Thousand Oaks, CA: Sage.

McDermott, P. A. (1996). A nationwide study of developmental and gender prevalence for psychopathology in childhood and adolescence. *Journal of Abnormal Child Psychology, 24*, 53-67.

Meyer, L. S., Gamst, G., & Guarino, A. J. (2006). *Applied multivariate research: Design and interpretation.* Thousand Oaks, CA: Sage Publications.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage.

Moscou, S. (2008). The conceptualization and operationalization of race and ethnicity by health services researchers. *Nursing Inquiry, 15*, 94-105.

Mukherjee, S., Shukla, S., Woodle, J., Rosen, A. M., & Olarte, S. (1983). Misdiagnosis of schizophrenia in bipolar patients: A multiethnic comparison. *American Journal of Psychiatry, 140*, 1571-1574.

Neighbors, H. W., Trierweiler, S. L., Munday, C., Thompson, E. E., Binion, V. J., & Gomez, J. P. (1999). The psychiatric diagnosis of African Americans: Diagnostic divergence in clinician-structured and semi-structured interviewing conditions. *Journal of the National Medical Association, 91*, 601-612.

Nilsson, J. E., Love, K. M., Taylor, K. J., & Slusher, A. L. (2007). A content and sample analysis of quantitative articles published in the Journal of Counseling & Development between 1991 and 2000. *Journal of Counseling & Development, 85*, 357-363.

Paniagua, F. A. (2005). *Assessing and treating culturally diverse clients: A practical guide* (3rd ed.). Thousand Oaks, CA: Sage.

Parker, W. M., Moore, M. A., & Neimeyer, G. J. (1998). Altering White racial identity and interracial comfort through multicultural training. *Journal of Counseling and Development, 76*, 302-310.

Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Rosenthal, D. A. (2004). Effects of client race on clinical judgment of practicing European American vocational rehabilitation counselors. *Rehabilitation Counseling Bulletin, 47*, 131-141. doi:10.1177/00343552040470030201

Ruiz, P. (2004). Addressing culture, race, and ethnicity in psychiatric practice. *Psychiatric Annals, 34*, 527-532.

Seems, S. R., & Johnson, E. (1998). Gender bias among counseling trainees: A study of case conceptualization. *Counselor Education and Supervision, 37*, 257-269.

Smith, J. D., & Agate, J. (2004). Solutions for overconfidence: Evaluation of an instructional module for counselor trainees. *Counselor Education & Supervision, 44*, 31-43.

Smith, T. B., Constantine, M. G., Dunn, T. W., Dinehart, J. M., & Montoya, J. A. (2006). Multicultural education in the mental health professions: A meta-analytic review. *Journal of Counseling Psychology, 53*, 132-145.

Snowden, L. R. (2001). Barriers to effective mental health services for African Americans. *Mental Health Services Research: Special Issue: barriers to providing effective mental health services to racial and ethnic minorities in the United States, 3*, 181-187.

Snowden, L. R., & Cheung, F. K. (1990). Use of inpatient mental health services by members of ethnic minority groups. *American Psychologist, 3*, 347-355.

SPSS. (2010). SPSS Statistics Graduate Pack 19.0 for Windows (Version 19): SPSS.

Strakowski, S. M., Shelton, R. C., & Kolbrener, M. L. (1993). The effects of race and comorbidity on clinical diagnosis in patients with psychosis. *Journal of Clinical Psychiatry, 54*, 96-102.

Strakowski, S. M., Hawkins, J. M., Keck, P. E., McElroy, S. L., West, S. A., Bourne, M. L., Sax, K. W., & Tugrul, K. C. (1997). The effects of race and information variance on disagreement between psychiatric emergency service and research diagnoses in first-episode psychosis. *The Journal of Clinical Psychiatry, 58*, 457-463.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage.

Sue, D. W., Rivera, D. P., Capodilupo, C. M., Lin, A. I., & Torino, G. C. (2010). Racial dialogues and White trainee fears: Implications for education and training. *Cultural Diversity and Ethnic Minority Psychology, 16*, 206-214.

Sue, D. W., & Sue, D. (2008). *Counseling the culturally diverse: Theory and practice* (5th ed.). New York: Wiley.

Sue, S. (1992). Ethnicity and mental health: Research and policy issues. *Journal of Social Issues, 48*, 187-205.

Szymanski, D. M. (2005). Heterosexism and sexism as correlates of psychological distress in lesbians. *Journal of Counseling and Development, 83*, 355-360.

Trierweiler, S. J., Neighbors, H. W., Munday, C., Thompson, E. E., Binion, V. J., & Gomez, J. P. (2000). Clinician attributions associated with the diagnosis of schizophrenia in African American and non-African American patients. *Journal of Consulting and Clinical Psychology, 68*, 171-175. doi:10.1037/ /0022-006X.68.1.171

Trierweiler, S. J., Muroff, J. R., Jackson, J. S., Neighbors, H. W., & Munday C. (2005). Clinician race, situational attributions, and diagnoses of mood versus schizophrenia disorders. *Cultural Diversity and Ethnic Minority Psychology, 11*, 351-364.

Trierweiler S. J., Neighbors, H. W., Munday, C., Thompson, E. E., Jackson, J. S., & Binion, V. J. (2006). Differences in patterns of symptom attribution in diagnosing

schizophrenia between African American and Non-African American clinicians. *American Journal of Orthopsychiatry, 76*, 154-160.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science, 185,* 1124-1131. doi:10.1126/science.185.4157.1124

U.S. Census Bureau. (2009). *Statistical abstract of the United State: 2010* (129th Edition). Retrieved from http://www.census.gov/statab/

Veling, W., Hoek, H. W., & Mackenbach, J. P. (2008). Perceived discrimination and the risk of schizophrenia in ethnic minorities: A case-control study. *Social Psychiatry & Psychiatric Epidemiology, 43*, 953-959.

Whaley, A. L. (2001). A two-stage method for the study of cultural bias in the diagnosis of schizophrenia in African Americans. *Journal of Black Psychology, 30*, 167-186.

Whaley, A. L., & Geller, P. A. (2007). Toward a cognitive process model of ethnic/racial biases in clinical judgment. *Review of General Psychology, 11*, 75-96.

Widiger, T. A., & Samuel, D. B. (2005). Diagnostic categories or dimensions? A question for the *Diagnostic and Statistical Manual of Mental Disorder—Fifth Edition. Journal of Abnormal Psychology, 114*, 494-504.

Wisch, A. F., & Mahalik, J. R. (1999). Male therapists' clinical bias: Influence of client gender roles and therapist gender role conflict. *Journal of Counseling Psychology, 46,* 51-60. doi:10.1037/0022-0167.46.1.51

Appendix A
Email Invitation to Participate in Research: CACREP Programs

Dear <PROGRAM DIRECTOR>:

I am a doctoral candidate at Old Dominion University recruiting participants for my dissertation study (IRB approved). I am contacting a randomized list of CACREP approved counseling programs to request the distribution of my invitational email to your current counselor trainees in a masters and/or doctoral counseling program. This study investigates the clinical decision-making process of counselors and counselor trainees, a research area underrepresented in the counseling research literature.

I genuinely appreciate your consideration to forward the below request to your students. If you have any questions, please do not hesitate to contact me at epros001@odu.edu.

Best,
Elizabeth

Dear Counselor Trainee:

This email invites participation in a research study entitled Diagnosis and the Clinical Decision Making Process (IRB-approved). You have received this email as a student of a CACREP counseling program from a randomized sampling of CACREP programs. This study is a mixed methods design conducted via a secure Internet website. Participation requires counselors and counselor trainees to view a mock client video, assign a clinical diagnosis using the *Diagnostic and Statistical manual of Mental Disorders-Text Revision* (DSM-IV-TR-IV-TR; American Psychiatric Association, 2000), answer open-ended interview questions, and rank-order survey questions. Participation will take an estimated 45-60 minutes. The researcher understands this is a significant time commitment for a research study; however it is important to investigate this topic among the counseling profession. Weekly lottery incentives are available as appreciation for your time-commitment.

If you are interested, please click on the link provided. You will be linked to an informed consent document. After reading the informed consent document you may choose to participate or not participate in the study. It will be helpful to have your DSM-IV-TR IV available and a space you can work in for about 60 minutes before you begin the survey.

To take the study, click here: Clinical Decision Making

If you have any questions, please contact the researcher, Elizabeth A. Prosek at epros001@odu.edu.

