DIFFERENCES IN PROFESSIONAL COUNSELORS' SCHIZOPHRENIA SYMPTOMATOLOGY RATINGS BASED ON CLIENTS' RACE

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DIFFERENCES IN PROFESSIONAL COUNSELORS' SCHIZOPHRENIA SYMPTOMATOLOGY RATINGS BASED ON CLIENTS' RACE

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Dissertation

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ABSTRACT

Research patterns show distinct diagnostic racial disparities in mental disorders where African Americans are disproportionately assigned a schizophrenia diagnosis at a rate that is up to four times greater compared to European Americans. Researchers have called for additional investigation beyond simple diagnostic labels into symptomatology judgments that underlie clinicians' basis for determining a mental disorder diagnosis. This present study explored differences in licensed professional counselors' schizophrenia symptom severity ratings based on client's race among 101 African American and European American clients. An ex post facto cross-sectional descriptive research design was used to investigate several underlying groups of biopsychosocial symptomatology, some of which have not been previously studied: (1) psychosis-related psychological symptomatology; (2) non-psychotic psychological symptomatology; (3) social impairment-related symptomatology; and (4) dangerousness-related symptomatology. Results of MANOVA analyses showed licensed professional counselors' do in fact statistically significantly rate schizophrenia symptomatology differently based on clients' race. Surprisingly, counselors rated European Americans with higher severity on social impairment-related symptomatology, specifically interpersonal relationship problems and family relationship problems, compared to African Americans. Delayed help-seeking behaviors of African Americans related to these findings were discussed, including implications for counselor training and supervision, clinical practice, and recommendations for future research.

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CHAPTER I

INTRODUCTION

The term psychotic is characterized by individuals displaying delusions (i.e., fixed beliefs not amenable to change in light of conflicting evidence) and/or hallucinations (i.e., sensory experiences in the absence of external events) among many other prospective symptoms potentially leading to a mental disorder diagnosis such as a psychotic disorder (American Psychiatric Association; APA, 2013; Barlow & Durand, 2002). Psychotic disorders are also synonymously termed "psychosis" and used interchangeably in the literature. Lifetime prevalence rates of both narrowly and broadly defined psychotic illnesses range from 1.3% and 2.2%, respectively (Kenler, Gallagher, Abelson, & Kessler, 1996). Although less common, psychotic disorders are considered a more severe form of mental disorders associated with behavioral and cognitive symptoms (APA, 2013). Due to the nature of this condition, psychotic disorders can be viewed as more debilitating and stigmatizing.

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; APA, 2013) functions as a categorical classification manual used by trained clinicians to "serve as a practical, functional, and flexible guide for organizing information that can aid in the accurate diagnosis and treatment of mental disorders" (p.xii). The *DSM* is the most common reference used to assess all mental disorders, including psychotic disorder symptomatology. According to the *DSM* (APA, 2013), diagnoses of psychotic disorders fall under the schizophrenia spectrum and other psychotic disorders classification.

The World Health Organization (WHO, 2017) recognizes that schizophrenia not only presents with the longest duration of the psychotic disorder diagnoses, but worldwide it is the most common psychotic disorder with a lifetime prevalence rate ranging from approximately 0.3% to 0.7% (APA, 2013). While there is a stigma associated with having a mental disorder, schizophrenia in particular draws great public stigmatization. Blow et al. (2004) emphasized that the social stigma experienced through having a schizophrenia label not only contributes to a lower quality of life, but may also be detrimental to one's prognosis. As Perry, Neltner, and Allen (2013) reported, psychotic disorders are more highly stigmatizing by the American public than most other conditions. Evidently, this stigmatization can negatively affect overall well-being of the individual diagnosed with a psychotic disorder, particularly schizophrenia.

Without an accurate mental disorder diagnosis, a clinician may mistakenly misdiagnose an individual with a psychotic disorder such as schizophrenia when in fact they may not suffer from such an illness. As Apeponle, Thombs, Groleau, Jarvis, and Kirmayer (2012) emphasized, misdiagnosis involves failing to recognize that a mental health condition is present (under-diagnosis), identifying a disorder when there is not one (over-diagnosis), or misjudging the condition for another diagnosis (misidentification).

Not only can clinicians misidentify a diagnosis, but as Kilbourne, Haas, Mulsant, Bauer, and Pincus (2004) discussed, such diagnostic instability can ultimately lead to inappropriate treatment. For example, Pavkov, Lewis, and Lyons (1989) reported that having a diagnosis of schizophrenia leads to the use of psychotropic medications with serious side effects, lead individuals to rely on unstable jobs while ending up on welfare, experience intense scrutiny by employers and overall consume a large amount of mental

health resources spanning 40-50 years in the mental health system. Likewise, Schwartz and Feisthamel (2009) explained how certain populations diagnosed with schizophrenia were 13 times more likely to experience not only involuntary hospital admissions but also a longer duration of hospitalizations compared to the same population without a schizophrenia diagnosis. Failing to produce an accurate diagnosis, not only results in social stigma, but also debilitating, invasive treatments. Malgady and Zayas (2001) explained that having an accurate diagnosis determines patterns of utilization of mental health services, psychotherapeutic and psychopharmacological selection, and even post-treatment services. Additionally, Pavkov et al. (1989) warned that an incorrect diagnosis leads to wrong medications and less than optimal treatment outcomes with individuals developing medical conditions (e.g., tardive dyskinesia) caused by longer-term use of psychotropic medications. Therefore, when someone is under-diagnosed, over-diagnosed, or misdiagnosed, utilization and selection of treatments and aftercare services can be misplaced due to faulty clinical decision-making. Malgady (1996) reported that an inaccurate diagnosis fundamentally influences not only the effectiveness of the mental health services, but also the integrity of mental health research. Diagnostic disparities of a mental disorder are not as easily identifiable and understandable as one would think. As described by Sohler and Bromet (2003), the challenge is to understand why there are disparities occurring to inform policy development in order to improve upon the effectiveness and equitability of the mental health care system.

Mental disorders are defined in relation to culture (e.g., race, ethnicity, gender, religious and spiritual beliefs), which provides an interpretive framework that shapes the experience and expression of the behaviors, signs, and symptoms that make up criteria

for diagnoses (APA, 2013). Therefore, a diagnostic assessment must consider whether an individual's experiences, behaviors, and symptoms differ from sociocultural norms and contribute to adaptive difficulties within a cultural context (APA, 2013). It is also important to consider the boundaries between normality and pathology that varies across cultures for specific types of behaviors and symptoms revealing how the level at which a client's experience becomes pathological or problematic will differ (APA, 2013). Consequently, clinical judgment used in interpreting whether a given behavior is abnormal requires clinical attention and depends on cultural norms that are internalized by the client and applied by the counselor providing the diagnostic assessment (APA, 2013). Sue and Sue (2013) believed that "cultural competence can prevent diagnostic and treatment errors due to inaccurate assumptions and stereotypes" (p. 349). Cultural competence is defined by (a) self-awareness of one's values and biases; (b) knowledge of culturally diverse groups; and (c) specific clinical skills (Sue & Sue, 2013). Demonstrating multicultural competence and sensitivity is important to help provide awareness of cultural factors because they can contribute to vulnerability and suffering by amplifying fears that maintain certain mental disorders in clients (APA, 2013). One such cultural factor to consider is a client's race, which can influence a clinician's diagnostic judgment.

It is well-established in the literature that diagnostic racial disparities have been found among African Americans when compared to European Americans (Feisthamel & Schwartz, 2009). Stockdale, Lagomasino, Siddique, McGuire, and Miranda (2008) found within a 10-year trend that African Americans and Latino Americans are less likely to be diagnosed as depressed during mental health and primary care visits demonstrating racial

disparities in diagnoses of depression and anxiety. African Americans are diagnosed less often with depression and anxiety disorders compared to European Americans (Schwartz, Feisthamel, & Smith, 2015; Stockdale, Lagomasino, Siddique, McGuire, & Miranda, 2008).

Among clients with a diagnosis of bipolar disorder in a routine care setting, older African Americans were more likely to have received a diagnosis of schizophrenia during the same period compared to European Americans (Kilbourne et al., 2004). Additionally, it was reported that mood disorders were underdiagnosed resulting in an over-diagnosis of psychotic disorders, such as schizophrenia, among African Americans receiving mental health treatment (Kales, Blow, Bingham, Copeland, & Mellow, 2000). Kilbourne et al. (2004) found that African Americans had an elevated occurrence of schizophrenia diagnoses with bipolar disorder, which interestingly by diagnostic standards are mutually exclusive and these two disorders cannot exist concurrently. This is consistent with many findings that psychotic disorders show one of the highest rates of disproportionate diagnoses based on race (U.S. Department of Health and Human Services, 2001; National Institute of Mental Health, 1987; Schwartz & Blankenship, 2014).

In a review spanning a 24-year period, Schwartz and Blankenship (2014) revealed a pervasive pattern within the literature showing that African Americans on average are diagnosed with schizophrenia three to four times more than European Americans, while Latino Americans are diagnosed at a rate that is more than three times higher compared to European Americans with schizophrenia. The authors also indicated that African Americans and Latino Americans showed an increased lifetime rate of psychotic symptoms compared to European Americans. Additionally, outside of the United States,

a pattern has shown that misdiagnosis of psychotic disorders are more prevalent with immigrant ethnic minorities compared to native majority individuals regardless of ethnicity (Schwartz & Blankenship, 2014). It is unclear why there are diagnostic racial disparities, particularly with African Americans diagnosed with schizophrenia. While diagnostic accuracy is extremely important, any mental disorder is simply a set of symptom characteristics that collectively define a syndrome or diagnosis (APA, 2013). Understanding and recognizing the symptomatology of a mental disorder diagnosis is vitally important in concluding that an individual meets enough criteria to support a diagnosis, as determined by the clinician. Neighbors, Trierweiler, Ford, and Muroff (2003) expressed how diagnoses of mental disorders greatly rely on client self-reported information. Although this may at times be unreliable, licensed professional counselors and other clinicians may operate with some degree of uncertainty whether concrete symptomatology exists. This can lead to the possible influence of stereotypes that may be linked to observable characteristics such as a client's race. Therefore, to obtain an accurate diagnosis, clinicians must accurately identify the symptomatology underpinning that particular mental disorder (APA, 2013).

Recent literature has suggested several possible reasons for disparities in psychotic disorder diagnoses such as genetic factors, different exposure to risk factors, clinician stereotypes such as racial biases, and clinicians misinterpreting symptoms or presentation of the client's reported and observable complaints (Schwartz & Feisthamel, 2009). While the importance of diagnostic accuracy in symptomatology has been identified by researchers, cultural factors such as race, particularly for African Americans, has led to diagnostic racial disparities more prevalently in schizophrenia.

The focus of this study will be on investigating how licensed professional counselors rate schizophrenia symptomatology severity based on clients' race.

Statement of the Problem

The purpose of mental disorder diagnoses is to help clinicians determine prognosis, treatment plans, and potential treatment outcomes for their clients (APA, 2013). When deciding to give a mental disorder, "diagnostic criteria are offered as guidelines for making diagnoses, and their use should be informed by clinical judgment" (APA, 2013, p. 21). This requires clinicians using the *DSM* to be trained in its appropriate utilization by exercising careful clinical judgment. However, "although some mental disorders may have well-defined boundaries around symptom clusters, scientific evidence now places many, if not most, disorders on a spectrum with closely related disorders that have shared symptoms" (APA, 2013, p. 6). Therefore, careful clinical judgment is necessary in accurately deciphering not only the client's symptoms leading to a mental disorder diagnosis, but also recognizing which diagnoses or even diagnostic spectrum these reported symptoms may be placed.

This study investigates how professional counselors may contrast in symptomatology severity ratings among different racial clients (African American and European American) with schizophrenia. Some of the limitations with past research emphasized identifying how race influences psychotic diagnoses, as opposed to how race influences psychotic symptomatology leading to a diagnosis. However, none have looked at racial disparities of schizophrenia symptomatology among licensed

professional counselors. This qualitative difference in focus is necessary because a mental disorder diagnosis is a collection of symptomatology criteria that is interpreted by the diagnostician (APA, 2013). Additionally, as Schwartz and Feisthamel (2009) identified, limitations of previous research suffered from methodological restrictions (e.g., small sample sizes), and used what is now becoming outdated versions of the *DSM* (i.e., *DSM-III*, *DSM-IV*) with the arrival of the most updated released *DSM-5* (APA, 2013) now being utilized by clinicians.

Additionally, previous research used differing professional affiliations within the mental health field (i.e., psychiatrists, psychologists, psychiatric nurses, psychiatric social workers, general physicians) as diagnosticians. Schwartz and Feisthamel (2009) demonstrated one of the only studies employing licensed professional counselors within their sample population of diagnosticians. This is important because although other mental health professionals have a similar scope of practice including the ability to diagnose a mental disorder, the difference in training may influence not only conceptualizing interpretations of symptomatology but also the consideration (or lack of consideration) of multicultural factors such as race (Sue & Sue, 2013). That is, the profession of counseling highlights multicultural training, supervision, research, advocacy, and ethics throughout its mission (American Counseling Association, 2014; Council for the Accreditation of Counseling and Related Educational Programs (CACREP, 2016)). Therefore, professional counselors functioning as diagnosticians may differ from other professional affiliations (e.g., psychiatrists, social workers) and counselor educators are instructed to infuse multicultural and diversity issues into all

training courses and workshops according to the profession's guiding code of ethics (ACA, 2014).

Relatedly, counselor education programs who are accredited by CACREP have to meet the requirement of reflecting "current knowledge and projected needs concerning counseling practice in a multicultural and pluralistic society" (CACREP, 2016, p. 8). Counselor education programs that are accredited by CACREP have met minimal standards of training with regard to: (a) institutional settings; (b) program mission and objectives; (c) program content; (d) practicum experiences; (e) student selection and advising; (f) faculty qualifications and workload; (g) program governance; (h) instructional support; and (i) self-evaluation (CACREP, 2014). This important accreditation provides recognition that the content and quality of the counseling program has been evaluated and meets standards set by the profession of counseling (CACREP, 2014). Also, graduating from institutions that are not CACREP-accredited can lead to difficulty or inability to obtain professional licensure that can impede a graduate's ability to ethically practice counseling (CACREP, 2014). Through this accreditation, counselors obtain a stable, consistent, and high quality of training with a collective multicultural education and sensitivity in diversity issues such as considering a client's race when practicing counseling.

Misdiagnosis refers to under-diagnosing, over-diagnosing, or misidentification (Apeponle et al., 2012), and although it is unclear why clinicians misdiagnose (Neighbors et al., 2003), researchers have speculated that factors contributing to misdiagnosis include lack of standardized instruments (Minsky et al., 2006), different exposure factors, genetics, communication barriers, lower socioeconomic status or education, racial bias,

symptomatology presentation (Kales et al., 2000), delayed help seeking behaviors (Boa, Fisher, & Studnicki, 2008), and under-diagnosis of mood disorders (Schwartz & Feisthamel, 2009). Client race is consistently a factor contributing to the misdiagnosis for African Americans (Minsky et al., 2006; Neighbors, Jackson, Campbell, & Williams, 1989; Schwartz & Blankenship, 2014; Schwartz & Feisthamel, 2009). Specific to minority populations, Strakowski, McElroy, Keck, and West (1996) reported how studies showed increased regularity and severity of psychotic symptoms such as hallucinations, paranoia, and other symptomatology in African Americans compared to European Americans. This finding suggested that psychotic symptoms that are most commonly associated with schizophrenia may occur more frequently in African Americans regardless of the underlying diagnosis. It also highlighted the importance of investigating how certain factors such as race, may influence a clinician's judgment of symptomology, specifically related to the diagnostic racial disparities in schizophrenia.

Research shows that the demographic most strongly associated with a schizophrenia diagnosis is a client's race (Blow et al., 2004), while rates of diagnoses among racial groups may be related to cultural differences in symptom presentations of psychotic disorders (Arnold et al., 2004) or clinicians interpreting symptomatology differently (Mizock & Harkins, 2011). This phenomenon requires a closer examination to better understand this diagnostic racial disparity.

Purpose of the Study

The purpose of this study was to investigate whether licensed professional counselors' schizophrenia symptomatology severity ratings differed based on clients' race (specifically among African American and European American clients). This study examined counselors' assessment of a client depending upon race using a range of severity ratings for psychological and social symptoms. The aim was to study a more specific and comprehensive range of clinicians' symptomatology judgments related to the race of a client, beyond simply accounting for differential diagnoses as described in prior research. Previous research has continuously referenced symptomatology as a potential reason for misdiagnosis with no study found to date exploring a range of specific symptoms associated with a schizophrenia diagnosis using licensed professional counselors. Understanding this formulation is important not only to clinicians, but also to supervisors, counselor educators, researchers, and clients. According to the American Counseling Association's (ACA, 2014) most recently published *Code of Ethics*, section E.5. clarified the standards of practice of diagnosis of mental disorders. For example, section E.5.a. explained the importance of providing a proper diagnosis of mental disorders through appropriate use of assessment techniques, which includes personal interviews with clients (ACA, 2014). Section E.5.b. explained how counselors recognize that culture affects the problems identified by clients and to consider the client's cultural experiences when diagnosing mental disorders (ACA, 2014). Section E.5.c. cautioned counselors to recognize historical and social prejudices in the misdiagnosis of certain individuals and to be aware of any biases within themselves (ACA, 2014). It is therefore ethically imperative that counselors practice unbiased decision making with culturally

informed considerations when interpreting symptomatology of a client and diagnostically determining a mental disorder.

Research Questions

The primary objective of this study was to determine whether there are statistically significant differences in licensed professional counselors' psychosocial symptom severity ratings among clients with schizophrenia based on those clients' race. The following four research questions were posed in this study:

1. Do licensed professional counselors rate African American and European American clients differently on severity of psychosis-related psychological symptomatology (i.e., positive psychotic symptoms and self-care deficits)?

2. Do licensed professional counselors rate African American and European American clients differently on severity of non-psychotic psychological symptomatology (i.e., depression, anxiety, mania, and traumatic stress)?

3. Do licensed professional counselors rate African American and European American clients differently on severity of social impairment-related symptomatology (i.e., interpersonal relationship problems, family relationship problems, and work or school problems)?

4. Do licensed professional counselors rate African American and European American clients differently on severity of dangerousness-related symptomatology (i.e., homicidality, suicidality, and perception of need for an immediate inpatient admission)?

Definition of Terms

Mental Disorder: a syndrome characterized by clinically significant disturbance in an individual's cognition, emotional regulation, or behavior displaying dysfunction in the person's psychological, biological, or developmental process while causing significant distress in social, occupational, or other important activities (APA, 2013).

Diagnosis: identifying a mental disorder from its signs and symptoms based on criteria outlined in the *Diagnostic and Statistical Manual of Mental Disorders* (APA, 2013).

Diagnostic and Statistical Manual of Mental Disorders (DSM): a book published by the American Psychiatric Association as a statistical diagnostic classification system of criteria used by psychiatrists, other physicians and other mental health professionals that describe the essential features of the full range of mental disorders (APA, 2013).

Symptomatology: a branch of medical science concerned with symptoms of diseases (Symptomatology, 2017), specifically signs and symptoms for a mental disorder in the present study.

Race: categories to which individuals belong or identify within the eyes of the community (Office of Management and Budget [OMB], 1997), including but not limited to those who self-identify as Black/African American, White/European Americans, Hispanic/Latino Americans, Asian/Asian American persons.

Black/African American: a person having origins in any of the Black racial groups of Africa (OMB, 1997).

White/European American: a person having origins in any of the original peoples of Europe (OMB, 1997).

Hispanic/Latino American: a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race (OMB, 1997).

Asian/Asian American: a person having origins in any of the original peoples of Asia (OMB, 1997).

Disparity: containing fundamentally different and often incongruous elements, including statistical differences in mental disorder diagnostic rates or patterns in the present study.

Overview of the Remainder of the Study

Chapter two will explore and discuss a review of the literature related to symptoms of mental disorders and client race detailing specific peer-reviewed empirical article findings related to this study. A critique of each article found to date will be discussed including the need for this study and rationale. Chapter three will discuss the methodology including the null and directional research hypotheses, research design, and participants. Procedures, instrument measures, and data analysis will also be detailed in chapter three. Chapter four provides the results of statistical analyses used in this study, including pre-analysis data screening procedures and descriptive statistics. Finally, chapter V includes a discussion and interpretation of statistical results with implications for counselor training, supervision, and practice. Limitations and recommendations for future research are also examined in Chapter five.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

Diagnostic and Statistical Manual of Mental Disorders

Licensed professional counselors use the *Diagnostic and Statistical Manual of Mental Disorders* for criteria guidelines to diagnose a mental disorder. As stated in the *DSM-5* (American Psychiatric Association [APA], 2013), its primary purpose is to assist trained clinicians in the diagnosis of mental disorders as part of a case formulation assessment leading to a fully informed treatment plan for each client. Licensed professional counselors conduct an assessment incorporating the evaluation of a client's stated complaints and relevant symptomatology, and through clinical decision-making and trained evaluation skills a diagnosis may be warranted. In order to determine a mental disorder diagnosis, significant personal distress and/or social and occupational disability must be present, in addition to a minimum number of *DSM-5* criteria outlined for a specific mental disorder (APA, 2013). The difficulty in making an accurate and objective mental disorder diagnoses lies with interpreting the client's reported and observed symptomatology while translating data into understandable and identifiable criteria as understood by the licensed professional counselor conducting the diagnostic assessment. This difficulty can be heightened when conducting a diagnostic assessment with someone suffering from a severe or complex mental disorder, such as a psychotic disorder. As Linden and Rath (2014) noted, the diagnosis of a mental disorder is based on diagnostic algorithms, and even the best algorithm will not produce results that are valid if a client's reported complaints or criteria which formulate the basis of the algorithm are

not precise. According to the *DSM-5*, simply checking off the symptoms in the diagnostic criteria to make a mental disorder diagnosis is not sufficient without using clinical judgment (APA, 2013). This necessitates the utmost attention of the professional counselor when giving an accurate diagnosis.

According to the *DSM-5*, the diagnosis of a mental disorder should help clinicians determine treatment planning and potential treatment outcomes (e.g., prognosis) for clients (APA, 2013). If the wrong diagnosis is given, then unintended consequences influencing key aspects of the treatment process for that client will ensue. Additional negative consequences of inaccurate diagnoses may include unnecessary invasive or costly treatments (e.g., psychotropic medications), loss of work and personal freedom (e.g., inpatient hospitalization), and social stigma resulting from a more severe mental disorder (i.e., schizophrenia) that is inappropriately diagnosed (Feisthamel & Schwartz, 2009; Singh & Rajput, 2006). For example, in reviewing the literature on bipolar disorder, Singh and Rajput (2006) noted that consequences of misdiagnosis result in treatment complications such as inappropriate psychotropic medications, receiving a delay in more suitable treatments, increased healthcare costs that can result from higher rates of hospital use, and loss of work days and productivity. Apeponle et al. (2012) described how misdiagnosis can also result when there is a misinterpretation of crucial diagnostic information because of insufficient attention to social, cultural and contextual factors that shape symptom expression. This is one of the reasons the *DSM* has experienced significant changes through the years with its utilization by clinicians and why "clinicians are called upon to evaluate individuals from numerous different ethnic groups and cultural backgrounds (including many who are recent immigrants)" (APA,

1994, p. xxiv). As Malgady and Zayas (2001) stated, the fourth edition of the *DSM* reflects an unprecedented importance and recognition of the cultural diversity of clients in diagnostic evaluations. Necessary attention was given to cultural sensitivity in the formulation of diagnostic criteria evidenced by its outline for cultural formulation and glossary of culture bound syndromes in the appendixes and ethnic and cultural considerations (Malgady & Zayas, 2001). For example, the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV*; APA, 1994) included three types of information specifically related to cultural considerations: (1) in text discussion of cultural variations in the clinical presentations of disorders; (2) a description of culture-bound syndromes not contained in the *DSM-IV* Classification included in the appendixes; and (3) an outline for cultural formulation designed to assist clinicians in systematically evaluating the impact of the individual's cultural context also included in the appendixes (APA, 1994). These significant cultural considerations were not present in previous versions of the *DSM* (e.g., *DSM-III, DSM-III-R*). As stated in the *DSM-IV*, "a clinician who is unfamiliar with the nuances of an individual's cultural frame of reference may incorrectly judge as psychopathology those normal variations in behavior, belief, or experience that are particular to that individual's culture" (APA, 1994, p. xxiv). An example is given in the *DSM* for misinterpreting a client's religious practices (e.g., hearing or seeing a deceased relative during bereavement) as manifestations of a psychotic disorder resulting in a misdiagnosis (APA, 1994). As the *DSM-IV* states, "it is hoped that these few features will increase sensitivity to variations in how mental disorders may be expressed in different cultures and will reduce the possible effect of unintended bias stemming from the clinician's own cultural background" (APA, 1994, p. xxv).

Although identifiable consequences of misdiagnosis can be established, potential explanations for the causes of misdiagnosis are often difficult to recognize. One contextual factor that shapes symptom expression are cultural factors such as age, gender, socioeconomic status, and race, which could influence a diagnostician's perception of the client's behavior and communicated symptomatology (APA, 2013). This may be especially true considering the race of a client and how it can affect a clinician's assessment. Empirical research has consistently shown across time period and geographic location that a client's race influences the rates by which diagnoses are assigned. However the underlying reasons for this phenomenon has yet to be established. In a review spanning 12 years from 1974 to 1996, Garb (1997) examined in the literature the pattern of bias in clinical judgment.

Role of Racial Bias in Diagnosis

When specifically looking at diagnostic racial bias, Garb (1997) found that racial bias occurs when the accuracy of judgments vary as a function of factors such as a client's race. He surmised that the accuracy of judgments can result from factors such as diagnostic criteria showing bias if clinicians adhere to the criteria when making a diagnosis if that particular diagnosis is more valid for one group of clients than another. An additional bias occurs through a confirmatory bias where clinicians form hypotheses based on stereotype beliefs towards clients of a particular race and act on this bias when collecting information that will support, but not refute, their hypotheses while not considering alternative ones (Garb, 1997; Whiston, 2012). Therefore, Garb (1997)

concluded from the review that bias is related to the collection of data and/or the interpretation of data.

Minsky et al. (2006) implored that a lack of standardized instruments being used could be a cause for diagnostic disparities. In addition, misdiagnosis may relate to treatment setting or the type of clinicians working in a particular treatment location (Minsky et al., 2006). Kales et al. (2000) cited several factors contributing to misdiagnosis, such as differences in exposure to risk factors, symptoms or presentations of psychiatric illness, genetics, communication barriers, ethnocentric bias, and lower socioeconomic status or education. Boa et al. (2008) stated how cultural and social factors influence care-seeking behaviors that result in African Americans not seeking professional help until later on during an illness (compared to European Americans) when more severe symptomatology has developed.

Similar to clinician stereotypes, Kales et al. (2005) noted that clinician bias is the most frequently cited and possible etiological factor leading to misdiagnosis. Schwartz and Feisthamel (2009) summarized reasons for disproportionate diagnoses of mental disorders among African Americans to include the under-diagnosis of mood disorders (compared to European Americans), clinician bias and misinterpretation of symptoms, and African Americans not seeking treatment until later stages of a mental illness when symptomatology had worsened. Among all the stated potential reasons for race-related misdiagnosis, Whaley (2004) seemed to best narrow down diagnostic bias into two basic categories: (1) clinician bias including a lack of adhering to diagnostic criteria during evaluations; and (2) cultural bias including true racial differences in symptom expression that are misinterpreted or overlooked by diagnosticians.

Race and Non-Psychotic Disorder Diagnoses and Symptomatology

Neighbors et al. (1989) conducted a review that showed a pervasive pattern of diagnostic discrepancies influenced by a client's skin color, and suggested the use of structured instruments to ensure uniform and comprehensive data collection so clinicians can arrive at a more consist diagnosis devoid of racial influence. Neighbors et al. (1989) described two fundamental assumptions made by diagnostic researchers: (1) African Americans and European Americans are diagnostically similar, but clinicians assume they are different resulting in diagnostic errors toward clients of color; (2) African Americans and European Americans display psychopathology differently but clinicians assume they are the same suggesting diagnosticians are either culturally unaware or insensitive to racial and cultural differences. For example, African Americans may present as more guarded and mistrustful due to historical and social prejudices (Muroff, Edelsohn, Joe, & Ford, 2008; Whaley, 2004), which may inaccurately be interpreted by clinicians as a delusion of paranoia leading to a misdiagnosis of a psychotic disorder. This symptom interpretation can influence a diagnostician's clinical judgment. Malgady (1996) noted that some widely used standardized tests, such as the Minnesota Multiphasic Personality Inventory (MMPI), have items that refer to culturally patterned behaviors, beliefs, and feelings that are not pathological in certain cultures. Additionally, psychological assessments are normed on specific populations that may not include the racial and cultural characteristics of the client assessed by a clinician, which can potentially lead to poor clinical judgments and an incorrect diagnosis.

Kales et al. (2005) investigated psychiatrists' diagnoses after viewing videotaped interviews of racially different client actors displaying symptoms of depression while reading a script with established *DSM-IV* (APA, 1994) criteria for major depressive disorder. Results showed that clients' race was not associated with differences in the diagnosis of major depressive disorder. Kales et al. (2005) suggested that psychiatrist bias based simply on the client's race does not explain the lower rates of clinical depression among African Americans clients. They suggested the differences could be attributed to variations in symptomatology presentation. Minsky et al. (2006) investigated clients under age 18, researching if potential diagnostic differences existed according to race. Results showed that African American clients received more externalizing diagnoses (e.g., disruptive disorders such as conduct disorder, oppositional defiant disorder and attention deficit/hyperactivity disorder) and fewer internalizing diagnoses (e.g., depression, anxiety, adjustment disorder, and posttraumatic stress disorder) compared to European American clients. Minsky et al. (2006) speculated that biopsychosocial origins, clinician bias, and different expression of symptomatology could explain the differences. Similarly, Feisthamel and Schwartz (2009) investigated diagnostic judgments of licensed professional counselors, finding that African American clients were diagnosed disproportionally more often with disruptive behavior disorders (e.g., externalizing diagnoses) compared to European American clients who were more often diagnosed with a less severe adjustment disorder (e.g., internalizing diagnoses). The researchers concluded that clinicians may perceive certain symptoms of mental disorders as significantly more common among clients of color and that race may influence diagnostic bias.

Pinals, Packer, Fisher, and Roy-Bujnowski (2004) examined racial disparities in criminal justice system cases and found no significant racial differences in defendants' diagnoses. The researchers concluded that their results could be due to the participants' criminal history of charges not part of the database, and therefore was not able to influence clinician impressions. Also, Pinals et al. (2004) expressed that screening evaluations were based on limited clinical examination so there may be a tendency for clinicians to over-diagnose or under-diagnose. Pinals et al. (2004) conclude that future research should focus on diagnostic racial differences with the need for clinicians to be more cultural competent. Zayas, Cabassa, Perez, and Howard (2005) studied language and race influencing diagnostic accuracy with 10 first-time Latino American clients using two Latino American psychiatrists and two non-Latino American psychiatrists assisted by translators. Results showed no diagnostic differences on most mental disorder diagnoses. However, the non-Latino American psychiatrists diagnosed personality disorders more often compared to the Latino American psychiatrists (Zayas et al., 2005). Although their sample size was small (N=10), the researchers stated that their findings suggest behavioral and emotional problems may be assessed by diagnosticians differently depending on their cultural distance to clients. Zayas et al. (2005) also expressed that cultural differences between clinicians and clients can produce different diagnostic impressions as a result of bias and that more training and consultation on cultural factors in diagnosing is needed.

Stockdale et al. (2008) analyzed 10-year time trends in outpatient diagnoses of depression and anxiety among racial minorities and found a pervasive pattern in diagnoses by race. Findings showed that African Americans were less likely to be

diagnosed as depressed during psychiatric visits. The researchers suggested clinicians need to address cultural barriers to overcome these persistent disparities.