Thank you for your consideration,

Elizabeth

Appendix B
Email Invitation to Participate in Research: ACA Divisions

Dear<ACA DIVISION PRESIDENT>:

I am a doctoral candidate at Old Dominion University recruiting participants for my dissertation study (IRB approved). ACA no longer provides a list of randomized members for research purposes; therefore I am contacting presidents of ACA divisions to request the distribution of the invitational email to your member list-serv. This study investigates the clinical decision-making process of counselors and counselor trainees, a research area underrepresented in the counseling research literature.

I genuinely appreciate your consideration to forward the below email request to your members. If you have any questions, please do not hesitate to contact me at epros001@odu.edu.
Best,
Elizabeth

Dear Counselor and Counselor Trainee Colleagues:

This email invites participation in a research study entitled Diagnosis and the Clinical Decision Making Process (IRB-approved). You have received this email as a member of an ACA division. I apologize that you may receive this request more than once, if you are a member of multiple ACA divisions. This study is a mixed methods design conducted via a secure Internet website. Participation requires counselors and counselor trainees to view a mock client video, assign a clinical diagnosis using the *Diagnostic and Statistical manual of Mental Disorders-Text Revision* (DSM-IV-TR; American Psychiatric Association, 2000), answer open-ended interview questions, and rank-order survey questions. Participation will take an estimated 45-60 minutes. The researcher understands this is a significant time commitment for a research study; however it is important to investigate this topic among the counseling profession. Weekly lottery incentives are available as appreciation for your time commitment.

You are eligible for this research study if you are a counselor or student in a counseling program. If you are interested, please click on the link provided. You will be linked to an informed consent document. After reading the informed consent document you may choose to participate or not participate in the study. It will be helpful to have your DSM-IV-TR IV available and a space you can work in for about 60 minutes before you begin the survey.

To take the study, click here: Clinical Decision Making
If you have any questions, please contact the researcher, Elizabeth A. Prosek at epros001@odu.edu.
Thank you for your consideration,

Elizabeth

Appendix C
Informed Consent

PROJECT TITLE: Diagnosis and the Clinical Decision-Making Process

INTRODUCTION
The purposes of this form are to provide you information that may affect your decision to participate (YES) or not participate (NO) in this research, and to record the consent of those who choose to participate (YES). This document of informed consent will present researcher information, description of research, and assess the risk and benefits of participation.

RESEARCHERS
The primary investigator of this study is Danica G. Hays, PhD, LPC, NCC, Responsible Project Investigator, the Chair of the Department of Counseling and Human Services at Old Dominion University.

The secondary investigator is Elizabeth A. Prosek, M.S. Ed., NCC, a doctoral candidate in Counselor Education and Supervision in the Department of Counseling and Human Services at Old Dominion University.

DESCRIPTION OF RESEARCH STUDY
Previous research studies have considered prevalence rates of mental health diagnoses for clients. However, there are few studies that consider the process by which mental health professionals have arrived at clinical decisions. Further, there are some published articles that describe cognitive factors that affect clinical decisions, but very few are based on actual samples of counselors. We are interested in how you arrive at a clinical decision, and what factors seem most important to you in formulating a diagnosis or diagnoses.

The purpose of this study is to examine how counselors make clinical decisions about a hypothetical client. This project has two phases. For the first phase, you as the counselor are asked to view a recorded mock intake session. After reviewing the session, you will make a clinical decision (i.e., provide a multiaxial diagnosis). You are encouraged to, and may use the *Diagnostic and Statistical Manual of Mental Disorders- Text Revision* (DSM-IV-TR) (American Psychiatric Association, 2000). After assigning a diagnosis or diagnoses, you are asked to answer open-ended questions. This phase is estimated to take 45-60 minutes.

The second phase of the project involves completing the survey materials. There is a brief demographic form, two assessment rating scales to rate the client, and one inventory assessing your awareness of potential client environmental stressors. This phase will take approximately 20-30 minutes.

If you decide to participate, then you will join a study involving research of emerging themes related to the process of clinical decision-making in the counseling profession. If you say YES, then your participation will last for an estimated 60-90 minutes at the

location of your home or office where you have access to a computer and the Internet. Approximately 200 counselors and counselor-trainees will be participating in this study.

EXCLUSIONARY CRITERIA

If you have received an email advertising this study, you meet the criteria to participate as a counselor or student in a counseling program. There are no other criteria to participate in this study.

RISKS AND BENEFITS

RISKS: If you decide to participate in this study, there are no foreseeable risks. As with any research, there is some possibility that you may be subject to risks that have not yet been identified.

BENEFITS: There are no direct benefits with participation. The main benefit to you for participating in this study is the opportunity to self-reflect on your clinical decision-making process. If you are a student, this study provides an opportunity to practice your clinical skills with a hypothetical client.

COSTS AND PAYMENTS

There is no cost to participate. The researchers want your decision about participating in this study to be absolutely voluntary. Yet they recognize that your participation is a significant time commitment. In order to compensate for your time a weekly drawing for a $50 gift card to Amazon.com will be awarded. Participation in the weekly drawing is also voluntary, as it involves providing an email address to send the gift card. Submission of an email address will not be linked to your responses in the study.

NEW INFORMATION

If the researchers find new information during this study that would reasonably change your decision about participating, then they will provide it to you.

CONFIDENTIALITY

The researchers will take reasonable steps to keep private information, such as demographic information and survey results confidential. Data will be compiled using computer software (SPSS) and stored on a password-protected computer. Only the listed researchers will have access to the data. The results of this study may be used in reports, presentation, and publication; but the researchers will not identify you. Of course, your records may be subpoenaed by court order or inspected by government bodies with oversight authority.

WITHDRAWAL PRIVLEGE

It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study, at any time. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits from which you might otherwise be entitled.

VOLUNTARY CONSENT

By proceeding with this electronic based study, you are agreeing to the following: that you have read this form, or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research.
If you have any questions at any point during or after this study, please contact Danica G. Hays at 757.683.6692, or dhays@odu.edu. Please feel free to send correspondence to Old Dominion University, 110 Education Building, Norfolk, VA 23529. You may also contact the IRB chair, George Maihafer at anytime at 757.683.4520, or gmaihafe@odu.edu. The Office of Research at Old Dominion University may also be contacted anytime at 757.683.3460.

Importantly, by proceeding in this electronic based study, you are telling the researchers YES, that you agree to voluntarily participate in this study. You may print this informed content document for your records.

Danica G. Hays, PhD, LPC, NCC
Associate Professor/Department Chair
Old Dominion University
Dept. of Counseling and Human Services
757.683.6692
dhays@odu.edu

Elizabeth A. Prosek, M.S. Ed., NCC
Doctoral Candidate
Old Dominion University
Dept. of Counseling and Human Services
757.502.5313
eprosek@odu.edu

By clicking the "next" button below, you agree that you have read and understand the explanation provided and voluntarily agree to participate in this study.

Appendix D
Client Summary
Adapted from (Hays, McLeod, & Prosek, 2009; Hays, Prosek, & McLeod, 2010)

CLR: What brings you to counseling today <name>?

CL: My partner encouraged me to come to counseling because I have been struggling with work and home life as well. I just can't seem to keep myself together anymore. I am not setting a very good example for my children right now.

CLR: Tell me about the struggles you are experiencing.

CL: <Depressed affect> Things at work are falling apart for me right now. I was the only manager to not get the bonus my company distributed last month. The only one; I am so ashamed. I know my co-workers are talking about me. I feel them staring at me, judging my work. I find it distracting; it makes it hard to concentrate. And, I was already having trouble concentrating at work. <Increasingly angry affect> And I know that the only reason I did not get the bonus was because of this customer who is suing the company, blaming me for the discrepancies in the product he ordered. The mistake wasn't my fault at all! I don't feel supported at work, and know if this customer issue doesn't get resolved peacefully, I am worried I'll fired; I just know it.

CLR: I hear this is a hard time for you at work.

CL: <Less angry affect> Yeah. And I know it is making life miserable for everyone at home. I am just as useless at home as I am at work. I keep to myself when I get home, get a beer, grab some food, and go to the TV room. I just don't want

to be bothered. <Depressed affect> Especially on weekends, I can't get myself out of bed in the morning. But it's not like I am sleeping well. Sometimes at night I cry, and I hear a voice telling me how worthless I am. That everyone would be better off without me.

CLR: Do you have a plan to hurt yourself?