These studies showed a consistent pattern of diagnostic racial disparities with several of the researchers suggesting more attention to address cultural factors and potential clinician bias may explain this pervasive trend. Investigating the influence of race on symptomatology of non-psychotic disorder diagnoses additionally needs to be examined since diagnoses represent a collection of symptoms. Especially considering how cultural factors such as race can influence clinical impressions of diagnosticians. McLaughlin, Hilt, and Nolen-Hoeksema (2007) examined racial difference in self-reported symptoms of several mental disorders in a large racially diverse sample of Latino American, African American, and European American adolescents. Results showed that while there are no large racial differences in symptomatology, Latino American adolescents reported higher levels of internalizing and externalizing symptoms and exhibited higher levels of comorbidity symptoms while African Americans reported higher levels of both internalizing and externalizing symptoms. McLaughlin et al. (2007) concluded the need to investigate potential mechanisms leading to symptomatology differences of mental disorders by race.

Kanazawa, White, and Hampson (2007) investigated an Asian American population assessing the impact of conceptualization with depression on the experience and presentation of depressive symptoms among differing racial groups. Results showed that Asian Americans (i.e., Japanese-American) reported lower levels of positive affect symptoms compared to European Americans, but their depressed affect, somatic symptoms, and interpersonal problem symptoms did not differ significantly from

European American clients (Kanazawa et al., 2007). In contrast, Native Hawaiians reported higher levels of depressed affect and somatic symptoms, while reporting lower levels of positive affect symptoms compared to European Americans. Kanazawa et al. (2007) noted that among the Asian Americans, lower positive affect might be linked to cultural values more than mental health status so diagnosticians will need to consider cultural norms when interpreting client responses to positive affect symptoms among Asian Americans when assessing for depressive symptoms. Kanazawa et al. (2007) suggested "these results show that lower positive affect in a racial or subcultural sample is only realized when other symptom clusters are considered and the predictions can be linked to specific cultural concepts" (p.42). The researchers concluded that differences in symptomatology among racial groups may have differing etiologies and consequences with more attention needed examining what may contribute to these differences.

Payne (2012) hypothesized that misdiagnosis of African American clients is due to their presentation of culturally expressed depression symptoms. Payne (2012) randomly assigned viewing videos of young adult men actors (one African American and one European American) playing the part of a depressed client with classic symptoms of major depressive disorder. Payne (2012) found no statistically significant differences between how clinicians diagnosed mood disorder for African American or European American clients who presented with similar symptoms with no detection of overt clinician racial bias based on phenotypic characteristics alone. The researcher suggested that although overt racism may not be observed, clinicians having race-based expectations of clients may be present and expressed that additional research is warranted to investigate misdiagnosis.

Ghafoori, Barragan, Tohidian, and Palinkas (2012) examined the association between race and symptom severity of depression, posttraumatic stress disorder, and generalized anxiety disorder with results showing no significant relationship found between racial group status and symptom severity. However, Ghaffoori et al. (2012) reported that African Americans had lower depression symptom severity compared to European Americans, and being of African American race remained significantly associated with decreased depression symptom severity accounting for a statistically significant five percent of the variance in lower depression symptom severity. The researchers suggested that protective factors (e.g., religiosity promoting hope) specific to African Americans may play a role in lower reported levels of depression. Additionally, Ghaffoori et al. (2012) speculated that self-report measures may fail to capture symptomatology in African Americans such as depressive symptoms.

Frueh et al. (2002) examined how race may influence clinical presentation and symptomatology in combat veterans with PTSD and found significant racial differences with moderate effects on clinician rating of psychotic symptoms. Specifically, African Americans endorsed more positive symptoms of psychosis that suggested symptoms of paranoid ideation and dissociation, compare to European Americans. Interestingly, no racial differences were found on self-reported anxiety, depression, or PTSD symptomatology. The researchers stated racial differences may be a result of cultural or biological differences between African Americans and European Americans, or these differences may result from clinician rater bias. Frueh et al. (2002) reported that African Americans have a tendency to present with a slightly different clinical symptom picture

possibly leading to misdiagnosis. Therefore, Frueh et al. (2002) suggested future research would benefit investigating clinician rating bias for the spectrum of psychosis.

The research summarized above on race and non-psychotic disorder diagnoses and symptomatology showed a pattern of diagnostic racial disparities. For example, African Americans are diagnosed with more disruptive and externalizing disorders than the less severe internalizing disorders compared to European Americans. Researchers concluded that clinician bias most likely may contribute to this phenomenon. Additionally, there is a trend of inconsistency of African Americans diagnosed with depression. Some researchers showed African Americans diagnosed with depression more frequently than European Americans when diagnostic racial disparities are present. Other researchers specifically investigating depression show no diagnostic racial differences more frequently and additionally that African Americans are less likely to be diagnosed as depressed. An interesting phenomenon worth noting is when researchers used actors of different races portraying the same symptoms, there were no diagnostic racial differences when explicitly investigating race. Researchers concluded that symptomatology presentation and/or interpretation through the clinician's cultural understanding may play a role in explaining the differences.

Race and Psychotic Disorder Diagnoses

It has been established that a clear pattern is present in the literature showing racial disparities with minority populations being overrepresented in non-psychotic disorder diagnoses and symptomatology. It has been well recognized that this pervasive

pattern of diagnostic racial disparities is even more prevalent with psychotic disorders. Therefore, it is necessary to examine this phenomenon to better understand patterns depicted in the literature. To help differentiate particular trends, this section of psychotic disorders has been divided into two sub-sections of non-schizophrenia diagnoses, and schizophrenia diagnoses. There appears to be distinct differences between the two sub-sections worth mentioning.

Non-Schizophrenia Diagnoses

Schwartz and Blankenship (2014) reviewed the literature spanning a 24-year period that examined racial disparities in psychotic disorder diagnoses and found a long-term pervasive pattern where African Americans were consistently more likely to be diagnosed with a psychotic disorder diagnosis compared to European Americans. Schwartz and Blankenship (2014) also found that African American and Latino American youth under the age of 18 were twice as likely to be diagnosed with a psychotic disorder compared to European American youth.

Kilgus, Pumariega, and Cuffe (1995) examined racial differences for inpatient clients under the age of 18 finding African Americans were more likely to receive a psychotic disorder due to a general mental condition (e.g., organic/psychotic disorder) compared to European American clients. The researchers believed this pattern could be a result of bioenvironmental influences such as lower socioeconomic status and perinatal factors (e.g., trauma, nutrition). Additionally, Kilgus et al. (1995) reported that results may also develop from diagnostic bias with clinicians misinterpreting culturally

influenced adaptive mechanisms, such as paranoia, which could be incorrectly interpreted as evidence of psychosis. Kilgus et al. (1995) cautioned clinicians to be careful interpreting symptomatology differently in racial groups and minorities with a lower socioeconomic status, as well as, considering cultural factors that contribute to the expression or interpretation of psychotic symptomatology. The researchers expressed the need for more studies showing sensitivity in the evaluation of ethnic minorities.

Strakowski et al. (1996) examined clients having mania with psychotic features and found that African American clients were significantly more likely to receive a clinical diagnosis of non-manic psychosis (e.g., psychosis not-otherwise-specified or psychosis unspecified) compared to European American clients. The researchers also reported that African American clients exhibited a psychotic symptomatology profile differently due to more severe hallucinations and less severe persecutory delusions compared to European American clients. They concluded that the racial differences in diagnoses do not appear to be due to differences in symptomatology presentation but potentially due to clinicians failing to identify certain clients with atypical presentations.

Boa et al. (2008) examined racial differences within inpatient diagnoses using information from healthcare facility discharges showing that African American clients were at least twice as likely to have received a primary psychotic diagnosis compared to European American clients. More specifically, a primary psychotic diagnosis accounted for over 50% of all behavioral hospitalizations for African American clients compared to 23% for European American clients. Therefore the researchers concluded that a higher volume of behavioral hospitalizations were strongly associated with a greater likelihood

of being diagnosed with psychosis. The researchers suggested diagnosticians improve cultural sensitivity and awareness with racial minority clients.

Similarly, Perry et al. (2013) reviewed data from medical chart evaluations in a pre-trial correctional psychiatric facility. The researchers found that African Americans were disproportionately diagnosed with highly stigmatizing psychotic spectrum disorders compared to European Americans who are 78% less likely to be diagnosed with a psychotic disorder. Higher levels of education were associated with a reduction in the odds of being diagnosed with a psychotic disorder and length of stay in the forensic psychiatric facility is positively associated with the odds of being diagnosed with a psychotic disorder (Perry et al., 2013). Therefore, the researchers predicted the probability that an African American at the forensic psychiatric facility to be diagnosed with a psychotic disorder is 56% compared to 21% for European Americans. Perry et al. (2013) concluded that clinicians may be either unintentionally biased in their application of diagnostic criteria or the diagnostic criteria may be biased towards ethnic minorities. Perry et al. (2013) also expressed that since African Americans are less apt to voluntarily seek or receive mental health treatment compared to European Americans, this may result in untreated mental illness increasing the likelihood of criminal activity leading to involuntary hospitalizations and individuals brought to treatment services by legal means. Therefore, African Americans with psychotic spectrum disorders may represent their first genuine contact with the mental health treatment system resulting in the disproportionate diagnostic patterns related to behavioral hospitalizations associated with a psychotic disorder. Perry et al. (2013) suggested that clinicians develop culturally sensitive assessments and that African Americans portraying suspiciousness of the mental health

treatment system may be mislabeled as symptoms of paranoia during the diagnostic process, thus leading to higher rates of psychotic spectrum disorders.

Schwartz and Feisthamel (2009) conducted the first study using master's and doctoral-level professional counselors investigating race and diagnoses. The researchers found that counselors diagnosed African American clients with psychotic disorders disproportionately at a higher rate compared to European American clients. Additionally, Schwartz and Feisthamel (2009) noted that 27% of all African American clients were diagnosed with psychotic disorders compared with 17% of all European American clients showing a disproportionate diagnostic rate. The authors speculated that clinicians' stereotypical beliefs about certain racial groups may lead to racial diagnostic bias.

Kales et al. (2000) examined veterans admitted to an acute inpatient unit in the Department of Veterans Affairs hospitals and found that African American and Latino American clients had significantly higher rates of psychotic disorder diagnoses compared to European American clients. The researchers concluded their results may reflect African Americans demonstrating different patterns of seeking mental health services, clinician bias leading to misdiagnosis, or different presentations of symptomatology.

Muroff et al. (2008) investigated racial influences in diagnostic decision-making among children and adolescents. They found that African Americans and Latino Americans were more than twice as likely to receive a psychotic disorder and behavioral disorder diagnoses compared to European American children and adolescents than all other diagnoses. The researchers concluded their results may reflect cultural or racial uniqueness in disposition and diagnostic decision-making. For example, racial minorities are less inclined to seek formal mental health services thus a delay in seeking treatment

may result in a more severe diagnosis. Also, Muroff et al. (2008) reported that diagnostic discrepancies may be due to mistrust and "cultural paranoia" in certain minority groups (e.g., African Americans), misdiagnosis resulting from clinician bias leading to diagnostic errors, or cultural variations in clinical presentations of mental disorders.

Outside of the United States, international studies have been conducted examining the pattern of race influencing diagnostic decision-making. For example, in the Netherlands, Vinkers, de Beurs, Barendregt, Rinne, and Hoek (2010) conducted a study investigating the disproportionate overrepresentation of Africans and other ethnic minorities (comprised of persons from Turkey, Morocco, the Antilles, Surinam, and other non-western countries) in prisons and forensic psychiatric facilities compared to Europeans (born in Europe). Vinkers et al. (2010) reported Africans and other ethnic minorities (19.8%) and European from other Western countries (19.3%) were diagnosed with a psychotic disorder more often than native Dutch clients. According to Vinkers et al. (2010) this finding is consistent with earlier studies showing an increased risk of psychotic disorders among immigrants, which would include the Africans and other ethnic minorities in addition to Europeans from non-native countries. They suggested an increase in culturally competent assessments by clinicians. In Sweden, Al-Saffar, Borga, Wicks, and Hallstorm, (2004) investigated different racial groups in psychiatric outpatient settings and factors affecting diagnosis. Results showed race had a strong impact on how diagnoses were given in cross-cultural settings and that the African group ran a higher risk (odds ratio 5.55 to 1) of receiving a psychotic disorder diagnosis (except schizophrenia) compared to other racial groups. Al-Saffar et al. (2004) noted that an

under-representation of minority groups in the area was not likely, possibly due to the clinic established in an immigrant-dense housing area with a certain degree of multi-racial characteristics reflected in the staff. However, Al-Saffar et al. (2004) suggested the higher prevalence of psychosis may be linked to a weaker social network of Africans who are a relatively new group in Swedish society. The researchers emphasized the importance of cultural considerations in diagnostic determinations.

On the contrary, in Canada, Adeponle et al. (2012) investigated the impact of the systematic use of the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.: text rev.; *DSM-IV-TR*; APA, 2000) cultural formulation on diagnoses of psychotic disorders among clients with ethnic minority and immigrant backgrounds who were referred to a cultural consultation service. The cultural formulation outlined in the *DSM-IV-TR* is a tool for clinicians to help gather and organize culturally-relevant clinical information that was included in the *DSM-IV-TR* (APA, 2000). The intake diagnoses provided by clinicians were classified as either a psychotic disorder (including schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, shared psychotic disorder, brief psychotic disorder, or psychotic disorder not-otherwise-specified) or a nonpsychotic disorder. For clients admitted with an intake psychotic disorder diagnosis, 49% where rediagnosed to a nonpsychotic disorder after using the *DSM-IV-TR* cultural formulation. These clients were significantly associated with having a more recent arrival in Canada, and being in a racial-ethnic group other than "Black" (e.g., African descent). Only 12% who were admitted with a nonpsychotic disorder diagnosis were changed to a psychotic disorder diagnosis. The authors reported that the trend of misdiagnosis showed only for persons who resided in the country fewer than 10 years

(non-African immigrants). Adeponle et al. (2012) reported the over-diagnosis of psychotic disorders were significantly more likely among persons who were not of African descent, which is surprising given that the literature suggests a greater likelihood of misdiagnosis of African Americans in the United States. The researchers expressed how the clients of African descent (e.g., Black) were recent immigrants or refugees from Africa or the Caribbean, whereas African Americans in the United States include more indigenous populations and fewer immigrants. Therefore, Adeponle et al. (2012) suggested that misdiagnosis of psychotic disorders occurs with immigrant and refugee clients regardless of racial/ethnic backgrounds. They proposed this trend may reflect referral or diagnostic bias. Also, the researchers highlighted the utilitarian importance of using the *DSM-IV-TR* cultural formulation and how it can affect diagnostic accuracy.

When reviewing the literature of race and psychotic disorders that do not focus specifically on schizophrenia, African Americans are diagnosed with psychotic disorders at a higher rate compared to European Americans with one study showing African Americans being at least twice as likely to receive a psychotic disorder diagnosis. Even for youth clients under 18, African Americans are twice as likely to be diagnosed with a psychotic disorder compared to European American youth. There appears to be an association of being diagnosed a psychotic disorder with behavioral disturbances in clients. Especially for those studies showing African Americans being twice as likely to be diagnosed with a psychotic disorder when there were behavioral factors associated with clients, which may demonstrate a particular bias towards African Americans. International studies showed similar patterns of racial diagnostic disparities of psychotic disorder diagnoses. However, international diagnostic patterns were not consistent with

those reflected in the United States. For example, the underlying reasons for disproportionate psychotic disorder diagnoses in international studies showed that length of time in the country studied (i.e., immigrant status) was related to disproportionate misdiagnoses, regardless of race. However, overwhelming and consistent recommendations given by all researchers is the need for exploring clinician bias, the essential use of cultural consideration and competence in clinicians and training, and the examination of differences in symptomatology presentation.

Schizophrenia Diagnosis

Among all the mental disorders, schizophrenia shows one of the highest racial diagnostic disparities, particularly with African Americans being overrepresented (Schwartz & Blankenship, 2014). Although schizophrenia is considered a psychotic disorder, this particular diagnosis has its own unique trends in phenomenon depicted in the research.