CL: <Difficulty making eye contact> No, not like that. I haven't hurt myself in a long time.

CLR: It sounds like you did hurt yourself in the past, how long ago?

CL: <Maintaining depressed affect> About six years ago, when my brother was killed in a car accident, I had problems dealing with it. I relied a lot on painkillers at that time. Kind of messed with my head and I would think a lot about hurting myself and did a couple times. I got some help though, and that hasn't been a problem since. No pills for me; I promised my partner.

CLR: You were able to recognize that the pills were not a healthy coping mechanism.

CL: That was a really bad time in life. But a different kind of bad than what is going on now. That was my brother and family and grief. Now it's more about me. Not being able to be successful at work, feeling like a loser at home. I just wish I knew what would happen with that customer complaint at work. I go to court in three weeks. If things don't go well, I am worried about needing to find a new job, and in the unemployment rates are high right now. I don't think I will be able to find another job easily. I have worked for them for five years; you would think they would support me, not the customer in this situation. <Getting

more angry> But it's like I said, they are all judging me at work, watching my every move. It's like I'm walking on very thin ice there and sometimes I don't care, I just get the urge to yell at them all. Screw them. I guess it comes down to the courts now.

CLR: I hear from you the upcoming court appearance is anxiety provoking.

CL: <Calmer now> It is a lot to worry about, my whole job seems to depend upon what the courts decide, if they rule in favor of the customer, I am sure to lose my job. I find myself praying at night. Praying that the courts find no fault on behalf of the company. Maybe then the company will keep me around. It's weird to be praying again. I haven't talked to God since the accident. I went to church with my partner and kids last Sunday. That was a really good day. After church, we went to breakfast and then I took everyone shopping at the mall. I bought all sorts of stuff, I remember feeling really good that day. Better than I had in a long time.

CLR: Mmhmm.

CL: <Limited eye contact> It didn't last long though. I had a bad day at work on Monday and didn't want to go home after work. I went over to the bar instead. I didn't get home until late, and I know I worried everyone, but I just didn't care. I wanted to be alone. I've been doing that a lot over the last few months; finding a bar to go to instead of home after work. I don't intend to, but it's a quick decision I make as I am driving home.

CLR: It sounds as though drinking provides you a sense of comfort right now.

CL: It helps keep my mind off things, all the stuff going on. Not so great for my waistline though <kind of laughs, awkwardly>, I've gained 15 pounds over the last three months.

CLR: I hear from you that you are not convinced spending more time at the bar, or drinking more at home is helpful.

CL: <Depressed affect> It's just so sad at home. Knowing that my screw up at work could ruin everything for my family. I get so upset, I can't help but cry. But I try to wait until late at night when everyone is sleeping. Lay in bed and cry about the situation I find myself in, praying that there is hope, and trying to keep the voice that says I am worthless at bay.

CLR: I appreciate your willingness to talk with me today. We are out of time, but let's make a plan for our next session.

Appendix E
Diagnostic Impressions

Clinical Diagnostic Impressions (Based on DSM-IV-TR IV-TR criteria):

- Please include numerical code of disorder (e.g. 314.9 Attention-Deficit/Hyperactivity Disorder NOS)

Axis I: _____

_____

_____

Axis II: _____

_____

_____

Axis III: _____

_____

_____

Axis IV: _____

_____

_____

Appendix F
Drop-Down Menu Options

Axis I

Acute Stress Disorder 308.3
Adjustment Disorder, unspecified 309.9
Adjustment Disorder, with anxiety 309.24
Adjustment Disorder, with depressed mood 309.0
Adjustment Disorder, with disturbance of conduct 309.3
Adjustment Disorder, with mixed anxiety and depressed mood 309.28
Adjustment Disorder, with mixed disturbance of emotions and conduct 309.4
Alcohol-Induced Anxiety Disorder 291.89
Alcohol-Induced Mood Disorder 291.89
Alcohol-Induced Psychotic Disorder with delusions 291.5
Alcohol-Induced Psychotic Disorder with hallucinations 291.3
Anxiety Disorder due to a General Medical Condition 293.84
Anxiety Disorder NOS 300.00
Bipolar Disorder NOS 296.80
Bipolar I Disorder, most recent episode depressed, mild 296.51
Bipolar I Disorder, most recent episode depressed, moderate 296.52
Bipolar I Disorder, most recent episode depressed, severe with psychotic features 296.54
Bipolar I Disorder, most recent episode depressed, severe without psychotic features 296.53
Bipolar I Disorder, most recent episode manic, mild 296.41
Bipolar I Disorder, most recent episode manic, moderate 296.42
Bipolar I Disorder, most recent episode manic, severe with psychotic features 296.44
Bipolar I Disorder, most recent episode manic, severe without psychotic features 296.43
Bipolar I Disorder, most recent episode mixed, mild 296.61
Bipolar I Disorder, most recent episode mixed, moderate 296.62
Bipolar I Disorder, most recent episode mixed, severe with psychotic features 296.64
Bipolar I Disorder, most recent episode mixed, severe without psychotic features 296.63
Bipolar I Disorder, single manic episode, mild 296.01
Bipolar I Disorder, single manic episode, moderate 296.02
Bipolar I Disorder, single manic episode, severe with psychotic features 296.04
Bipolar I Disorder, single manic episode, severe without psychotic features 296.03
Bipolar I Disorder, unspecified 296.40
Bipolar II Disorder 296.89
Brief Psychotic Disorder 298.8
Delusional Disorder 297.1
Depressive Disorder NOS 311
Dysthymic Disorder 300.4
Generalized Anxiety Disorder 300.02

Major Depressive Disorder, recurrent, mild 296.31
Major Depressive Disorder, recurrent, moderate 296.32
Major Depressive Disorder, recurrent, severe with psychotic features 296.34
Major Depressive Disorder, recurrent, severe without psychotic features 296.33
Major Depressive Disorder, recurrent, unspecified 296.30
Major Depressive Disorder, single episode, mild 296.21
Major Depressive Disorder, single episode, moderate 296.22
Major Depressive Disorder, single episode, severe with psychotic features 296.24
Major Depressive Disorder, single episode, severe without psychotic features 296.23
Major Depressive Disorder, single episode, unspecified 296.20
Mood Disorder due to a General Medical Condition 293.83
Mood Disorder NOS 296.90
Obsessive-Compulsive Disorder 300.3
Panic Disorder associated with both psychological factors and a general medical condition 307.89
Panic Disorder associated with psychological factors 307.80
Panic Disorder with Agoraphobia 300.21
Panic Disorder without Agoraphobia 300.01
Posttraumatic Stress Disorder 309.81
Psychotic Disorder due to General Medical Condition with delusions 293.81
Psychotic Disorder due to General Medical Condition with hallucinations 293.82
Psychotic Disorder NOS 298.9
Schizoaffective Disorder295.70
Schizophrenia, catatonic type 295.20
Schizophrenia, disorganized type 295.10
Schizophrenia, paranoid type 295.30
Schizophrenia, residual type 295.60
Schizophrenia, undifferentiated type 295.90
Schizophreniform Disorder 295.40
Social Phobia 300.23

V-Codes
V71.09 No Diagnosis on Axis I
V15.81 Noncompliance with Treatment
V61.10 Partner Relational Problem
V61.12 Physical Abuse of Adult (if by partner)
V61.12 Sexual Abuse of Adult (if by partner)
V61.20 Parent-Child Relational Problem
V61.8 Sibling Relational Problem
V61.9 Relational Problem Related to a Mental Disorder or General Medical Condition
V62.2 Occupational Problem
V62.3 Academic Problem
V62.4 Acculturation Problem
V62.81 Relational Problem NOS

V62.82 Bereavement
V62.89 Phase of Life Problem
V62.89 Religious or Spiritual Problem
V65.2 Malingering
V71.01 Adult Antisocial Behavior

Axis II

V71.09 No Diagnosis on Axis II
Antisocial Personality Disorder301.7
Avoidant Personality Disorder 301.82
Borderline Personality Disorder 301.83
Dependent Personality Disorder 301.6
Histrionic Personality Disorder 301.50
Narcissistic Personality Disorder 301.81
Obsessive-Compulsive Personality Disorder 301.4
Paranoid Personality Disorder 301.0
Personality Disorder NOS 301.9
Schizoid Personality Disorder 301.20
Schizotypal Personality Disorder 301.22