Pavkov et al. (1989) examined diagnoses among a predominantly African American random sample of 313 clients at four Chicago metropolitan state mental hospitals. The researchers found that being African American is predictive of a diagnosis of schizophrenia. One of the speculated explanations for the high rates of a schizophrenia diagnosis among African Americans given by Pavkov et al. (1989) is that African Americans seek mental health services only after their symptoms have become severe. Also, the researchers stated that their results suggested the diagnosis of schizophrenia is being misapplied to African Americans. They stated the diagnostic

section was completed by "independent diagnosticians who were blind to the hypotheses under study, (Pavkov et al., 1989, p.365)" but did not state the profession of these diagnosticians. Additionally, the researchers did not specify the criteria used for diagnosing the participants such as the *DSM* version.

Minsky, Vega, Miskimen, Gara, and Escobar (2003) studied diagnostic patterns in 19,219 African American, Latino American, and European American inpatient clients in New Jersey. The researchers found that African Americans were diagnosed as having a disorder in the schizophrenia disorders spectrum more frequently compared to Latino Americans and European Americans using *DSM-IV* criteria. Diagnosticians were unspecified by profession. Minsky et al. (2003) concluded that clinicians not using diagnostic criteria effectively as a means of differentiating symptoms among clients may contribute to diagnostic racial differences. They recommended clinicians use more structured research diagnoses in comparison to original chart diagnoses to help mitigate clinician bias.

There also appears to be a relationship between race and diagnostic disparities with Latino clients. Baskin and Nelson (1981) investigated diagnostic differences of 1,986 clients admitted to an outpatient community mental health center in South Bronx, New York City. Findings showed statistical differences between the client's race and mental disorder diagnosis. Specifically, they found African American clients having a higher proportion of schizophrenia and alcoholism and Latino American clients having a higher diagnostic rate of depressive/affective disorders and nonpsychotic disorders compared to European American clients. Baskin and Nelson (1981) also examined interactions between the therapists' race and diagnostic patterns showing that European

American and Asian American therapists tended to diagnose a higher proportion of African American clients as having schizophrenia and nonpsychotic. The interaction between diagnosis and client race is statistically significant for each different therapists' racial group except for Asian American therapists. Although these diagnostic differences by clinicians' race is reported, it is noted there were 11 African American therapists, 26 European American therapists, 10 Latino American therapists, and 8 Asian American (predominantly Indian) therapists (Baskin & Nelson, 1981). The researchers did not identify the *DSM* version for diagnostic criteria. These results showed that racial diagnostic differences occur among various racial groups and that diagnosticians from different racial groups make significantly different diagnoses. Therefore, Baskin and Nelson (1981) suggest that diagnosticians may perceive symptomatology differently and there needs to be greater attention given to how clinicians perceive client symptoms.

Alexandre, Ribeiro, and Cardoso (2010) investigated the association between race and clinical characteristics of 977 clients admitted to a psychiatric inpatient unit in Portugal. Results showed that African immigrants were overrepresented among the inpatient population and diagnosed by psychiatrists at a higher rate with schizophrenia compared to native European clients. Alexandre et al. (2010) noted that African immigrants in Portugal were more frequently unemployed, live in more crowded areas, and experienced worse housing conditions, which may be independent risk factors for mental disorders. The psychiatrists conducting these assessments did not use the *DSM* for diagnostic criteria. The researchers concluded their results may reflect help-seeking behavior patterns among the African clients with psychosis being considered a reason to see a physician. Also, Alexandre et al. (2010) noted that symptomatology may be

inaccurately assigned to clients leading to an inaccurate diagnosis and recommend increased cultural sensitivity.

Also internationally in Britain, Littlewood (1992) conducted a study with health professionals who were randomly given a brief clinical vignette designed to offer an equal likelihood of six diagnoses commonly used with versions of the vignette differing only by the client being "born locally" or "to Jamaican parents." Littlewood (1992) noted there were no diagnostic biases found but the only significant finding was that the "medics" (all doctors and all medical students) were more likely to diagnose schizophrenia in both the "Neutral" and "Afro-Caribbean" vignette versions regardless of race compared to psychologists and social workers. The researchers made no mention of any *DSM* used for criteria. This interesting finding of significance may reveal the implications that different professional trainings have on influencing diagnostic conceptualization of clients and the implementation, or lack thereof, of utilizing multicultural competency when determining a mental disorder.

Neighbors et al. (2003) analyzed data on 665 African American and European American inpatient clients admitted to a state psychiatric facility located in Detroit, Michigan examining the relationship of a client's race to specific diagnoses. Diagnosticians were recruited from three local psychiatric residency programs using the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-III-R*; APA, 1987) criteria. Using a semi-structured diagnostic instrument to increase objectivity, Neighbors et al. (2003) found that client race is related to diagnosis regardless of standardized diagnostic criteria being utilized. This is critical because the use of standardized diagnostic criteria is used to specifically reduce clinician bias, which for this study did not differentiate

results showing diagnostic racial disparities for schizophrenia. For example, Neighbors et al. (2003) found when considering the relationship of race to the hospital's admitting diagnosis, African American clients displayed a higher percentage of schizophrenia (44% compared to 32% European American) and a lower rate of bipolar disorder (5.4% compared to 14.3% European American) when contrasted with European American clients. In comparison to the hospital's admitting diagnoses explained above, Neighbors et al. (2003) also investigated the relationship of race to the research clinician's primary diagnosis for diagnostic differences and found that African American clients displayed a higher percentage of schizophrenia (33% compared to 24% European American) and a lower rate of bipolar disorder (6.5% compared to 18.5% European American) contrasted with European American clients. These findings reveal how even when using semi-structured diagnostic instruments based explicitly on *DSM* criteria does not eliminate racial disparities in diagnostic outcomes (Neighbors et al., 2003). The researchers concluded that preconceived notions by clinicians might contribute to the misdiagnosis with the need for culturally knowledgeable clinicians.

Trierweiler et al. (2000) studied schizophrenia diagnoses in 292 clients largely in an African American community where 72% of the clients were African American and 28% were non-African American adults at two inpatient hospitals in the Midwest. Criteria from the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; rev.; *DSM-III-R,* APA, 1987) guided the diagnosticians who were identified as "third- and fourth-year residents" (Trierweiler et al., 2000, p.172) having a minimum of two years' experience with an inpatient population. The researchers found African American clients had a hospital diagnosis of schizophrenia more often (62%) compared to clients who

were not African American (40%), which was also repeated on the research diagnosis but somewhat less strongly. Trierweiler et al. (2000) concluded that African American clients elicit different diagnostic responses from clinicians and that diagnostic differences may be a result of differing symptomatology attributions by clinicians with a greater need investigating this interaction.

Sohler and Bromet (2003) researched whether racial bias influences diagnoses assigned to clients at discharge from their first psychiatric hospitalization with 528 clients in New York. The researchers yielded surprising results showing no racial bias in the assignment of a schizophrenia diagnosis between African American and European American clients with psychiatrists as the diagnosticians. Additionally, there were no evidence that clinicians weighted the importance of psychotic symptoms differently for African American clients when assigning a discharge diagnosis from the hospital (Sohler & Bromet, 2003). However, Sohler and Bromet (2003) noted that African American clients were discharged more often without a definitive diagnosis such as psychosis not-otherwise-specified, while a substantial proportion of these clients met *DSM-III-R* criteria for schizophrenia, which the authors believe may be a reflection of clinicians' difficulty in arriving at a definitive diagnosis for African Americans compared to European American clients. Alternatively, the clinicians may have become more aware of the potential diagnostic racial disparities reflecting a decision to delay assigning a schizophrenia label to African American clients at their first hospitalization (Sohler & Bromet, 2003). Regardless, an interesting display of results worth further examination in consideration of first psychiatric hospitalization showing no racial bias in the assignment of a schizophrenia diagnosis.

Barnes (2013) investigated the extent of over-diagnosis of schizophrenia in four different types of psychiatric hospitals (i.e., state and county, private, general, Veterans Affairs medical centers) using data on 1,641 inpatient clients nationwide. Data were obtained from a national survey of individuals receiving care in each of the 50 states and the District of Columbia during a one month period in 1997. Results showed that in each type of hospital, African American clients were three times more likely to be diagnosed with schizophrenia than a mood disorder (e.g., major depressive disorder, bipolar disorder) at a higher rate compared to European American clients. Race was the most significant predictor of a schizophrenia diagnosis after controlling for the influence of client clinical (e.g., suicidal symptoms) and demographic variables (e.g., gender, marital status). Diagnoses were based on *DSM-IV* criteria with diagnosticians identified only as "clinicians" with unspecified professional identities. Barnes (2013) noted that some of the highest likelihood for over-diagnosis of schizophrenia occurred in general hospitals due to these specific types of hospitals provide the largest amount of inpatient psychiatric care in the United States, probably resulting from psychiatric admissions increasing in general hospitals. The researcher suggested that the under-diagnosis of mood disorders is a major factor associated with the misdiagnosis of schizophrenia in African American clients. Additionally, Barnes (2013) proposed increasing clinicians' awareness of this disparity, improved cultural competency training, and the use of structured clinical interviews to reduce information processing errors.

Kilbourne et al. (2004) examined the diagnosis of 813 clients in the Department of Veterans Affairs (VA) facility in western Pennsylvania having a bipolar disorder diagnosis during the year 2000. The researchers did not use the *DSM* for diagnostic

criteria with "providers and professional coders" vaguely identified as potential diagnosticians (Kilbourne et al., 2004). Comparing the frequencies of key diagnoses among four age-race groups, results showed that among clients with a diagnosis of bipolar disorder in a routine care setting, older African Americans (67%) were most likely to have a diagnosis of schizophrenia compared to younger African Americans (34%), older European Americans (38%), and younger European Americans (27%) during the same period. Kilbourne et al. (2004) suggested that this inconsistent diagnosis of schizophrenia in this group may have been exacerbated by inconsistent treatment experiences in the past such as changes in *DSM* editions and criteria, and also confirmation biases of existing diagnoses continuing without conducting a comprehensive assessment of possible changes. In particular, the researchers noted that pre-*DSM-III* and *DSM-III-R* differential diagnostic practices may have yielded a diagnosis of schizophrenia more frequently because there was not a ruling out of bipolar disorder within the criteria (Kilbourne et al., 2004). Therefore, when clinicians saw a pre-existing schizophrenia diagnosis that may have been based on this criteria, diagnosticians may have continued the diagnosis without consideration of presenting symptoms better explained by a mood disorder such as bipolar with psychotic features.

Whaley (2004) investigated clinician bias as a reason for diagnostic disparities of African Americans diagnosed with schizophrenia using data from 24 African American inpatient clients in upstate New York. The diagnosticians were one Haitian American and one European American master's level psychologists using the Structured Clinical Interview for *DSM-IV* in diagnosing schizophrenia (Whaley, 2004). Clinician bias was described as diagnosticians not adhering to diagnostic criteria and was explored using the

structured clinical interview as a means of eliminating this bias. Results showed lower percentages of schizophrenia diagnoses than original chart diagnoses supporting that clinician bias may exist (Whaley, 2004). Whaley (2004) also suggested that clinician bias is more likely to operate alone for the broad category of schizophrenia, whereas clinician biases may influence diagnoses of subtypes of schizophrenia.

There appears to be a pattern related to subgroup and subtypes of psychotic diagnoses. Additionally, negative symptoms of schizophrenia appear to be more prevalent in some racial groups. Whaley (2004) found that cultural bias was described as diagnosticians misinterpreting symptom expression of true racial and ethnic differences. Whaley (2004) used an African American psychiatrist or clinical psychologist with over 10 years of cultural competency training and extensive experience diagnosing and treating African American clients with a chronic mental illness to conduct a best estimate diagnosis. Interestingly, Whaley (2004) found that best estimate diagnoses of schizophrenia established by cultural experts of the same race as the client (i.e., African American) yielded a higher rate of a schizophrenia diagnosis compared to using the structured interview assessment, even though interrater agreement between the structured interview and cultural expert diagnoses of schizophrenia were significantly stronger than any other comparison. Moreover, Whaley (2004) found that cultural experts were statistically more likely to associate cultural mistrust with pathology.

Barnes (2004) examined the relationship among race, diagnoses of schizophrenia, mood disorder, and admission to state psychiatric hospitals to see if the schizophrenia diagnosis would change. This was attempted by using criteria from the *DSM-IV* compared to the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; *DSM-*

III; APA, 1980) and *DSM-III-R* criteria because of the incorporation of ethnic and cultural content added to the *DSM-IV* designed to reduce diagnostic bias related to clinicians' specific cultural backgrounds. Having a sample of 2,311 clients in Indiana during an eight year period, results showed that African American clients continued to be overrepresented among inpatients and were four times more likely than European American clients to receive a diagnosis of schizophrenia with diagnosticians unspecified by profession. Surprisingly, the percentage of African Americans admitted to state hospitals with schizophrenia diagnoses increased significantly when diagnoses were made with the *DSM-IV*, which was unexpected. However Barnes (2004) did not find evidence of African Americans being diagnosed with mood disorders at a lower rate than European Americans, which is contrary to previously mentioned studies. Barnes (2004) concluded that insufficient cultural training (particularly in psychiatrists) and racial differences in symptomatology presentations may explain this phenomenon.

Using a sample of 2,404 clients, Barnes (2008) again examined the relationships among admission diagnoses of schizophrenia and mood disorder for clients admitted to state psychiatric hospitals in Indiana with results showing that African Americans were diagnosed four times at a higher rate with a schizophrenia diagnosis rather than a mood disorder compared with European American clients admitted to a state hospital. Barnes (2008) compared overall distribution of six diagnostic subgroups (e.g., paranoid schizophrenia, undifferentiated schizophrenia, other schizophrenia, major depression, bipolar disorder, and other mood disorder) among African American and European American clients examining the relationship between admission diagnoses of schizophrenia or mood disorders and seven demographic variables (e.g., race, age,

gender, education, income, health insurance, prior hospital admission). After controlling for the influence of other demographic variables, client race was the strongest predictor of admission diagnoses of schizophrenia with African American clients showing fewer rates of being diagnosed with bipolar and major depressive disorders and significantly more likely to receive a diagnostic subgroup of schizophrenia-paranoid type or schizophrenia-undifferentiated subtype compared to European American clients. "Hospital clinicians" were identified as the diagnosticians and *DSM-III-R* was used for participants during years of 1988 through 1993 when data were collected, and *DSM-IV* criteria were used during years of 1994-1996 for those particular participants. Barnes (2008) suggested that the under-diagnosis of the two major forms of depression (i.e., major depressive disorder and bipolar disorder) appear to be one factor associated with the over-diagnosis of schizophrenia among African American clients. Barnes (2008) postulated an alternative explanation for the under-diagnosis of mood disorders and over-diagnosis of schizophrenia that may be due to insufficient training in cultural competence and also racial differences in symptom presentation.

Eack, Bahorik, Newhill, Neighbors, and Davis (2012) investigated 752 inpatient clients focusing on exploring potential reasons for the continued diagnostic disparities of African Americans diagnosed at a higher rate with schizophrenia. Participants were recruited from psychiatric inpatient hospitals located in major metropolitan areas of (a) Pittsburg, Pennsylvania; (b) Worcester, Massachusetts; and (c) Kansas City, Missouri. Neither the original chart nor research diagnosticians were identified by profession with *DSM-III-R* criteria used for the diagnosis of schizophrenia. Specifically, this study investigated the degree to which clinical presentation, sociodemographic characteristics,

and interviewer perceptions of client honesty served as mechanisms for the disproportionate schizophrenia diagnoses among African Americans. Analyses compared interviewers' perceptions of participants' honesty of different races with results that showed interviewers perceived African Americans to be less honest than European Americans during diagnostic interviews. Also, African American clients were more than three times as likely as European American clients to be diagnosed as having schizophrenia. Other analyses were used examining the degree to which interviewers' perceived honesty of clients contributed to the increased diagnosis of schizophrenia among African Americans with results showing that individuals were nearly one and a half times as likely to receive a diagnosis of schizophrenia if the interviewer perceived them to be dishonest during the diagnostic assessment. Mediator analyses revealed that interviewers' perceptions of participants' honesty was the strongest and only consistent mediator of racial disparities in having a schizophrenia diagnosis by both original chart diagnosis and researcher diagnosis. This is substantial because as Eack et al. (2012) reported, clinical perceptions of client honesty and the therapeutic relationship between the diagnostician and client were potentially unique contributors to racial disparities in the diagnosis of schizophrenia. Therefore, the researchers suggested improving the therapeutic working alliance between clinician and client to help improve perceived honesty and ultimately, lead to a more accurate diagnosis with minority populations.

Blow et al. (2004) investigated veterans with a large sample size of 134,523 participants (69.5% European American, 23.6% African American, and 6.9% Latino American) with a qualifying diagnosis of schizophrenia and bipolar disorder with results showing that the demographic characteristic most strongly associated with a

schizophrenia diagnosis was race. Additional results showed odds ratios for African Americans having over four times a greater likelihood of being diagnosed with schizophrenia instead of bipolar disorder, and Latino Americans having over three times a greater likelihood of being diagnosed with schizophrenia instead of bipolar disorder compared to European Americans, all while controlling for possible confounders. Diagnosticians were not identified, nor were the diagnostic criteria specified that was used in making the schizophrenia diagnoses. This large national study shows a consistent pattern of misdiagnosis by race with the researchers suggesting the need for greater multicultural competence in clinicians.

The above 15 articles depict a clear trend of race consistently shown as a predictor for a schizophrenia diagnosis with African Americans in particular being diagnosed with schizophrenia at a much higher rate compared to European Americans. More specifically, African Americans are four times more likely to receive a schizophrenia diagnosis compared to European Americans. Even Latino Americans show a pattern of being diagnosed with schizophrenia at a higher rate compared to European Americans. Several researchers suggested that African Americans may be over-diagnosed with schizophrenia at a higher rate due to the under-diagnosis of a mood disorder, but several studies do not support this claim. Other trends in explanations contribute delayed help-seeking mental health services in African Americans resulting in a more severe and untreated presentation of a mental disorder. Other researchers have argued incorporating a more structured clinical interview would decrease clinician bias, but several studies have shown this not to be the case. Again, there is an overarching consistent recommendation for greater cultural awareness, increased multicultural professional

training (with psychiatrists in particular), and racial differences in symptomatology presentation.

Race and Assessment of Psychotic Disorder Symptomatology

Although there is a distinct pattern of diagnostic racial disparities, there is no clear identifiable explanation for this phenomenon. There appears to be a consistent trend of researchers suggesting that future studies examine the symptomatology presentation and interpretation by clinicians. This potential explanation represents a very valid rationale given that symptomatology represents self-reported symptoms and observable indicators of a collection of criteria describing particular mental disorders. Symptomatology refers to the symptoms of a medical disease (Symptomatology, 2017), such as a mental disorder. Assessment of symptomatology typically includes concentrating on the symptoms and criteria that define the mental disorder. The investigation of symptomatology presentation and interpretation as a potential explanation for diagnostic racial disparities represents a rationale worthy of examination since diagnostic criteria for a mental disorder is a collection of symptoms. The assessment of these symptoms are collected through a clinician interview with a client to gather pertinent information to make a potential diagnosis determined by observable indicators, generally self-reported psychological inventories, and client self-reported concerns and background information (Drummond & Jones, 2010). These differences in identified and reported symptomatology are what differentiates mental disorders (APA, 2013). Additionally, the *DSM-IV* stated that symptoms are influenced by culture and racial factors (APA, 1994).

This is why researching symptomatology is a necessary investigation of the fundamental practice involved with diagnosing a mental disorder because of how influential culture can be through the diagnostic process. When examining potential diagnostic bias, Mizock and Harkins (2011) reported that statistically differing rates of diagnoses among racial groups are related to clinicians differentially interpreting symptomatology and holding stereotypes of racial groups. In particular, since there is a clear pattern of African Americans diagnosed with psychotic disorders, and schizophrenia in particular, at a higher rate compared to European Americans, it is important to go beyond the diagnostic surface level, and delve deeper into the symptomatology that make up the actual diagnoses.

During a review provided by Neighbors et al. (1989), not only were racial disparities found in mental disorder diagnoses, but as previously mentioned there were two contradictory hypotheses noted by the researchers: (1) African Americans and European American clients exhibit symptomatology similarly but diagnostic clinicians may assume they are different; and (2) African Americans and European American clients display symptomatology differently, but diagnostic clinicians are either insensitive or unaware to cultural differences and thus unlikely to differentiate. Likewise, the most recent review provided by Schwartz and Blankenship (2014) showed that African Americans and Latino Americans experienced an increased lifetime rate of psychotic symptoms compared to European Americans and Asian Americans. Feisthamel and Schwartz (2009) proposed that the diagnostic racial disparities may be a result of actual differences in symptomatology presented by clients of difference races.

Kendall, Sherman, and Bigelow (1995) investigated the relationship between, race, sex, age, and psychiatric symptoms of 94 polysubstance users seeking outpatient detoxification for opioid addiction with results that showed European American clients endorsed a greater number of symptomatology significantly more frequently than African American clients with a significant effect for race. Kendall et al. (1995) noted there are symptomatology differences between African Americans and European Americans having a mental disorder of substance use and indicated that the relationship between race and psychiatric symptoms may be larger than some researchers have suggested. Vincent, Grisso, Terry, and Banks (2008) examined the extent of racial differences in self-reported symptoms of mental disorders among U.S. juvenile justice programs using a large sample of 70,423 participants. Results showed European American youth were more likely to have clinical elevations of symptoms than African American and Latino American youth. Additionally, Vincent et al. (2008) concluded that race-related differences in symptomatology were generally small or nonexistent with European Americans more likely to have symptoms of suicidal ideation, as consistent with national reports in the general community when compared to African Americans and Latino Americans. There appears to be patterns showing the need to investigate symptomatology, yet when it comes to mental disorder symptomatology differences between African American and European Americans, the differences are difficult to detect.

Race and Non-Schizophrenia Psychotic Disorder Symptomatology

Arnold et al. (2004) investigated clients presenting for hospitalization with psychosis and were evaluated using medical records, structured diagnostic and symptom rating instruments, and transcribed audio-taping removing all cues indicating race from the transcript. Using two expert psychiatrists diagnosing and rating symptoms, ratings of presented symptoms were compared between racially-blinded expert consensus assessments and unblinded structured interviews. Results showed African American men received higher symptom ratings by both racially-blinded expert consensus and unblinded structured interview. Additionally, African American men showed having significantly more total psychotic symptoms compared to European American men (Arnold et al., 2004). Interestingly, the researchers noted the racially-blinded expert consensus did not find an increased rate of a schizophrenia diagnosis in African American men indicating that psychotic symptom presentation should be evaluated in the context of other symptoms (e.g., affective symptoms) in diagnostic assessment to prevent misdiagnosis. Arnold et al. (2004) suggested that these findings reflect racial and cultural differences in the symptomatology presentations of psychotic disorders and how increased severity of psychotic symptoms in African American clients may be a result of a delay in seeking mental health treatment. This is the first known study showing racial effects on the assessment of psychotic symptoms using blinded evaluations by expert diagnosticians and thereby decreasing the potential of diagnostician bias (Arnold et al., 2004).

Cassano et al. (2013) investigated whether isolated psychotic symptoms are more likely endorsed by Latino Americans with depression as opposed to other racial groups.

Result showed the prevalence of auditory-visual hallucinations in Latino Americans as 6.3%, 11.3% in African Americans, and 2.5% in European Americans. The prevalence of paranoid ideation was 21.1% in Latino Americans, 31.5% in African Americans, and 15.5% in European Americans. Cassano and colleagues (2013) concluded that Latino Americans do not appear to have more severe isolated psychotic symptoms when treated for major depressive disorder with auditory-visual hallucinations differently than African Americans and European Americans. The researchers also stated that clinicians should be careful taking at face values the report of isolated auditory-visual hallucinations and other psychotic symptoms because of the potential of being misleading and therefore misinterpreted.

Yamada, Barrio, Morrison, Sewell, and Jeste (2006) investigated racial differences in the content of delusions and hallucinations among psychiatric inpatient clients older than 40 years old who were hospitalized with an acute psychotic episode. Findings showed that racial group differences were found in the contents and subtypes of delusions and hallucinations rather than broad symptom categories. For example, European Americans were nearly twice as likely as Latino Americans to report delusions of grandiosity and African Americans more likely than Latino Americans to report general paranoid delusions of persecution and Latino Americans reported more culturally influenced contents than the other groups (Yamada et al., 2006). Interestingly, Yamada and colleagues (2006) noted that Latino Americans reported persecutory delusions attributed more to identifiable persons compared with African Americans establishing paranoid delusions on the source of persecution rather than on the type of persecution. Yamada et al. (2006) suggested these differences could be a result of African Americans

developing an adaptive or "healthy paranoia" attributed to their status in society and that differential expressions of symptomatology exists among racial groups.

Patel, DelBello, and Strakowski (2006) compared symptom profiles of African American and European American adolescents with a diagnosis of bipolar disorder at their first psychiatric hospitalization. Results showed racial differences existing in manic and positive symptom profiles, but not depressive symptoms where 90% of the African American youth were diagnosed more frequently as having psychotic features compared to 30% of European American youth. Additionally, African Americans were diagnosed with higher rates for auditory hallucinations compared to European American youth who had more severe delusions (Patel et al., 2006). Interestingly, Patel et al. (2006) noted that racial differences in positive symptom profiles were primarily due to severe auditory hallucinations in African American clients showing how racial differences in symptomatology lead to African American youth being diagnosed with having psychotic features at a higher rate.

When reviewing studies outside of the United States, in Canada, van der Ven, Bourque, Joober, Selten, and Malla (2012) explored differences in severity and nature of symptoms of first-episode psychosis according to racial group and migrant status. Results showed no statistically significant differences in symptom expression found between racial groups. However, van der Ven et al. (2012) reported that African and Afro-Caribbean immigrants exhibited more severe negative symptoms and general symptomatology compared to all racial groups. Additionally, the African and Afro-Caribbean immigrants presented with significantly higher ratings for alogia (poverty of speech), uncooperativeness, poor attention, and preoccupation. These similarities in core

symptoms are across racial groups and therefore suggests there is no support for the phenomenon that racial minorities are misdiagnosed psychotic (van der Ven et al., 2012).

In the Netherlands, Velthorst et al. (2012) examined whether symptomatology differences could be found in racial minorities with a high risk of developing a psychotic disorder compared to native Dutch participants. Results showed higher rates of negative symptoms, particularly anhedonia, in the racial minority groups compared to the native Dutch group with racial identity inversely related to symptoms in the Moroccan-Dutch minority subgroup (Velthorst et al., 2012). The researchers concluded that manifestation of symptomatology may be a result of differences in the concept of racial identity and cultural background with researchers encouraged to further investigate these factors.

King et al. (2005) investigated the prevalence of psychotic symptoms and risk factors for reporting psychotic symptoms using participants from six racial groups living in the United Kingdom. Results showed a twofold higher rate of reporting psychotic symptoms in African descent clients compared to European descent clients showing higher prevalence rates of psychotic symptoms among racial minorities. Even after adjusting for socio-demographic factors, social function and other symptomatology, there were little effect on this relationship. King et al. (2005) concluded that psychotic symptoms were more common in racial minorities, particularly among African descent Caribbeans living in the United Kingdom.

In summary, when looking at the research on racial differences in symptomatology among non-schizophrenia psychotic disorders, there is a pattern of African Americans receiving psychotic symptomatology at a higher rate compared to European Americans. In particular, African Americans seem to endorse more

hallucinations (e.g., auditory hallucinations), while European Americans endorse more delusions. There are however, some implications in content differences in symptomatology by race. For example, when comparing content and subtypes of delusions and hallucinations, there are differences in expression of paranoid delusions by race. Even international studies outside of the United States show a pattern of racial minorities, particular of African descent, having higher rates of psychotic symptomatology. Overall, researchers suggested that differences may be attributed to African Americans delayed help-seeking leading to more severe presentations of symptoms, differences in symptomatology expression, and other cultural and racial background factors.

Race and Schizophrenia Symptomatology

Although schizophrenia is considered a psychotic disorder, it is important to differentiate studies focusing exclusively on this diagnosis. This is a result of the highest rate of diagnostic racial disparities for African Americans is associated with having a schizophrenia diagnosis, and a resounding implication by researchers is to investigate symptomatology with schizophrenia. The interest of investigating symptomatology differences of schizophrenia by race can be traced as far back as the early 1960's with Vitols, Waters, and Keeler (1963) who conducted a study comparing the incidence of hallucinations and delusions of schizophrenia clients during first admissions at a state hospital in North Carolina. Results showed the incidence of hallucinations were significantly higher in African Americans compared to European Americans, while there

were no differences in incidents of delusions. The researchers speculated that cultural patterns may be responsible in the different rates of hallucinations occurring in African Americans. Additionally, they stated differences may be a result of African Americans being more distrustful of mental health hospitals causing them to seek services later in the course of this disorder (Vitols et al., 1963). Diagnosticians and *DSM* version were not identified.

Another exploratory study conducted by De Hoyos and De Hoyos (1965) examined differences in symptomatology among 87 African American and 87 European American clients diagnosed with schizophrenia while investigating the qualitative differing expression of symptoms. Using written observations from psychiatrists, nurses, social workers, and psychologists, each symptom recorded in the medical record was classified into five areas of symptomatology with each area having a different number of specific symptoms. Significant differences were found in symptomatology areas of physical state and emotional state (De Hoyos & De Hoyos, 1965). Surprisingly, overall the African American clients showed fewer symptoms in all five areas of symptomatology. Additional results showed qualitative differences of symptomatology by race with European Americans having a statically significant higher number of passivity symptoms and non-delusional symptoms compared to African Americans (De Hoyos & De Hoyos, 1965). The researchers speculated that the differences were a result of under-reported symptoms by clinicians for African American clients as a result of transference and cultural background or "class" differences (De Hoyos & De Hoyos, 1965). The location of this study was not identified, as well as the *DSM* version utilized in determining a schizophrenia diagnosis.

Adebimpe, Chu, Klein, and Lange (1982) compared symptomatology among 273 African American and European American clients with schizophrenia in Missouri and found severity differences by race using criteria from the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-II*; APA, 1969) with unidentified diagnosticians. The researchers found that African Americans endorsed more severe symptoms such as auditory hallucinations, disorientation, anger outbursts, poor communication, memory disturbances, impulsivity, dysphoria, and asocial behavior compared to European Americans (Adebimpe et al., 1982). The researchers also investigated the interaction of geographic location and race of symptomatology differences finding that African American rural clients with schizophrenia exhibited the most severe symptoms compared to European Americans. They concluded that clinicians may perceive African American clients differently than European American clients and suggested further research is needed to investigate potential clues for diagnostic errors among African American clients and other minority groups because diagnostic manuals assume uniformity of symptoms patterns in all groups. It is for this reason the *DSM-IV* incorporated more cultural consideration when making diagnostic conclusions to avoid errors resulting from a lack of multicultural considerations (APA, 1994).

Similarly, Chu, Sallach, Zakeria, and Klein (1985) examined symptomatology differences between 275 consecutive admissions of African American and European American clients with schizophrenia in Missouri state hospitals. Psychiatrists conducted the diagnoses for schizophrenia using *DSM-II* criteria and results showed significant differences of symptomatology by race. Specifically, African Americans exhibited more frequent symptoms of auditory and visual hallucinations, disorientation, angry outbursts,

poor communication, and asocial behavior (Chu et al., 1985). In comparison, European Americans showed only more frequent symptoms of delusions. Chu et al. (1985) concluded that differences of schizophrenia symptomatology exists among clients of different cultural backgrounds such as race. The researchers cautioned clinicians to be aware of diagnostic errors among African Americans with further research needed into the symptomatology disparities by race.