Axis III

N/A
Infectious and Parasitic Diseases
Neoplasms
Endocrine, Nutritional, and Metabolic Diseases and Immunity Disorders
Diseases of the Blood and Blood-Forming Organs
Diseases of the Nervous System and Sense Organs
Diseases of the Circulatory System
Diseases of the Respiratory System
Diseases of the Digestive System
Diseases of the Genitourinary System
Complications of Pregnancy, Childbirth, and the Puerperium
Diseases of the Skin and Subcutaneous Tissue
Diseases of the Musculoskeletal System and Connective Tissue
Congenital Anomalies
Certain Conditions Originating in the Perinatal Period
Symptoms, Signs, and Ill-Defined Conditions
Injury and Poisoning

Axis IV

N/A
Problems with primary support group
Problems related to social environment
Educational problems
Occupational problems
Housing problems
Economic problems
Problems with access to health care services
Problems related to interaction with legal system/crime
Other psychosocial and environmental problems

Appendix G
Interview Protocol

1. What diagnosis or diagnoses would you give this client?
2. How would you summarize the symptoms used to arrive at your diagnosis/diagnoses?
3. Are there other diagnoses that could explain the client's symptoms?
4. What aspects of the case did you use to arrive at your diagnosis/diagnoses?
5. What cultural characteristics, if any, are important to this client's presenting problem?
    a. How so?
6. What cultural characteristics, if any, are important to your diagnostic decision?
    a. How so?
7. How would you describe this client's level of functioning?
    a. How, if at all, do you see this changing with treatment?
8. What additional information or area of inquiry would have been helpful to you in arriving at a diagnosis?
    a. What might make it difficult to get this additional information?
9. As you weigh all the factors influencing your diagnostic decision, what was the most single important factor in your decision about the client?
10. What were your initial impressions of the client?
    a. To what degree did this weigh into your diagnostic decision?
11. Were there salient/intense aspects of the client's story?
    a. To what degree did this weigh into your diagnostic decision?

Appendix H
Example Transcript

Participant: 018B Date:_____
Research Team Member:_____

Axis I Primary Diagnoses: Depressive Disorder NOS 311
Axis I Secondary Diagnoses: V62.2 Occupational Problem
Axis I Tertiary Diagnoses:
Other:

Axis II Primary Diagnoses: V71.09 No Diagnosis on Axis II
Axis II Secondary Diagnoses:
Axis II Tertiary Diagnoses:

Axis III Primary Diagnoses: N/A
Axis III Secondary Diagnoses:
Axis III Tertiary Diagnoses:
Other:

Axis IV Primary Diagnoses: Occupational problems
Axis IV Secondary Diagnoses: Problems related to interaction with legal system/crime
Axis IV Tertiary Diagnoses:

Axis V GAF Score: 65

Prognosis Score: 1

Participant: 018B Date:_____
Research Team Member:_____

<Q>: How would you summarize the symptoms used to arrive at your diagnosis/diagnoses?

Difficulty concentrating at work, recent weight gain, neglect of family responsibilities in favor of going to the bar or being alone at home with a beer and food, mild insomnia, worry about losing job and guilt about the lawsuit, difficulty getting out of bed, thoughts that it might be better for others if he were dead

<Q>: Are there other diagnoses that could explain the client's symptoms?

Major depressive disorder, recurrent Alcohol induced mood disorder Adjustment disorder, mixed anxiety and depressive type

<Q>: What aspects of the case did you use to arrive at your diagnosis/diagnoses?

the lack of information concerning the client's alcohol use - could not determine how much of the depressive symptoms were related to alcohol or separate. Client also met five of the diagnostic criteria for major depressive disorder and had a past depressive episode, but it seemed like a stretch on some of the criteria to "make them fit". Seemed more serious than an adjustment disorder with the suicidal thoughts, but I was concerned that it would be "overdiagnosing" to give the full MDD, recurrent diagnosis. The Depressive Disorder NOS seemed to cover both of my concerns about alcohol use and not quite meeting the full MDD diagnostic criteria.

<Q>: What cultural characteristics, if any, are important to this client's presenting problem?

Client may be used to being judged or observed, as an African American, which could be exacerbating his symptoms. Also, his connection to family and church/religion might be important factors in his cultural background. It would be important to get more information about this because assuming he should have strong religious ties would be imposing a stereotype on him, which might not fit with his experience.

<Q>: What cultural characteristics, if any, are important to your diagnostic decision?

As a member of the dominant culture, I have to be careful to be aware of the client's culture and how he might present his symptoms differently than someone of my culture. I want to avoid over pathologizing the client's experience by taking into account some of the stressors he probably faces that I do not.

<Q>: How would you describe this client's level of functioning?

I think he is functioning moderately well, but has a lot of internal stress that is causing him to withdraw from some of his family responsibilities. He sounds like he is hanging on with his teeth, trying to stay on top of things, but is only moderately successful in doing so. Sometimes he seems to cope more effectively and be able to participate in and enjoy life, but other times, he is overwhelmed by the stressors in his life.

<Q>: How, if at all, do you see this changing with treatment?

I think he would be better able to cope with the stressors without getting overwhelmed, so he would be able to enjoy life more. With a return to enjoying life, he would be more interested in participating in his family roles. Less worry might also help him sleep better and he would feel more ready to face the day and get out of bed when he is well rested and not fearful of the situations ahead of him that day.

<Q>: What additional information or area of inquiry would have been helpful to you in arriving at a diagnosis?

Information about the amount of alcohol the client consumes - quantity and frequency. Also, were the depressive symptoms present before the alcohol, or only after? The client stated that he sometimes cries at night - how is this related to his drinking? Medical information - is this client suffering from any type of medical illness or problem that might be related to his mood? More information about the client's functioning outside of work - friends, family, leisure activities, etc. As well as how he is actually performing at work - how much of his worry about losing his job is realistic and accurate and how much is his internalized guilt?

<Q>: What might make it difficult to get this additional information?

In an intake session, the client might not have established enough trust with the counselor to share details of his alcohol use or he might downplay its significance, as is common with substance abuse and denial. Getting an accurate sense of what is happening at work is almost impossible as long as the client is emotionally tied up in his worries about the situation. However, he might be able to give concrete examples of what he experiences, which would help.

<Q>: As you weigh all the factors influencing your diagnostic decision, what was the most single important factor in your decision about the client?

His level of functioning

<Q>: What were your initial impressions of the client?

He seems to be very calm and matter of fact about the situation. A little subdued, but well spoken and willing to share about his experiences.

<Q>: To what degree did your initial impressions of the client weigh into your diagnostic decision?

Moderately - I think they caused me to see the client as functioning moderately well, despite significant stress.

<Q>: Were there salient/intense aspects of the client's story?

Past use of pills and attempts to hurt himself, but he got better and stopped using the pills (how?). His brother's death and the fact that he had not spoken to God since (what was his spiritual relationship before his brother's death?). The fact that his partner encouraged him to come to counseling and he did and was open to sharing his experiences.

<Q>: To what degree did these salient/intense aspects of the client's story weigh into your diagnostic decision?

I saw a lot of the client's strength in addition to his pain. He does not seem helpless. He seems to want help with the issues and takes his partner's ideas/concerns into account. This helped in the GAF and in deciding which of the several possible diagnoses to choose.

Appendix I
Participant Demographic Form

Age: _____

Gender: Female Male Transgender

Race/Ethnicity:
African American Asian American Latino/a Native American
White/European American Biracial/Multiracial Other not specified

Sexual Orientation: Bisexual Gay/Lesbian Heterosexual Questioning

Highest Degree Completed:
Bachelors Masters Educational Specialist Doctorate

Currently Enrolled in a Counseling Program:
Masters Educational Specialist Doctorate N/A

Attended a CACREP approved Masters in counseling program: YES NO
Did you complete a course in diagnosis and treatment planning? YES NO
Did you complete a course in multicultural counseling/diversity? YES NO
Did you complete a master's level practicum/internship experience? YES NO
If no, are you currently enrolled in a practicum/internship experience? YES NO

Counseling experience (before masters): _____ Years _____ Months
Counseling experience (post masters): _____Years _____ Months

Approximate total number of clients seen per week (currently): _____
Approximate total number of clients diagnosed per week (currently): _____

Credentials (Certifications/Licenses):
NCC LPC LMFT Other(s):_____

Current Work Setting (including practicum/internship): Private Practice School
Community Mental Health Hospital University/College Vocational Rehab
Residential Setting Other not specified:_____

Have you attended any multicultural workshops? YES NO
If yes, how many multicultural workshops attended in past 12 months? _____

Clinical Interests:_____
_____

Appendix J
Research Team Email

Dear Counseling Student Colleagues:

This email invites you to participate as a research team member for my dissertation project, *A Mixed Methodological Analysis of the Role of Culture and Diagnostic Variance Among Counselors and Counselor Trainees*. The general purpose of the study is to investigate how counselor and counselor trainees make diagnostic decisions in the counseling profession. The research team will use grounded theory qualitative data analysis procedures to test and revise a theory of clinical decision-making developed by previous research (see Hays, McLeod, & Prosek, 2009; Hays, Prosek, & McLeod, 2010).

The following outlines research team expectations and responsibilities, so that you may make an educated decision on your interest in assisting me with this project:

- February: Research team meeting to discuss our assumptions of clinical decision-making and the implications of cultural factors. During this first meeting, I will provide training on how to analyze data qualitatively (using in-case displays and contact summary forms) and review the preliminary thematic codebook from Hays et al., 2009 and Hays et al., 2010. Approximately a 3-hour commitment.
- March: Members individually analyze the same 10 participant transcripts (approximately a 10-hour commitment). During a second team meeting, members will compare our codes and make changes to the thematic codebook if necessary. Approximately 2-hour commitment.
- March: Research team members continue to analyze new transcripts individually with the updated thematic codebook, which take approximately an hour each. Research team members decide how many transcripts they are able to analyze; perhaps 10 more each. Approximately a 10-hour commitment.
- April: In the third and final research team meeting, we will discuss our impressions of the findings. Approximately a 2-hour commitment.
- Total time commitment between February 21, 2011 and April 10, 2011 is about 25-30 hours.
- Team meetings will be hosted at my house in Portsmouth, VA.
- Team members are NOT required to transcribe participate data; simply analyze data using in-case displays and contact summary forms.
- Potential benefits of research team members: research experience for curriculum vitae, opportunity to present study at national conferences, and opportunity to contribute to counseling research.

Please feel free to contact me with any questions you have regarding this opportunity, eprosek@odu.edu or 757.502.5313.

Best,
Elizabeth

Appendix K
Diagnosis Thematic Codebook (June 22, 2007)
Hays, McLeod, & Prosek (2009)
Hays, Prosek, & McLeod (2010)

Diagnostic Decision-making Process and Symptoms	
Representiveness_Criteria	Likelihood that a criterion belongs to a certain diagnosis (alludes to rigid adherence to DSM-IV-TR criteria), understanding of differential diagnosis (e.g., knowing that a criterion does not solely belong to a certain diagnosis)
Representativeness_Culture	Likelihood that certain disorders belong to certain cultural groups (e.g., depression in females)
Anchoring	Earlier clinical data hold more weight in final decisions, propensity to focus on later data that supports it (or later data not viewed as important) (e.g., MSE shows thought disorder symptoms and thus likely to find psychotic symptoms in intake to support diagnosis)
Availability_Experience	Diagnosis made based on clinical/personal experience, certain symptoms/disorders as available/familiar due to experience
Availability_Academic	Diagnosis made based on general cluster of symptoms learned in academic training, certain symptoms/disorders as available/familiar due to classroom learning
Availability_Context	Diagnosis made based on general cluster of symptoms made on environmental factors (usually indicative of giving a less severe diagnosis), symptoms familiar or common for certain environmental stressors
Availability_Broad	Integrate a broad range of symptoms as identifies symptoms
Vividness	Some criteria are more intense in their presentation and heavily influence diagnostic decision (e.g. withdrawal symptoms as evidence of dependence)
No_Vividness	No criteria were salient in the diagnostic decision
DxChange_Severe	Transitioned from a less severe to a more severe diagnosis as made the final diagnosis (e.g., MDD to bipolar; bipolar to schizophrenia)
DxChange_Less_Severe	Transitioned from a more severe to a less severe diagnosis as made the final diagnosis (e.g., schizophrenia to MDD)
Dx_Ruleout	Discussed a rule out diagnosis
Dx_Consideration	Listed possible diagnoses considered but not advanced thought processes to rule out
Dx_Defer	Deferring a more severe diagnosis to avoid unnecessary labeling

Locus of Attribution	
Situational	Locus of attribution that focuses on external factors causing the problem or presenting symptoms
Dispositional	Locus of attribution that focuses on internal/biological factors causing the problem or presenting symptoms.

Challenges (Client-Related)	
Client_Resistance	Perceives the client as denying/lying about symptoms
Language	Language barriers, English as a second language

Challenges (Personal)	
Uncertain_Info	Participant reports uncertainty for the diagnosis given due to information presented in the case
Uncertain_Experience	Participant reports uncertainty for the diagnosis given due to his/her clinical or personal experience
Certain_Info	Participant reports certainty for the diagnosis given due to information presented in the case
Certain_Experience	Participant reports certainty for the diagnosis given due to his/her clinical or personal experience
Regressive_Uncertainty	Participant initially comfortable or certain about diagnosis yet regresses in decision-making throughout interview to a lesser degree of certainty with the diagnosis given
Progressive_Certainty	Participant becomes more comfortable with the diagnosis given throughout the interview
DxAttitude_Positive	Likes to diagnose; sees diagnosing as helpful
DxAttitude_Negative	Sees diagnosis as pathologizing, avoids diagnosing
Transference	References self/sees self in client, impacts diagnosis, treatment and/or prognosis

Limitations (in Diagnosing)		
Duration_Frequency		Wants additional information about duration, frequency and/or onset of symptoms
Family_Hx		Wants additional information on family history or mental illness or substance abuse, other family history factors
Tx_Hx (Two subcodes)		Wants additional information on treatment history (no type specified)
	Substance_Abuse	Wants additional information about substance abuse, substance abuse treatment
	Medical	Wants additional information on medical treatment history; previous hospitalizations; previous history of medications
Trauma		Wants additional information about trauma-related issues, grief, physical injuries, suicidal ideation
Environment		Wants additional information on family, career, social functioning
Psychosis		Wants additional information about psychosis (hallucinations, delusions, paranoia)
Urgency		Wants additional information about why/what/when brought into ER, sees as important for making diagnosis
Ind_Interview		Wants to interview client without participant present
Information_Variance		Limitations of self-report in diagnosis, clients may not present all information about what is really going on (unintentionally); amount of type of data collected is limited by how much clients reports as well as how much counselors seek
Observation_Variance (One subcode)		There is variability in how the same data are interpreted among different counselors
	Obv_Perceived_Incompetence	Information is interpreted differently based on experience level; participant reports incompetence as compare to other professionals (e.g., perceives not able to give more severe diagnosis because no an MD, psychologist)
Criterion_Variance		Use different criteria to diagnose; similar criteria can fit multiple diagnoses-alludes to the ambiguity/subjective nature of diagnosing; has insight into cognitive tools and

	cognitive errors, i.e., confirmation bias
Cultural Factors	
Gender	Cites gender as factor in presenting problem and/or diagnosis
Race/ethnicity	Cites race or ethnicity in presenting problem and/or diagnosis
Age	Cites age in presenting problem and/or diagnosis
Sexual Orientation	Cites sexual orientation as factor in presenting problem and/or diagnosis
None	Participant state that no cultural factors played into the presenting problem and/or diagnosis
Gender_Bias	Participant referenced group only; Gender bias discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Heterosexual_Bias	Participant referenced group only; Heterosexual bias discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Spirituality_Bias	Participant referenced group only; Spirituality bias discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Family_Bias	Participant referenced group only; Family as a cultural variable discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Race/ethnicity_Bias	Participant referenced group only; Race or ethnicity discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
SES_Bias	Participant referenced group only; SES as a cultural variable discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)

Level of Functioning	
Inconsistent	GAF and GAS are inconsistent/different values
Consistent	GAF and GAS are consistent/same values
Somewhat	Views client as functioning in some areas but not others
Maladaptive	Views client as not functioning
Adaptive	Views client as functioning well considering stressors
Unsure	Unsure of client functioning

Prognosis	
Good	Client is high functioning with few or no symptoms
Good_Meds	Good prognosis with proper medication
Good_Enviornment	Good prognosis if environment is optimal/has a support system or resources
Good_Hx	Good prognosis based on previous treatment history, recover, resilience, personal resources
Fair	Participant reports symptoms can only be stabilized (will not get worse or better)
Poor_Hx	Poor prognosis due to history of symptoms
Poor_Enviornmental	Poor prognosis due to environmental stressors, infers that client will have a poor response to treatment
Unsure	Prognosis is deferred, dependent on treatment
Counselor_PosPrRx	Views job as a counselor to have a positive prognosis for the client