Escobar, Randolph, and Hill (1986) explored cultural influences of symptomatology between 85 Latino American and European American veterans with schizophrenia among the Veterans Administration Medical Center in Los Angeles. The researchers found that primary symptoms of schizophrenia (e.g., hallucinations, delusions, functional deterioration) were similar between racial groups with no significant differences in overall severity. A psychiatrist provided the clinical diagnosis based on criteria from the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-III*; APA, 1980). Escobar et al. (1986) concluded that cultural background impacts phenomenological differences of symptomatology between European Americans and Latino Americans with schizophrenia.

Fabrega, Mezzich, and Ulrich (1988) conducted a large study of 6,673 inpatient schizophrenia clients comparing symptomatology of African Americans and European Americans at the Western Psychiatric Institute and Clinic of the University of Pittsburgh. Psychiatrists (i.e., psychiatric resident and supervising faculty psychiatrist) using *DSM-III* criteria provided the diagnostic outcomes and the researchers found statistically significant racial differences in symptomatology while controlling for age, gender, and education. Interestingly, statistical significance was shown on seven items of

symptomatology, six of which African Americans had lower mean scores compared to European Americans. While European Americans received statistically significant scores on more areas of symptomatology (e.g., emotional distance or coldness, flat affect) otherwise known as negative symptoms of schizophrenia, remarkably, there were no racial differences on core symptoms of schizophrenia such as hallucinations or delusions in comparison to African American clients (Fabrega et al., 1988). These results are contrary to those of Vitols et al. (1963) and De Hoyos & De Hoyos (1965) showing racial differences in psychotic symptoms (e.g., hallucinations and or delusions) between African Americans and European Americans, but the differences may be a result of Fabrega and colleagues (1988) controlling for age, gender, and education. The researchers concluded that these reported differences may be a result of selection factors with African Americans possibly being more careful in their use of facilities.

Although these earlier chronological studies show a trend of symptomatology differences of schizophrenia by race, there remains an inconsistent pattern of significant findings despite improved developments in newer *DSM* versions and more intricate statistical analyses through rigorous research investigations. Trierweiler et al. (2000) examined 292 psychiatric inpatient clients in a largely African American community in the Midwest investigating if clinicians attribute symptomatology to schizophrenia clients differently by race. The researchers found that hallucinations and paranoid/suspicious attitude symptoms were more often attributed by clinicians to African American clients while elevated mood and the combination of negative symptoms (e.g., diminished emotional expression, avolition) and dysphoric mood were more often attributed to non-African American clients. Diagnosticians were identified as "third- and fourth-year

residents" (Trierweiler et al., 2000, p.172) having a minimum of two years' experience with an inpatient population using criteria from the *DSM-III-R*. Trierweiler and colleagues (2000) suggested that subtle judgments about negative symptoms lead clinicians more to endorsing a schizophrenia diagnosis for African American clients but not for non-African American clients. Therefore, the researchers concluded that diagnostic differences may result from clinicians attributing symptomatology differently to clients of differing races. They further advised that incorrect or misinterpreted attribution of symptomatology may explain the racial differences in clinician symptom attribution and reported that differences were not due to clinician bias within their study. These results should be treated with caution as the population sample was 72% African Americans and 28% non-African Americans.

Dassori et al. (1998) assessed racial differences in the negative symptom profile of 25 European Americans and 26 Latino Americans with schizophrenia at a San Antonio state hospital. Results showed statistical racial differences only for the cognition subscale and no racial differences in what is considered core negative symptoms of schizophrenia. The researchers suggested that cognition-related symptomatology differs between Latino American and European American clients with schizophrenia. Dassori et al. (1998) used criteria from the *DSM-IV-TR* while not specifying the diagnosticians.

Strakowski et al. (1996) examined schizophrenia misdiagnosis in 100 clients having mania with psychotic features to study if African Americans were more likely to present with specific symptoms of schizophrenia compared to European Americans at the University of Cincinnati Hospital psychiatric units. Master's level social workers and a psychiatrist provided the diagnoses using *DSM-III-R* criteria. Results showed that

African American clients were more likely to have received a clinical diagnosis of schizophrenia, although not statistically significant. Additionally, while adjusting for age, sex, education, employment level and alcohol and drug abuse, African Americans were given auditory hallucinations at a statistically significant higher rate and European Americans had statistically significant higher rates of persecutory delusions. Also, there were racial differences in psychotic symptom profiles of participants, however racial differences in diagnosis were not due to differences in symptomatic expression. The researchers concluded that racial differences in symptomatology expression may be a result of clinicians failing to identify certain atypical manic presentations in clients, thus leading to a misdiagnosis of schizophrenia in African Americans.

Brekke and Barrio (1997) examined cross-racial symptom differences in schizophrenia and tested cultural mediators of symptomatology differences in 184 participants (51.6% European American, 32.6% African American, 15.8% Latino American) diagnosed with a schizophrenia diagnosis in an outpatient urban setting of Los Angeles, California. The researchers identified the diagnosticians as a doctoral-level clinician with no mention of the *DSM* version used for diagnostic criteria. After controlling for social class, results revealed that European American clients consistently showed more frequent symptoms than Latino American and African American clients. Brekke and Barrio (1997) noted that these findings showed no support in greater levels of symptomatology for minority groups on the basis of disadvantaged social status. Additionally, Brekke and Barrio (1997) suggested that certain protective aspects of racial minority culture result in a more benign expression of symptomatology of schizophrenia for minority clients. Furthermore, the researchers reported that the two sociocentric

indicators of empathy and social competence were strong statistical mediators of nearly all of the symptom differences between the racial minority and nonracial minority groups suggesting that these variables might be part of a sociocentric cultural mechanism that can help explain cross-racial symptom differences in schizophrenia. For example, Brekke and Barrio (1997) suggested that aspects of the symptomatology of schizophrenia might be strongly influenced by cultural factors and models for understanding (e.g., biopsychosocial model) should incorporate cultural aspects as additional etiologic and protective factors due to its influence on symptomatology. The researchers went on to state that cultural factors influence the expression of schizophrenia and this significant core aspect should reflect a culturally sensitive biopsychosocial model to not only enhance clinician understanding of schizophrenia, but also the treatment of this disorder. This supported the need for diagnosticians to be trained as multiculturally competent and sensitive clinicians through a biopsychosocial lens when assessing a client's expression of symptomatology before concluding a mental disorder diagnosis.

Eack et al. (2012) compared clinical presentation of symptomatology of different races using 752 inpatient clients from psychiatric inpatient hospitals in areas of (a) Pittsburg, Pennsylvania; (b) Worcester, Massachusetts; and (c) Kansas City, Missouri. Diagnosticians were unidentified by profession with *DSM-III-R* criteria used for the symptomatology of schizophrenia. Results showed that African Americans experienced greater rates of hallucinations, delusions, thought disturbance, hostility, anxiety-depression, and lethargy compared to European Americans (Eack et al., 2012). Mediator analyses revealed that the presence of auditory hallucinations significantly mediated the effect of race on research interview diagnoses, but not on the original chart diagnoses of

schizophrenia (Eack et al., 2012). The researchers concluded that individuals experiencing delusions and other symptomatology (e.g., thought disturbance, lack of energy) were more likely be diagnosed as having a schizophrenia diagnosis.

Chang, Newman, D'Antonio, McKelvey, and Serper (2011) studied racial differences in schizophrenia with 219 inpatient clients in an unspecified location focusing on Asian American clients. Findings showed that Asian Americans (i.e., Chinese-American) presented with significantly fewer symptomatology of psychosis and fewer symptomatology of dysphoria than African American and European American clients. However, African American clients presented with more negative symptoms compared to the other groups. The unidentified diagnosticians used *DSM-IV* criteria in making their diagnostic determinations. Chang et al. (2011) noted how the Asian American clients had the lowest level of education and fewer symptoms, while the African American clients had relatively higher level of education and presented as more symptomatic suggesting that educational attainment may reflect a culture-specific risk or protective factor in schizophrenia. Chang et al. (2011) stressed the impact of cultural factors on symptom expression in clients with schizophrenia and how this area needs more attention.

Considering research outside of the United States, international studies have been conducted investigating the relationship of race and symptomatology of schizophrenia. For example, in The Hague, Netherlands, Veling, Selten, Mackenback, and Hoek (2007) compared symptoms at first treatment contact for a psychotic disorder between 117 native Dutch and 165 racial minorities (e.g., Morocco, Surinam, other non-Western countries, and Western countries). Results showed Moroccans, a racial minority, have

the highest risk of schizophrenia of all racial groups with significantly higher symptomatology total and negative symptom scores than the native Dutch clients. In particular, the Moroccan clients more often presented with specific symptomatology of persecutory delusions, bizarre behavior and visual hallucinations while the other ethnic minority groups did not differ from the native Dutch clients in levels of symptomatology. Native Dutch residents in psychiatry and other psychiatrists were the diagnosticians using *DSM-IV* criteria. Veling et al. (2007) suggested that social adversity such as lower socioeconomic status and experiencing a high degree of discrimination may contribute to their findings. Additionally, the researchers suggested that psychotic symptoms may be influenced by cultural background. For example, the researchers stated that in the Moroccan culture, belief in witchcraft is common, which may be associated with the tendency to attribute certain events to evil spirits or malevolent people leading to the perceived presentation of persecutory delusions. This factor in combination with the Moroccan culture described as guarded and distrustful, may help explain the symptomatology expression of schizophrenia that some diagnosticians interpret as psychotic (Veling et al., 2007). This is consistent with findings reported by Whaley (2004) who demonstrated a lack of significant correlation measures of cultural mistrust and false beliefs and perceptions, which are consistent with the argument that culturally-based paranoia in African Americans is not pathology. Whaley (2004) also showed findings of a significant association between client's self-reported cultural mistrust and proportion of chart diagnoses of paranoid schizophrenia. Internationally, this minority population similar to African Americans, hold commonly occurring characteristics such as being more guarded and mistrustful, which may inaccurately be interpreted by

clinicians lacking cultural sensitivity to have psychotic symptoms (e.g., paranoia, delusions) leading to misdiagnosis. This is why Veling et al. (2007) reported that an interplay between adverse social experiences and culture of certain ethnic minority groups may contribute to the development and expression of symptomatology.

McLean et al. (2014) investigated 1,539 participants from Australia, India, and Sarawak (Malaysia) comparing lifetime frequencies of *DSM-IV* criterion A symptomatology and types/content of delusions and hallucinations in racially different schizophrenia populations. Findings showed racial differences in both criterion A symptom composition and symptom content. For example, McLean and colleagues (2014) stated that Indian individuals reported negative symptoms more frequently than other racial groups and Sarawak reported disorganized symptoms more frequently. McLean et al. (2014) suggested that schizophrenia may not be a universal mental disorder with similar manifestations in all cultures and that the differences in schizophrenia expression across populations could be a result of potential differences in structural organization as well as symptomatology expression interpreted by clinicians. Diagnosticians using *DSM-IV* criteria were not identified in this study.

In Singapore, Lim, Subramaniam, Poon, Chong, and Verma (2011) investigated the relationship between race and severity of baseline symptomatology in a sample of 503 Asians (e.g., Chinese, Malays, and Indians) with first-episode schizophrenia spectrum disorder. On the island of Singapore, the Chinese constitute the majority (77%), while Malays (14%) and Indians (8%) representing minority populations (Lim et al., 2011). Diagnostic assessments were conducted by psychiatrists using *DSM-IV* criteria with the researchers examining if race predicted severity of symptomatology

independent of gender, duration of untreated illness, premorbid functioning, and age of illness onset. Results concluded that severity of baseline symptomatology of individuals with first-episode schizophrenia spectrum disorders did in fact differ by race. Specifically, Lim et al. (2011) noted that Malays presented with more severe symptomatology than Chinese and Indian clients. In particular, Malays presented with more severe negative symptoms than Chinese and Indians, and more severe positive and general symptomatology than the Chinese participants. The racial identification of Malay was consistently predictive of more severe symptomatology while Indians and Chinese did not differ significantly in severity of symptomatology. Lim et al. (2011) reported that Malays are recognized by the Singapore's Constitution to be the indigenous people of the island and suggested the greater severity of negative symptoms in Malays could possibly be related to the lower academic achievement compared to Chinese and Indians. Lim et al. (2011) suggested that cross-racial differences in symptomatology could be a result of racially-based rater bias.

Ainsah, Nurulwafa, and Osman (2008) examined the difference in presenting symptomatology among 97 Malay, Chinese, and Indian clients with schizophrenia in Malaysia. Findings showed no significant differences among the three racial groups in terms of positive symptoms. However, significant differences were present among some specific negative symptoms. For example, Ainsah et al. (2008) reported Indians scored higher in emotional withdrawal compared to Malays, while Malays scored lower for passive/apathetic social withdrawal and stereotyped thinking compared to the Chinese and Indian participants. Additionally, tension and active social withdrawal scores were significantly higher in Indians compared to Malays and Chinese individuals.

Diagnosticians were psychiatrists using *DSM-IV* criteria. Ainsah and colleagues (2008) stated that race influenced the symptom presentations and suggested that differences in symptomatology may reflect differences in cultural predispositions.

The 14 studies outlined above show a trend of symptomatology in schizophrenia and some common dynamics the researchers used in determining their findings. For instance, the median number of research participants is 273 with the *DSV-IV* demonstrating the more prevalent version used for diagnostic criteria. Psychiatrists or psychiatric residents/interns were overwhelmingly represented in most every study. Although some results may conflict with others, a trend was revealed showing racial differences in symptomatology and that specifically African American or international minority/indigenous participants were reported to display more severe symptoms. In particular, African Americans endorsed more negative symptoms of schizophrenia compared to European Americans. The overarching rationale for findings reported by researchers is a consistent trend of cultural factors contributing to results with suggestions to explore potential clinician bias leading to differences in symptom attribution, which ultimately will affect diagnostic conclusions. One study in particular explored this very factor with some interesting results.

Neighbors et al. (2003) investigated 665 African American and European American inpatient clients in Detroit, Michigan exploring the extent that client race is related to how clinicians link individual symptoms to diagnoses. No significant interactions with race in predicting schizophrenia were found for each symptom set. However, symptom attribution analysis showed that the process clinicians used to link symptomatology observations to diagnostic constructs were different among African

American and European American clients, particularly for schizophrenia, although these differences could not be accounted for by race differences in rates of symptomatology (Neighbors et al., 2003). Interestingly, this showed that although rates of symptomatology did not differ between African American and European American clients (i.e., by race), the diagnostic process that clinicians attributed observable symptoms in fact differed by clinicians. For example, the pattern of psychotic symptoms predicting a diagnosis of schizophrenia for African American clients showed that loose associations, inappropriate affect, auditory hallucinations, and vague speech increased the likelihood of a schizophrenia diagnosis. For European Americans, loose associations and vague speech were positive predictors for a schizophrenia diagnosis. Diagnosticians were resident psychiatrists using *DSM-III-R* criteria. Neighbors et al. (2003) stated that among these symptoms, only auditory hallucinations were attributed to African Americans more frequently and was of greater importance in predicting a schizophrenia diagnosis. In comparison to symptoms of bipolar disorder, relatively more symptomatology would lead to a diagnosis of schizophrenia and further away from a diagnosis of bipolar for both African American and European American clients (Neighbors et al., 2003). These results are consistent with prior research showing that negative symptoms are more powerful indicators of a schizophrenia diagnosis (Trierweiler et al., 2000). Neighbors et al. (2003) speculated that some symptoms may be weighted differently for the two races resulting from bias in clinical judgment. In particular, the researchers believed that any differences in a particular diagnosis must be the result of the way clinicians give attributions to the symptomatology with unconscious processes possibly explaining the differences between African American and European

American clients. These conclusions have lead Neighbors et al. (2003) to conclude that there is a need for more research focusing on racial differences at the symptomatology level.

The research described above demonstrates a trend showing symptomatology differences in schizophrenia according to race without a clear clinical explanation. This warrants the need for further investigation to see if clinicians differ in attributing severity ratings schizophrenia symptomatology to clients disproportionately by race. This would put the field of counseling one step closer to understanding this consistent pattern and phenomenon of diagnostic racial disparities of schizophrenia at the symptomatology level.