Treatment Recommendations	
Meds_Outpt	Med stabilization outpatient (no hospitalization required)
Meds_Input	Med stabilization inpatient
Agency	Case management, EAP
Individual	Individual counseling
Family_Couple	Involve family members, including partner
Group	Psychoeducational groups
Drug_Screening	Drug screening recommended
Phsyical_Exam	Physical exam to rule out organic causes of symptoms
Substance_Abuse	Substance abuse program
Leisure	Exercise program
SES	Income assistance
Tx_Defer	Treatment recommendations are deferred

Appendix L
In-Case Display

Participant & Client Characteristics	Diagnostic Decision-making	Cultural Factors	Level of Functioning & Prognosis
Participant Characteristics: Client Characteristics:	Diagnosis: Symptoms: Locus of Attribution. Process of Decision. Challenges/Limitations:		Treatment Recommendations: Prognosis

Appendix M
Contact Summary Form

Participant:_____
Research Team Member:_____ Date:_____

1. What were the main issues or themes that stuck out for you in this transcript?

2. What discrepancies, if any, did you note in the participant's response?

3. Anything else that struck you as salient, interesting, or important in this transcript?

4. General comments about how this participant's responses compare with other participants:

Appendix N
Thematic Codebook
May 1, 2011

Diagnostic Decision-making Process and Symptoms	
Representiveness_Criteria	Likelihood that a criterion belongs to a certain diagnosis (alludes to rigid adherence to DSM-IV-TR criteria), understanding of differential diagnosis (e.g., knowing that a criterion does not solely belong to a certain diagnosis)
Representativeness_Culture	Likelihood that certain disorders belong to certain cultural groups (e.g., depression in females)
Anchoring	Earlier clinical data hold more weight in final decisions, propensity to focus on later data that supports it (or later data not viewed as important) (e.g., MSE shows thought disorder symptoms and thus likely to find psychotic symptoms in intake to support diagnosis)
Availability_Experience	Diagnosis made based on clinical/personal experience, certain symptoms/disorders as available/familiar due to experience
Availability_Academic	Diagnosis made based on general cluster of symptoms learned in academic training, certain symptoms/disorders as available/familiar due to classroom learning
Availability_Context	Diagnosis made based on general cluster of symptoms made on environmental factors (usually indicative of giving a less severe diagnosis), symptoms familiar or common for certain environmental stressors
Availability_Broad	Integrate a broad range of symptoms as identifies symptoms
Vividness	Some criteria are more intense in their presentation and heavily influence diagnostic decision (e.g. withdrawal symptoms as evidence of dependence)
No_Vividness	No criteria were salient in the diagnostic decision
DxChange_Severe	Transitioned from a less severe to a more severe diagnosis as made the final diagnosis (e.g., MDD to bipolar; bipolar to schizophrenia)
DxChange_Less_Severe	Transitioned from a more severe to a less severe diagnosis as made the final diagnosis (e.g., schizophrenia to MDD)
Dx_Ruleout	Discussed a rule out diagnosis
Dx_Consideration	Listed possible diagnoses considered but not advanced thought processes to rule out
Dx_Defer	Deferring a more severe diagnosis to avoid unnecessary labeling

Locus of Attribution	
Situational	Locus of attribution that focuses on external factors causing the problem or presenting symptoms
Dispositional	Locus of attribution that focuses on internal/biological factors causing the problem or presenting symptoms.

Challenges (Client-Related)	
Client_Resistance	Perceives the client as denying/lying about symptoms
Language	Language barriers, English as a second language

Challenges (Personal)	
Uncertain_Info	Participant reports uncertainty for the diagnosis given due to information presented in the case
Uncertain_Experience	Participant reports uncertainty for the diagnosis given due to his/her clinical or personal experience
Certain_Info	Participant reports certainty for the diagnosis given due to information presented in the case
Certain_Experience	Participant reports certainty for the diagnosis given due to his/her clinical or personal experience
Regressive_Uncertainty	Participant initially comfortable or certain about diagnosis yet regresses in decision-making throughout interview to a lesser degree of certainty with the diagnosis given
Progressive_Certainty	Participant becomes more comfortable with the diagnosis given throughout the interview
DxAttitude_Positive	Likes to diagnose; sees diagnosing as helpful
DxAttitude_Negative	Sees diagnosis as pathologizing, avoids diagnosing
Transference	References self/sees self in client, impacts diagnosis, treatment and/or prognosis
Normalizing	Participants reference symptoms are common for all humans
Neg_Att_Client	Participant views client negatively, not related to the culture of the client

Limitations (in Diagnosing)		
Duration_Frequency		Wants additional information about duration, frequency and/or onset of symptoms
Family_Hx		Wants additional information on family history or mental illness or substance abuse, other family history factors
Tx_Hx (Two subcodes)		Wants additional information on treatment history (no type specified)
	Substance_Abuse	Wants additional information about substance abuse, substance abuse treatment
	Medical	Wants additional information on medical treatment history; previous hospitalizations; previous history of medications
Trauma		Wants additional information about trauma-related issues, grief, physical injuries, suicidal ideation
Environment		Wants additional information on family, career, social functioning
Psychosis		Wants additional information about psychosis (hallucinations, delusions, paranoia)
Urgency		Wants additional information about why/what/when brought into ER, sees as important for making diagnosis
Ind_Interview		Wants to interview client without participant present
Information_Variance		Limitations of self-report in diagnosis, clients may not present all information about what is really going on (unintentionally); amount of type of data collected is limited by how much clients reports as well as how much counselors seek
Observation_Variance (One subcode)		There is variability in how the same data are interpreted among different counselors
	Obv_Perceived_Incompetence	Information is interpreted differently based on experience level; participant reports incompetence as compare to other professionals (e.g., perceives not able to give more severe

	diagnosis because no an MD, psychologist)
Criterion_Variance	Use different criteria to diagnose; similar criteria can fit multiple diagnoses-alludes to the ambiguity/subjective nature of diagnosing; has insight into cognitive tools and cognitive errors, i.e., confirmation bias
Cultural Factors	
Gender	Cites gender as factor in presenting problem and/or diagnosis
Race/ethnicity	Cites race or ethnicity in presenting problem and/or diagnosis
Age	Cites age in presenting problem and/or diagnosis
Sexual Orientation	Cites sexual orientation as factor in presenting problem and/or diagnosis
None	Participant state that no cultural factors played into the presenting problem and/or diagnosis
Gender_Bias	Participant referenced group only; Gender bias discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Heterosexual_Bias	Participant referenced group only; Heterosexual bias discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Spirituality_Bias	Participant referenced group only; Spirituality bias discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Family_Bias	Participant referenced group only; Family as a cultural variable discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Race/ethnicity_Bias	Participant referenced group only; Race or ethnicity discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
SES_Bias	Participant referenced group only; SES as a cultural variable discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)

Level of Functioning	
Inconsistent	GAF and GAS are inconsistent/different values
Consistent	GAF and GAS are consistent/same values
Somewhat	Views client as functioning in some areas but not others
Maladaptive	Views client as not functioning
Adaptive	Views client as functioning well considering stressors
Unsure	Unsure of client functioning

Prognosis	
Good	Client is high functioning with few or no symptoms
Good_Meds	Good prognosis with proper medication
Good_Enviornment	Good prognosis if environment is optimal/has a support system or resources
Good_Hx	Good prognosis based on previous treatment history, recover, resilience, personal resources
Fair	Participant reports symptoms can only be stabilized (will not get worse or better)
Poor_Hx	Poor prognosis due to history of symptoms
Poor_Enviornmental	Poor prognosis due to environmental stressors, infers that client will

	have a poor response to treatment
Unsure	Prognosis is deferred, dependent on treatment
Counselor_PosPrRx	Views job as a counselor to have a positive prognosis for the client
Tx_Good	Good prognosis contingent upon access to treatment

Treatment Recommendations	
Meds_Outpt	Med stabilization outpatient (no hospitalization required)
Meds_Input	Med stabilization inpatient
Agency	Case management, EAP
Individual	Individual counseling
Family_Couple	Involve family members, including partner
Group	Psychoeducational groups
Drug_Screening	Drug screening recommended
Phsyical_Exam	Physical exam to rule out organic causes of symptoms
Substance_Abuse	Substance abuse program
Leisure	Exercise program
SES	Income assistance
Tx_Defer	Treatment recommendations are deferred
None_Specified	Treatment was assumed, but no specific type of treatment is specified

Appendix O
Thematic Codebook
May 5, 2011

Diagnostic Decision-making Process and Symptoms	
Representiveness_Criteria	Likelihood that a criterion belongs to a certain diagnosis (alludes to rigid adherence to DSM-IV-TR criteria), understanding of differential diagnosis (e.g., knowing that a criterion does not solely belong to a certain diagnosis)
Representativeness_Culture	Likelihood that certain disorders belong to certain cultural groups (e.g., depression in females)
Anchoring	Earlier clinical data hold more weight in final decisions, propensity to focus on later data that supports it (or later data not viewed as important) (e.g., MSE shows thought disorder symptoms and thus likely to find psychotic symptoms in intake to support diagnosis)
Availability_Experience	Diagnosis made based on clinical/personal experience, certain symptoms/disorders as available/familiar due to experience
Availability_Academic	Diagnosis made based on general cluster of symptoms learned in academic training, certain symptoms/disorders as available/familiar due to classroom learning
Availability_Context	Diagnosis made based on general cluster of symptoms made on environmental factors (usually indicative of giving a less severe diagnosis), symptoms familiar or common for certain environmental stressors
Availability_Broad	Integrate a broad range of symptoms as identifies symptoms
Vividness	Some criteria are more intense in their presentation and heavily influence diagnostic decision (e.g. withdrawal symptoms as evidence of dependence)
No_Vividness	No criteria were salient in the diagnostic decision
DxChange_Severe	Transitioned from a less severe to a more severe diagnosis as made the final diagnosis (e.g., MDD to bipolar; bipolar to schizophrenia)
DxChange_Less_Severe	Transitioned from a more severe to a less severe diagnosis as made the final diagnosis (e.g., schizophrenia to MDD)
Dx_Ruleout	Discussed a rule out diagnosis
Dx_Consideration	Listed possible diagnoses considered but not advanced thought processes to rule out
Dx_Defer	Deferring a more severe diagnosis to avoid unnecessary labeling

Locus of Attribution	
Situational	Locus of attribution that focuses on external factors causing the problem or presenting symptoms
Dispositional	Locus of attribution that focuses on internal/biological factors causing the problem or presenting symptoms.

Challenges (Client-Related)	
Client_Resistance	Perceives the client as denying/lying about symptoms
Language	Language barriers, English as a second language

Challenges (Personal)	
Uncertain_Info	Participant reports uncertainty for the diagnosis given due to information presented in the case
Uncertain_Experience	Participant reports uncertainty for the diagnosis given due to his/her clinical or personal experience
Certain_Info	Participant reports certainty for the diagnosis given due to information presented in the case
Certain_Experience	Participant reports certainty for the diagnosis given due to his/her clinical or personal experience
Regressive_Uncertainty	Participant initially comfortable or certain about diagnosis yet regresses in decision-making throughout interview to a lesser degree of certainty with the diagnosis given
Progressive_Certainty	Participant becomes more comfortable with the diagnosis given throughout the interview
DxAttitude_Positive	Likes to diagnose; sees diagnosing as helpful
DxAttitude_Negative	Sees diagnosis as pathologizing, avoids diagnosing
Transference	References self/sees self in client, impacts diagnosis, treatment and/or prognosis
Normalizing	Participants reference symptoms are common for all humans
Neg_Att_Client	Participant views client negatively, not related to the culture of the client
Pos_Att_Client	Participant views client with unconditional positive regard, describes warmly

Limitations (in Diagnosing)		
Duration_Frequency		Wants additional information about duration, frequency and/or onset of symptoms
Family_Hx		Wants additional information on family history or mental illness or substance abuse, other family history factors
Tx_Hx (Two subcodes)		Wants additional information on treatment history (no type specified)
	Substance_Abuse	Wants additional information about substance abuse, substance abuse treatment
	Medical	Wants additional information on medical treatment history; previous hospitalizations; previous history of medications
Trauma		Wants additional information about trauma-related issues, grief, physical injuries, suicidal ideation
Environment		Wants additional information on family, career, social functioning
Psychosis		Wants additional information about psychosis (hallucinations, delusions, paranoia)
Urgency		Wants additional information about why/what/when brought into ER, sees as important for making diagnosis
Ind_Interview		Wants to interview client without participant present
Information_Variance		Limitations of self-report in diagnosis, clients may not present all information about what is really going on (unintentionally); amount of type of data collected is limited by how much clients reports as well as how much counselors seek
Observation_Variance (One subcode)		There is variability in how the same data are interpreted among different counselors
	Obv_Perceived_Incompetence	Information is interpreted differently based on experience

	level; participant reports incompetence as compare to other professionals (e.g., perceives not able to give more severe diagnosis because no an MD, psychologist)
Criterion_Variance	Use different criteria to diagnose; similar criteria can fit multiple diagnoses-alludes to the ambiguity/subjective nature of diagnosing; has insight into cognitive tools and cognitive errors, i.e., confirmation bias
Cultural Factors	
Gender	Cites gender as factor in presenting problem and/or diagnosis
Race/ethnicity	Cites race or ethnicity in presenting problem and/or diagnosis
Age	Cites age in presenting problem and/or diagnosis
Sexual Orientation	Cites sexual orientation as factor in presenting problem and/or diagnosis
Family	Cites family of origin as factor in presenting problem and/or diagnosis
None	Participant state that no cultural factors played into the presenting problem and/or diagnosis
Gender_Bias	Participant referenced group only; Gender bias discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Heterosexual_Bias	Participant referenced group only; Heterosexual bias discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Spirituality_Bias	Participant referenced group only; Spirituality bias discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Family_Bias	Participant referenced group only; Family as a cultural variable discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
Race/ethnicity_Bias	Participant referenced group only; Race or ethnicity discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)
SES_Bias	Participant referenced group only; SES as a cultural variable discussed in participant-referenced group (not connected to presenting problem and/or diagnosis)

Level of Functioning	
Inconsistent	GAF and GAS are inconsistent/different values
Consistent	GAF and GAS are consistent/same values
Somewhat	Views client as functioning in some areas but not others
Maladaptive	Views client as not functioning
Adaptive	Views client as functioning well considering stressors
Unsure	Unsure of client functioning

Prognosis	
Good	Client is high functioning with few or no symptoms
Good_Meds	Good prognosis with proper medication
Good_Enviornment	Good prognosis if environment is optimal/has a support system or resources
Good_Hx	Good prognosis based on previous treatment history, recover, resilience, personal resources

Fair	Participant reports symptoms can only be stabilized (will not get worse or better)
Poor_Hx	Poor prognosis due to history of symptoms
Poor_Enviornmental	Poor prognosis due to environmental stressors, infers that client will have a poor response to treatment
Unsure	Prognosis is deferred, dependent on treatment
Counselor_PosPrRx	Views job as a counselor to have a positive prognosis for the client
Tx_Good	Good prognosis contingent upon access to treatment

Treatment Recommendations	
Meds_Outpt	Med stabilization outpatient (no hospitalization required)
Meds_Input	Med stabilization inpatient
Agency	Case management, EAP
Individual	Individual counseling
Family_Couple	Involve family members, including partner
Group	Psychoeducational groups
Drug_Screening	Drug screening recommended
Phsyical_Exam	Physical exam to rule out organic causes of symptoms
Substance_Abuse	Substance abuse program
Leisure	Exercise program
SES	Income assistance
Tx_Defer	Treatment recommendations are deferred
None_Specified	Treatment was assumed, but no specific type of treatment is specified

Appendix P
Global Assessment of Functioning Scale
(APA, 2000)

Consider current psychological, social, and occupational functioning on a hypothetical continuum of mental health-illness. Do not include impairment in functioning due to physical (or environmental) limitations. Use intermediate codes when appropriate (e.g., 45, 68, 72).

Current Level of Functioning: _____

100–91 Superior functioning in a wide range of activities, life's problems never seem to get out of hand, is sought out by others because of his or her many positive qualities. No symptoms.

90–81 Absent of minimal symptoms (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g., an occasional argument with family members).