African Americans and Schizophrenia

The collection of research previously discussed showed that regardless of the use of standardized diagnostic instruments used to increase objectivity (Neighbors et al., 2003). More specifically, being African American is predictive of a schizophrenia diagnosis (Pavkov et al., 1989). African Americans are diagnosed up to four times a higher rate with a diagnosis of schizophrenia compared to European Americans (Barnes, 2004; Barnes, 2008; Blow et al., 2004). During diagnostic assessments, clients are nearly one and a half times more likely of receiving a schizophrenia diagnosis if the interviewer perceived them to be dishonest with interviewers perceiving African Americans to be less honest compared to European Americans (Eack et al., 2012). Interestingly, clinicians

self-reporting the same race as clients do not produce a difference in diagnostic clinical judgment in giving a schizophrenia diagnosis (Whaley, 2004).

Regarding symptomatology, African Americans exhibited more frequent symptoms of hallucinations (Adebimpe et al., 1982; Chu et al., 1985; Each et al., 2012; Strakowski et al., 1996; Trierweiler et al., 2000; Vitols et al., 1963), anger outbursts (Adebimpe et al., 1982; Chu et al., 1985; Eack et al., 2012), thought disturbance (Adebimpe et al., 1982; Eack et al., 2012), asocial behavior (Adebimpe et al., 1982; Chu et al., 1985) and additional symptoms compared to European Americans. Remarkably, African Americans showed less frequent but more severe symptoms of schizophrenia compared to European Americans (Adebimpe et al., 1982; Brekke and Barrio, 1997; De Hoyos & De Hoyos, 1965; Fabrega et al., 1988). The consistent echoing recommendation made by researchers is the need for investigating how clinicians attribute and interpret the symptomatology of schizophrenia for African Americans.

Critique of Research on Race and Symptomatology

In reviewing the empirical literature of racial differences of race and non-psychotic disorder diagnoses and symptomatology, race and psychotic disorder diagnoses, and race and psychotic disorder symptomatology, there appears to be some clear patterns that deserve some attention. For example, evidence suggested that African Americans are diagnosed with more disruptive and externalizing disorders and less often with internalizing and less severe disorders compared to European Americans. African Americans are diagnosed with psychotic disorders at a higher rate (sometimes twice as

likely) compared with European Americans. Being diagnosed with a psychotic disorder was associated several times in the literature with behavioral disturbances in clients, which was demonstrated in African Americans being twice as likely to be diagnosed with a psychotic disorder when there were behavioral factors associated with clients. Race was consistently shown as a predictor for a schizophrenia diagnosis with African Americans diagnosed at a rate that is four times more likely in receiving a schizophrenia diagnosis compared to European Americans. The overarching rationales provided by researchers are: (a) delayed help-seeking mental health services in African Americans resulting in potentially a more severe and untreated mental disorder; (b) the need for increased multicultural awareness and training in diagnostic clinicians (particularly with psychiatrists); (c) clinician bias; and (d) racial differences in symptomatology presentation.

For the research investigating symptomatology, the literature showed that African Americans endorsed more hallucinations (e.g., auditory hallucinations), while European Americans endorsed more delusions. More specifically, African Americans endorsed more severe symptoms overall such as negative symptoms of schizophrenia (e.g., diminished emotional expression, decreased motivation, social withdrawal) compared to European Americans. The overarching rationales provided are similar to what was previously stated such as delayed help-seeking of mental health services in African Americans causing more severe symptomatology presentations, contributing cultural factors (e.g., mistrust), and clinician bias leading to differences in symptom attribution to clients.

In critiquing the research related to race and schizophrenia symptomatology, psychiatrists or psychiatric interns were overwhelmingly represented in most every study as diagnostic clinicians. It has been established throughout the respected literature that lack of cultural training and sensitivity, particularly psychiatrists (Barnes, 2004) contributes to misdiagnosis of schizophrenia and inaccurate attribution to symptomatology. Likewise, a lack of cultural awareness and sensitivity can also contribute to clinician bias due to clinicians following a confirmatory bias, or lack training in considering a client's cultural background and beliefs when conducting diagnostic measures. Zayas et al. (2005) reported that one of the limitations of their study were being limited to psychiatrists as diagnosticians who present a narrow view of clinical mental health practice and as a result of the varying orientations in training, this critical factor could help explain diagnostic similarity or disagreement compared to other professional disciplines. Unfortunately, not all professions in mental health are equally trained, especially when it comes to multicultural competence and sensitivity.

Another critique is that the previous studies focused on comparing hallucinations or delusions by race, negative verses positive symptoms of schizophrenia by race, and other different symptoms of psychopathology. There is a lack of biopsychosocial considerations as suggested by Brekke and Barrio (1997). Because a diagnosis is a collection of symptoms that determine a mental disorder, clinicians are expected to make their diagnostic assessments and evaluations through a multiculturally competent lens while considering biopsychosocial background information in order to make the most accurate and representative interpretation of symptomatology that leads to the corresponding diagnosis. Inaccurate attribution of symptoms by clinicians can make the

difference between diagnosing a mood disorder, or a highly stigmatizing psychotic disorder such as schizophrenia, as exemplified with African Americans.

One final critique is that several researchers have used outdated *DSM* versions such as the *DSM-III* (APA, 1980) or *DSM-III-R* (APA, 1987) that does not have the newly incorporated ethnic and cultural consideration provided in text to help guide clinicians in making accurate diagnoses such as those provided in the *DSM-IV* (APA, 1996) and later versions. These outdated *DSM* versions do not provide a description of culture-bound syndromes that are present and diagnosed in other countries and cultures. Additionally, there are no outlines for cultural formulation available to assist clinicians in systematically evaluating an individual's cultural context for consideration as provided in the *DSM-IV*. Furthermore, older *DSM* versions are based on outdated research that does not include critical literature reviews that have shaped and changed updates in later *DSM* versions leading to more accurate descriptions and recognition of diagnostic symptomatology of mental disorders.

Summary of the Topic

Research patterns show distinct diagnostic racial disparities in mental disorder diagnoses among African Americans compared with European Americans and other racial minorities. Specifically, African Americans are disproportionately assigned a schizophrenia diagnosis at a rate that is three to four times greater than European Americans. Although no definitive basis for this disparity has been established, several hypotheses are proposed in the literature. Clinician bias is the most prevalent and

consistent hypothesis reported. However, it remains unclear why these diagnostic disparities are prevalent over time, setting, and professional specialty area. Researchers have therefore called for additional investigation to go beyond simple diagnostic labels and study symptomatology judgments that underlie clinicians' basis for determining metal disorder diagnosis.

Rationale for the Present Study

The present study considered differences in clinicians' schizophrenia symptom severity ratings based on client's race by investigating several underlying categories of symptomatology, some of which were not studied previously: (1) psychosis-related psychological symptomatology; (2) non-psychotic psychological symptomatology; (3) social impairment-related symptomatology; and (4) dangerousness-related symptomatology. The research design for this study aimed to test whether racial disparities in clinicians' severity ratings of schizophrenia symptomatology existed. It was hoped that the information gained will be valuable to the profession of counseling by informing researchers, practicing counselors, clinical supervisors, and counselor educators. For example, the American Counseling Association's (2014) code of ethical standards explained the importance of providing a proper diagnosis while considering a client's cultural experiences. By investigating race-related schizophrenia diagnoses at the level of client symptomatology, it was hoped that the field would be brought one step closer to understanding a prevalent, yet poorly understood, and clinically important

phenomenon that has affected clinicians and clients across time, treatment setting, and profession.

CHAPTER III

METHODOLOGY

The purpose of this study was to investigate whether licensed professional counselors rate schizophrenia symptomatology severity differently based on clients' race. Therefore, this study investigated group differences in four specific clinician-rated symptomatology categories between African Americans and European Americans. The researcher studied whether or not licensed professional counselors assigned disproportionately higher severity ratings on the Functional Assessment Rating Scale (FARS) for African American clients compared to European American clients. This chapter provides an overview of the research questions, description of the variables, research design, participants and delimitations, setting and procedures, instruments, and data analyses for the present study.

Research Questions

1. Do licensed professional counselors rate African American and European American clients differently on severity of psychosis-related psychological symptomatology (i.e., positive psychotic symptoms and self-care deficits)?

2. Do licensed professional counselors rate African American and European American clients differently on severity of non-psychotic psychological symptomatology (i.e., depression, anxiety, mania, and traumatic stress)?

3. Do licensed professional counselors rate African American and European American clients differently on severity of social impairment-related symptomatology (i.e., interpersonal relationship problems, family relationship problems, and work or school problems)?

4. Do licensed professional counselors rate African American and European American clients differently on severity of dangerousness-related symptomatology (i.e., homicidality, suicidality, and perception of need for an immediate inpatient admission)?

Null and Directional Hypotheses

Null hypothesis 1: There is no statistically significant difference in licensed professional counselors' FARS psychosis-related psychological symptomatology ratings (i.e., positive psychotic symptoms and self-care deficits) between African American and European American clients with schizophrenia.

Directional hypothesis 1: Licensed professional counselors will rate African American clients with schizophrenia as having statistically significantly higher severity on FARS psychosis-related psychological symptomatology compared to European American clients.

Null hypothesis 2: There is no statistically significant difference in licensed professional counselors' FARS non-psychotic psychological symptomatology ratings (i.e., depression,

anxiety, mania, and traumatic stress) between African American and European American clients with schizophrenia.

Directional hypothesis 2: Licensed professional counselors will rate African American clients with schizophrenia as having statistically significantly higher severity on FARS non-psychotic psychological symptomatology compared to European American clients.

Null hypothesis 3: There is no statistically significant difference in licensed professional counselors' FARS social impairment-related symptomatology ratings (i.e., interpersonal relationship problems, family relationship problems, and work or school problems) between African American and European American clients with schizophrenia.

Directional hypothesis 3: Licensed professional counselors will rate African American clients with schizophrenia as having statistically significantly higher severity on FARS social impairment-related symptomatology compared to European American clients.

Null hypothesis 4: There is no statistically significant difference in licensed professional counselors' FARS dangerousness-related symptomatology ratings (i.e., homicidality, suicidality, and perception of need for an immediate inpatient admission) between African American and European American clients with schizophrenia.

Directional hypothesis 4: Licensed professional counselors will rate African American clients with schizophrenia as having statistically significantly higher severity on FARS dangerousness-related symptomatology compared to European American clients.

Description of Independent and Dependent Variables

The independent variable in this study was self-reported race based on a nominal scale comprised of two distinct racial groupings: self-identification as African American or European American. There were a total of 12 dependent variables in this study, all of which were continuous variables using clinical rating scales that include four different categories of symptomatology comprised of: (1) psychosis-related psychological symptomatology; (2) non-psychotic psychological symptomatology; (3) social impairment-related symptomatology; and (4) dangerousness-related symptomatology. Within each category there were specific symptomatology domains outlined in the FARS (Ward, Dow, Penner, Saunders, & Halls, 2006). The psychosis-related symptomatology category included the FARS domains of impaired thought process (i.e., positive psychotic symptoms in this study) and inability to care for one's self. The non-psychotic psychological symptomatology category comprised the FARS domains of depression, anxiety, hyper affect (i.e., mania in this study) and traumatic stress. The social impairment-related symptomatology category included the FARS domains of interpersonal relationship problems, family relationship problems and work or school problems. The dangerousness-related symptomatology category included the FARS domains of danger to others (i.e., homicidality in this study), danger to self (i.e., suicidality in this study), and security/management needs (i.e., perception of need for an immediate inpatient admission in this study).

Research Design

In this study, archival data from 2001 were entered and analyzed to test the null and directional hypotheses. Archival data are a type of primary research collection involving the extraction of evidence from original archival records from an institution or other agency that originally generated the information (Lewis-Beck, Bryman, & Futing Liao, 2004). Internal Review Board (IRB) approval was obtained by the researcher's university for the use of archival data in this study (see Appendix B). For the purpose of this study, an ex post facto research design was used with tests of alternative hypotheses. The name ex post facto means after the fact and is an investigation that takes place after the groups or conditions have been formed due to the independent variable not able to be manipulated (Heppner, Wampold, & Kivlighan, 2008). Ex post facto designs resemble the posttest-only quasi-experimental design with no random assignment to groups and seeks to compare levels of a non-manipulated independent variable (e.g., race) on a dependent variable (Heppner et al., 2008). Subsequently, the independent variable of race cannot be manipulated and this study is investigating how race impacts or explains variation in each of the 12 dependent variables at a statistically significant level, as well as any statistical significance of the four grouped symptomatology categories. Therefore, an ex post facto design in an appropriately fitting research design for this study.

A descriptive field study was used, which is characterized by investigations conducted in a real-life setting that does not use experimental random controls (Heppner et al., 2008). A type of descriptive study that was applied was the cross-sectional research design because this study involves investigating participants who differ on one key characteristic (e.g., race) at one specific point in time, but share other characteristics

such as having a schizophrenia diagnosis (Cherry, 2016). This type of research is used to describe characteristics that exist in a sample, but is not used to determine cause-and-effect relationships between different variables (Cherry, 2016). One of the benefits of cross-sectional studies include collecting a large amount of information from a large pool of participants, while one of the challenges are finding participants who are very similar except on one specific variable and generally requiring a large number of participants (Cherry, 2016). Because the present study investigated participants who differ on one key characteristic of race in a real-life setting at a specific point in time using 101 participants, a descriptive field study using a cross-sectional research design is appropriate.

Participants and Delimitations

Participants were delimited to a geographical Southeastern region in the United States (i.e., northern Florida) due to the nature of using existing archival data. The sample population was delimited to participants having a confirmed *DSM-IV-TR* diagnosis of schizophrenia based on clinical interviews and board certified psychiatrist records. Participants were also be delimited to persons aged 18 years and older. Finally, data was collected using participants having a self-reported race of either African American or European American. In order to help increase the generalizability of results to other populations, delimitations were not placed on the gender, educational background, prior treatment history, physical disabilities, and socioeconomic status of participants. A power analysis was calculated to determine an acceptable probability that

the results will be statistically significant before conducting the research study (Gravetter & Wallnau, 2013). This calculation considered a multivariate analysis of variance (MANOVA) using a hypothesized large effect size of $f^2(v) = 0.3$, an alpha level of 0.05, with an assumed power level of .80 using G*Power statistical software (version 3.0.10). Results of the a priori power analysis showed a minimum total sample size of 98 participants was needed to ensure power of at least .80.

All participants were clients selected from a community mental health agency in a Southeastern region of the United States (i.e., northern Florida) that services an area consisting of 10 different counties within rural to semi-urban areas. In addition to client symptomatology data, demographic and diagnostic information were obtained for all newly admitted clients with schizophrenia presenting for an initial interview at the treatment site over a continuous 10-month period. All participants were assigned a *DSM-IV-TR* (APA, 2000) diagnosis of schizophrenia by a licensed professional counselor, confirmed by a board-certified psychiatrist.

Archival data from 101 participants were included in the present study. Based on self-reports participants in this study were represented by 46.5% ($n = 47$) European American and 53.5% ($n = 54$) African American participants. Regarding gender, 58.4% ($n = 59$) of participants self-reported being men and 39.6% ($n = 40$) self-reported being women. The total population of the 10-counties catchment area was approximately 425, 000 (U.S. Census Bureau, 2000b) with participants who lived in semi-urban to urban areas. The racial census of Florida during that time was 78% European American and 14.6% African American (U.S. Census Bureau, 2000b). In particular, the largest county in the catchment area (e.g., Alachua County) showed a racial census of 73.5% European

American and 19.3% African American during this same time period (U.S. Census Bureau, 2000a). Although most of the census of the 10-county catchment area represented a majority of European Americans, the sample population for this study shows that the majority of participants represented as African American. This is consistent with current research trends showing African Americans diagnosed with schizophrenia being overrepresented and the need for this study investigating this phenomenon.

Setting and Procedures

The treatment setting used was a state-supported community mental health triage center assessing potential clients for treatment needs within a 10-county catchment area in northern Florida. Clients with a *DSM-IV-TR* schizophrenia diagnosis who were admitted for short-term inpatient treatment or who were referred for outpatient or residential treatment were included as participants for this study. Demographic variables (e.g., self-reported race, age, gender) were recorded for all participants as data to be analyzed.