80–71 If symptoms are present, they are transient and expectable reactions to psychological stressors (e.g., difficulty concentrating after family argument); no more than slight impairment in social, occupational, school functioning (e.g., temporarily falling behind in schoolwork).

70–61 Some mild symptoms (e.g., depressed mood and mild insomnia) OR some difficulty in social, occupational, or school functioning (e.g., occasional truancy, or heft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.

60–51 Moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks) OR moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with peers or co-workers).

50–41 Serious symptoms (e.g., suicidal ideation, severe obessional rituals, frequent shoplifting) OR any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job).

40–31 Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant) OR major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood (e.g., depressed man avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home, and is failing at school).

30–21 Behavior is considerably influence by delusions or hallucinations OR serious impairment in communication or judgment (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) OR inability to function in almost all areas (e.g., stays in bed all day; no job, home, or friends).

20–11 Some danger of hurting self or others (e.g., suicide attempts without clear expectation of death; frequently violent; manic excitement) OR occasionally fails to maintain minimal personal hygiene (e.g., smears feces) OR gross impairment in communication (e.g., largely incoherent or mute).

10–1 Persistent danger of severely hurting self or others (e.g., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.

Appendix Q
Prognosis Scale
(Friedlander & Stockman, 1983)

Directions Rate the highest level of adaptive functioning that could be expected for this client (i e prognosis), given sufficient motivation for change, a good therapeutic relationship, and adequate time for whatever form of treatment is adopted The scale ranges from 1 (Superior) to 10 (Grossly Impaired) with behavioral anchors at each level

Rating (1-10): _____

1 No symptoms, superior functioning in a wide range of activities, life's problems never seem to get out of hand, is sought out by others because of his/her warmth and integrity

2 Transient symptoms may occur, but good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, "everyday" worries that only occasionally get out of hand

3 Minimal symptoms may be present by no more than slight impairment in functioning, varying degree of "everyday" worries and problems that sometimes get out of hand

4 Some mild symptoms (e g depressive mood and mild insomnia) OR some difficulty in several areas of functioning, but generally functioning pretty well, has some meaningful interpersonal relationships and most untrained people would not consider him/her "sick "

5 Moderate symptoms OR generally functioning with some difficulty (e g , few friends and flat affect, depressed mood, and pathological self-doubt, euphoric mood and pressure of speech, moderately severe antisocial behavior)

6 Any serious symptomology or impairment in functioning that most clinicians would think obviously requires treatment or attention (e g , suicidal preoccupation or gesture, severe obsessional rituals, frequent anxiety attacks, serious antisocial behavior, compulsive drinking)

7 Major impairment in several areas, such as work, family relations, judgment, thinking, or mood (e g , depressed woman avoids friends, neglects family, unable to do housework), OR some impairment in reality testing or communication (e g speech is at times obscure, illogical, or irrelevant), OR single serious suicide attempt

8 Unable to function in almost all areas (e g , stay in bed all day), OR behavior is considerably influence by either delusions or hallucinations, OR serious impairment in communication (e g sometimes incoherent or unresponsive) or judgment (e g acts grossly inappropriately)

9 Needs some supervision to present hurting self or others, or to maintain minimal personal hygiene (e g repeated suicide attempts, frequently violent, manic excitement, smears feces), OR gross impairment in communication (e g , largely incoherent or mute)

10 Needs constant supervision for several days to prevent hurting self or others, or make no attempt to main minimal personal hygiene

Appendix R

Privilege and Oppression Inventory
(Hays, Chang, & Decker, 2007)

Directions: The following instrument examines an individual's attitudes toward social issues. Please respond to the following statements as they apply to the current United States Society. Rate each item within the range of (1) *strongly disagree* to (6) *strongly agree*. Please rate each item *honestly* so various attitudes toward social issues can be further understood.

Strongly Disagree 1	Disagree 2	Somewhat Disagree 3	Somewhat Agree 4	Agree 5	Strongly Agree 6

1. Whites have the power to exclude other groups.	1	2	3	4	5	6
2. There are benefits to being White in this society.	1	2	3	4	5	6
3. Christian holidays are given more prominence in society than non-Christian holidays.	1	2	3	4	5	6
4. Heterosexuals have access to more resources than gay, lesbian, and bisexual individuals.	1	2	3	4	5	6
5. Women experience discrimination.	1	2	3	4	5	6
6. The lighter your skin color, the less prejudice and discrimination you experience.	1	2	3	4	5	6
7. Being White and having an advantage go hand in hand.	1	2	3	4	5	6
8. White cultural characteristics are more valued than those of people of color.	1	2	3	4	5	6
9. Some individuals are devalued in society because of their sexual orientation.	1	2	3	4	5	6

10. Heterosexuals are treated better in society than those who are not heterosexual.	1	2	3	4	5	6
11. Society is biased positively toward Christians.	1	2	3	4	5	6
12. I am aware that women are not recognized in their careers as often as men.	1	2	3	4	5	6
13. Christianity is valued more in this society than other religions.	1	2	3	4	5	6
14. Many gay, lesbian, and bisexual individuals fear for their safety.	1	2	3	4	5	6
15. There are different standards and expectations for men and women in this society.	1	2	3	4	5	6
16. Gay, lesbian, and bisexual individuals experience discrimination.	1	2	3	4	5	6
17. Gay, lesbian, and bisexual individuals lack power in the legal system.	1	2	3	4	5	6
18. The majority of positive role models in movies are White.	1	2	3	4	5	6
19. Christianity is the norm in this society.	1	2	3	4	5	6
20. Women are disadvantaged compared to men.	1	2	3	4	5	6
21. Openly gay, lesbian, and bisexual individuals lack power in today's society.	1	2	3	4	5	6
22. I believe that being White is an advantage in society.	1	2	3	4	5	6
23. The media (e.g., television, radio) favors Whites.	1	2	3	4	5	6

24. Femininity is less valued in this society.	1	2	3	4	5	6
25. Christians are represented positively in history books.	1	2	3	4	5	6
26. Gay, lesbian, and bisexual individuals do not have the same advantages as heterosexuals.	1	2	3	4	5	6
27. Whites generally have more resources and opportunities.	1	2	3	4	5	6
28. Government policies favor Whites.	1	2	3	4	5	6
29. To be Christian is to have religious advantage in this country.	1	2	3	4	5	6
30. I am aware that men typically make more money than women do.	1	2	3	4	5	6
31. Individuals do not receive advantages just because they are White.	1	2	3	4	5	6
32. The media negatively stereotypes gay, lesbian, and bisexual individuals.	1	2	3	4	5	6
33. Most White high-level executives are promoted based on their race.	1	2	3	4	5	6
34. Christians hold a lot of power because this country is based on their views.	1	2	3	4	5	6
35. I think gay, lesbian, and bisexual individuals exaggerate their hardships.	1	2	3	4	5	6
36. Women lack power in today's society compared to men.	1	2	3	4	5	6
37. Christians have the opportunity of being around other Christians most of the time.	1	2	3	4	5	6
38. Many movies negatively stereotype people of color.	1	2	3	4	5	6

39. Advertisers set standards for how women should appear.	1	2	3	4	5	6

Note. This instrument was used with permission from the primary author.

CURRICULUM VITAE

Elizabeth A. Prosek earned a Bachelor's of Science degree in Human Development and Family Studies in 2004 from The Pennsylvania State University. In 2007, she completed a Master's of Science in Education degree with a concentration in community counseling from Old Dominion University. Ms. Prosek is a Nationally Certified Counselor (NCC) with several years experience providing mental health counseling services to adults and children in the community and in schools.

Ms. Prosek taught for the Department of Counseling and Human Services at Old Dominion University. Her graduate and undergraduate teaching experience includes multicultural/diversity, qualitative research methods, human service methods, evaluation, and research. She has served as the clinical supervisor for master's students in the graduate counseling program. Ms. Prosek's research interests include qualitative research design, diagnosis and assessment, mental health services for underserved populations, and the co-occurring population of intellectual disability and serious mental illness. She has two published articles in peer-reviewed journals and two publications within texts.

Ms. Prosek has presented at international, national, regional, and state conferences. Ms. Prosek is an active member of several national professional organization including the American Counseling Association (ACA), the Association for Counselor Education and Supervision (ACES), the Association for Assessment in Counseling and Education (AACE), American Rehabilitation Counseling Association (ARCA), and Counselors for Social Justice (CSJ). She is an active member of Chi Sigma Iota (CSI) and former Secretary of the Omega Delta chapter.