Presenting clients participated in a comprehensive psychosocial evaluation by a licensed professional counselor comprised of current mental disorder symptomatology and prior symptom history, social history, medical history, mental health treatment history, and demographic information such as gender, race, age, and other factors. The psychosocial evaluation was outlined on an agency-wide standardized clinical intake form to provide consistency and accuracy of assessment information. To help ensure

diagnostic accuracy, participants were interviewed by all clinicians using the Structured Clinical Interview for *DSM-IV* (SCID-I; First, Spitzer, Gibbon, & Williams, 1995). The SCID-I is a semi-structured interview approach specifically designed to guide clinicians in accurately assessing, evaluating, and diagnosing mental disorders using *DSM-IV* criteria. The SCID-I helped clinicians confirm a diagnosis of schizophrenia. However, the SCID-I was used for diagnostic purposes only, rather than for assessing psychosis-related symptomatology specific to FARS data used in the present study. After the completion of the comprehensive diagnostic assessment process, licensed professional counselors assigned a mental disorder diagnosis using the *DSM-IV-TR* criteria, which was confirmed by a board-certified psychiatrist. Only those clients having a confirmed schizophrenia diagnosis where included in the sample population.

Symptomatology ratings during psychosocial evaluations were conducted by 10 licensed master's and doctoral level professional counselors (seven women and three men) who graduated from a Counsel for the Accreditation of Counseling and Related Educational Programs (CACREP) accredited educational institutions. During the period that archival data were collected for the present study, CACREP 2001 accreditation standards were in effect nation-wide. Clinicians participating in the present study received master's degrees in Community Counseling (versus Clinical Mental Health Counseling, as described in CACREP 2016 accreditation standards) or doctoral degrees in Counselor Education and Supervision. The following factors were found to be substantially similar between both accreditation guidelines: (a) the eight foundational core areas for all entry-level counselor education graduates; (b) the emphasis on and standards related to multicultural counseling knowledge, awareness, and skills; (c) the

minimum clock hours and supervision requirements for practicum and internship experiences; and (d) the general requirements for counselor educator faculty (CACREP, 2001, 2016). In a comparison of the CACREP 2001 standards and current CACREP 2016 standards, no significant differences in core educational requirements relevant to the present study were identified. Therefore, it has been determined that the date of archival data obtained and the training received by participating clinicians is generalizable to current standards of practice. Additionally, diagnostic training principles have not changed substantially between prior and current counseling program accreditation standards (CACREP, 2001, 2016).

Nine of the licensed professional counselors participating as clinicians for the present study self-identified as European American and one self-identified as being of mixed race. Although clinician race in this study is not proportionate to the racial demographics of the participants, Whaley (2004) has shown that clinicians with the same race as participants does not produce a difference in diagnostic clinical judgment when giving a schizophrenia diagnosis. The clinicians conducting the assessments all graduated from a CACREP-accredited counseling program, received mental health agency training related to cultural sensitivity, and served a diverse population of clients self-reporting as African American and European American. However, the researcher was unable to identify individual clinician level of multicultural knowledge, awareness, and skills during the assessment process or proficiency interviewing and rating schizophrenia symptomatology.

As part of the psychosocial evaluation, all clinicians used the Structured Clinical

Interview for the Functional Assessment Rating Scale (SCI-FARS; Ward et al., 1995), a semi-structured interview process used to gain detailed information about the severity of 18 psychosocial problem areas (12 of which were included in the present study). The SCI-FARS was used by all clinicians in order to help ensure consistency among interviewers and accuracy in ratings of psychosocial problem areas. All clinicians were trained to use the SCI-FARS prior to interviewing participants. Immediately following the psychosocial evaluation, clinicians then completed ratings on all areas of the FARS (Ward et al., 2006).

The total duration of this evaluation process was approximately 90 minutes and all clinicians who completed client assessments (e.g., intake assessment, SCID-I, SCI-FARS) were blind to the purposes and protocol for this study. Only archival data obtained on the FARS was used for this study. Approval to use all archival data described above was provided by the data owner, Dr. Robert C. Schwartz, for use in the present study (see Appendix A).

Instruments

The FARS is an 18-item standardized instrument used to assess psychiatric symptom severity and psychosocial impairments (Ward & Dow, 1994; Ward et al., 2006) in participants age 18 and older. Clients with or without mental, emotional, physical, cognitive or behavioral problems, can be rated using the FARS domains. Items represent an evaluation of current client impairments in psychosocial or role functioning. Each of the FARS items uses a nine-point Likert-type rating for each of the 18 functional domains

listed. The nine-point scale (1 = no current problem, 2 = less than slight, 3 = slight problem, 4 = slight to moderate, 5 = moderate problem, 6 = moderate to severe, 7 = severe problem, 8 = severe to extreme, 9 = extreme problem) is used in assessing the individual's current problem within the last three weeks (Ward & Dow, 1994; Ward et al., 2006). Clients who are functioning and performing in ways considered age or role appropriate, meeting developmental milestones, and exhibiting no symptoms of cognitive, behavioral or social difficulty would likely be rated as "1 = no problem" or "2 = less than slight problem" for most of the 18 domains (Ward & Dow, 1994; Ward et al., 2006). Higher scores indicate more severe impairments in cognitive or behavioral (social or role) functioning related to each rating based on manifested client symptoms. Clients whose functioning in a specific domain that is being "maintained" by medication or other supports (e.g., counseling) would not be rated as a "1" or "2" for that domain, as clinicians are to critically take this into consideration when giving a more accurate rating score. A rating of "5 = moderate problem" would indicate functioning that is clearly inadequate and not meeting the usual expectations of a typical person of this age, gender, and subculture. A rating of "9 = extreme problems" would indicate individuals whose functioning negatively impacts most other domains by impeding ability in making autonomous decisions about treatment, involuntary hospitalization or other therapeutic intervention, and functioning that creates potentially life-threatening situations (Ward & Dow, 1994; Ward et al., 2006).

To help the clinician identify issues to consider in defining a functional domain rating, the FARS lists words or phrases associated with behaviors or symptoms in each domain with accompanying definitions of each listed word or phrase. The 18 FARS

functional domains include depression, anxiety, hyper affect, thought process, cognitive performance, medical/physical, traumatic stress, substance use, interpersonal relationships, family relationships, family environment, socio-legal, work or school, ADL (activities of daily living) functioning, ability to care for self, danger to self, danger to others, and security/management needs (Ward & Dow, 1994; Ward et al., 2006). In this research study, a total of 12 specific symptoms consistent with schizophrenia characteristics will be grouped into four different categories (e.g., psychosis-related psychological symptomatology, non-psychotic psychological symptomatology, social impairment-related symptomatology, and dangerousness-related symptomatology) to represent a biopsychosocial perspective.

In the psychosis-related psychological symptomatology category, the FARS functional domains of thought process (called positive psychotic symptoms in this study) and ability to care for self will be used. The thought process domain consists of problems that include illogical thinking, delusions, hallucinations, loose associations, paranoia, ruminative thinking, loose associations, and taking anti-psychotic medications (Ward & Dow, 1994; Ward et al., 2006). Ability to care for self includes problems that include inability to care for self, risk of harm, suffering from neglect, refusal to care for self, not able to survive without help, and alternative care not available (Ward & Dow, 1994; Ward et al., 2006).

In the non-psychotic psychological symptomatology category, the FARS functional domains of depression, anxiety, hyper affect (called mania in this study), and traumatic stress will be used. The depression domain consists of problems that include depressed mood, worthlessness, loneliness, anhedonia, hopelessness, sleep problems,

sadness, and taking anti-depressant medications (Ward & Dow, 1994; Ward et al., 2006). The anxiety domain consists of problems that include anxiousness, guilt, tension, fearfulness, obsessiveness, panic, and taking anti-anxiety medications (Ward & Dow, 1994; Ward et al., 2006). The mania domain consists of problems that include very elevated mood, agitation, sleep deficits, overreactions, mood swings, pressured speech, and taking anti-manic medications (Ward & Dow, 1994; Ward et al., 2006). The traumatic stress domain consists of problems that include acute trauma, dreams/nightmares, chronic trauma, detachment, avoidance, repression/amnesia, and upsetting memories (Ward & Dow, 1994; Ward et al., 2006).

In the social impairment-related symptomatology category, the FARS functional domains of interpersonal relationship problems, family relationship problems, and work or school problems will be used. The interpersonal relationship problem domain consists of problems that include problems with friends, difficulty establishing relationships, poor social skills, difficulty maintaining relationships, and adequate social skills (Ward & Dow, 1994; Ward et al., 2006). The family relationship problem domain consist of problems that include no contact with family, poor parenting skills, difficulty with partner, acting out, no family contact despite the desire, difficulty with relatives, difficulty with child, and difficulty with parent (Ward & Dow, 1994; Ward et al., 2006). The family environment problem domain consists of problems that include family instability, separation, custody problems, family legal, divorce, single parenthood, birth in family, and death in family (Ward & Dow, 1994; Ward et al., 2006). The work or school problem domain consists of problems that include absenteeism, poor performance, termination(s), learning disabilities, unsuccessfully seeking employment, does not

read/write, tardiness, disabled, and not employed (Ward & Dow, 1994; Ward et al., 2006).

In the final category, dangerousness-related symptomatology, the FARS functional domains of danger to others (called homicidality in this study), danger to self (called suicidality in this study), and security/management needs (called perception of need for an immediate inpatient admission in this study) are included. The homicidality domain consists of problems that include violent temper, threatens others, perpetration of physical abuse, homicidal ideation, hostility, homicidal threats, assaults, and homicidal attempts (Ward & Dow, 1994; Ward et al., 2006). The suicidality domain consists of problems that include suicidal ideation, current plans, recent attempts, past attempts, self-injuries, and self-mutilation (Ward & Dow, 1994; Ward et al., 2006). The perception of need for an immediate inpatient admission domain consists of problems that include being on suicide watch, having a behavioral contract, being admitted to a locked unit, receiving protection from others, being in seclusion, being in restraints, and being referred for involuntary exam/commitment (Ward & Dow, 1994; Ward et al., 2006).

These 12 specific domains of symptomatology grouped into four distinct categories were chosen due to encompassing a biopsychosocial perspective and exemplifying characteristics of an individual diagnosed with schizophrenia. In addition, the FARS shows acceptable psychometric properties making it an appropriate instrument for this study. Because the FARS was developed as a measure of psychopathology in assessing various psychiatric symptoms and functional problems (Ward & Dow, 1994; Ward et al., 2006), it shows good interrater reliability and good construct validity among persons with severe mental illnesses in preliminary tests (Ward & Dow, 1994). Ward and

Dow (1994) reported good construct validity and good interrater agreement on FARS items with ranges from $r = .76$ to $r = .89$. Schwartz (1999) conducted a study on FARS psychometric properties and found mean interrater reliability correlations of $r = .88$ (ranging from .80 to .96) on all 18 areas of the FARS except for the work or school domain yielding $r = .61$. Two weeks after the initial assessments, mean stability reliability correlations showed $r = .86$ (ranging from .79 to .90), and good stability of the clinical ratings showed a mean score of .86 (ranging from .79 to .90).

The primary resource available verifying validity and reliability of the FARS with clients diagnosed with schizophrenia is a study by Schwartz (1999). When considering validity, Schwartz (1999) found good construct validity evidenced by counselor ratings of 1.3 on a 1 to 5 Likert-type scale (1 = extremely accurate/useful, 3 = somewhat accurate/useful, 5 = extremely inaccurate/not useful). Using the same 5-point Likert-type scale, clinicians evaluated a series of clients diagnosed with schizophrenia while assessing the accuracy and usefulness of the FARS ratings of problem severity based on psychopathology yielding a mean score of 1.6 on all items (Schwartz, 1999). Concurrent validity was established by interviewing 40 schizophrenia clients comparing ratings with the Positive and Negative Syndrome Scale (Kay, Flszbein, & Opfer, 1987) yielding correlations of a mean score of .89 (ranging from .78 to .92) on the domains of hyper affect, thought process, cognitive performance, anxiety, depression, and interpersonal relationships.

A factor analysis was conducted to determine what, if any, underlying structure existed for measures of all 18 FARS variables for construct validity. An exploratory factor analysis is used to describe and summarize data by grouping together variables that

are correlated while a confirmatory factor analysis is a more sophisticated factor analysis used to confirm or disconfirm some *a priori* theory (Mertler & Vannatta, 2013). An exploratory and confirmatory factor analysis of FARS admission evaluation problem severity ratings for each functional domain of adults resulted in the following four-factor solution assignment of the 18 functional domains: (1) "disability index" including ratings of (thought process + ability to care for self + cognitive performance + hyper affect + adult daily living skills functioning + medical/physical); (2) "emotionality index" including ratings of (anxiety + traumatic stress + depression); (3) "relationship index" including ratings of (socio-legal + family environment + family relations + interpersonal relations + work/school + danger to others); and (4) "personal safety index" including ratings of (danger to self + substance use + security/management needs) (Ward et al., 2006). Four of the problem severity areas loaded about equally on two different factors (Ward et al., 2006). Therefore, the index to which each of the four problem severity areas were assigned was based on clinical relevance or psychological meaningfulness of the problem severity area in adding to the description of the index domains described by the factor (Ward et al., 2006). Ward et al. (2006) stated that the domains cluster within an index that suggested ways in which functional domains are likely to clinically and behaviorally influence each other in this group for adults. Index scores can be created to help the clinician understand differences between people being evaluated and treated using certain combinations of FARS domains based on factor analysis of the 18 FARS domains (Ward et al., 2006).

Schwartz (1999) tested interrater agreement by having two licensed clinicians simultaneously interview and rate 47 randomly selected schizophrenia outpatient clients

on all 18 areas of the FARS. Pearson correlations were used to estimate congruence ratings with ranges showing .80 to .96 (M = .88), except work and school problems, which yielded an interrater agreement of .61. Schwartz (1999) also assessed test-retest reliability by having the same clients rated again by licensed clinicians about two weeks after the initial interviews with Pearson correlations yielding stability of clinical ratings ranging from .70 to .90 (M = .86). Ward et al. (1996) evaluated the FARS and also found acceptable interrater reliability (M = .68) after testing interrater agreement with 56 clients.

In conclusion, the psychometric properties for the FARS show very good interrater reliability, test-retest reliability, construct validity, and concurrent validity (Schwartz, 1999; Ward et al., 1996; Ward et al., 2006). Additional studies have also verified acceptable psychometric properties of the FARS with other populations (Schwartz & Del Prete-Brown, 2003; Srebnik et al., 2002). Therefore, the FARS is an appropriate instrument to use with clients diagnosed as having schizophrenia when clinicians are attempting to rate a broad range of symptomatology severity.

Data Analyses

In order to statistically test the research hypotheses, a separate MANOVA will be used for each of the four null hypotheses for a total of four MANOVAs using SPSS statistical software (version 24). A MANOVA is appropriate for this research question because this statistical analysis is designed to test the significance of group differences and is suitable when more than one dependent variable is involved (Mertler & Vannatta,

2013). Stevens (2009) provided two reasons why a researcher should be interested in using more than one dependent variable when comparing groups based on differing characteristics: (1) any meaningful treatment will affect the subjects in more than one way resulting in the need for several criterion (dependent) variables; and (2) through the use of several criterion measures, the researcher can obtain a more complete and detailed description of the phenomenon being investigated. Therefore, multiple measures of variables representing a common characteristic are likely to be more representative of that characteristic (Mertler & Vannatta, 2013). Additionally, Stevens (2009) stated there are four statistical reasons for preferring a MANOVA over using an ANOVA: (1) the use of fragmented univariate tests leads to a greatly inflated overall type I error rate, thus increasing the probability of at least one false refection of the null hypothesis; (2) the univariate tests ignore important information such as the correlations among the variables while the multivariate tests incorporate the correlations (e.g., covariance matrix) right into the test statistic; (3) small differences on several of the variables may combine to produce a reliable overall difference, thus the multivariate test is a more powerful test; and (4) a multivariate analysis allows the testing of the subtest scores in groups that can reflect the sources responsible for the global differences and thus show significant differences compared to a more global or total test score of groups to see if there is a difference. Measuring several dependent variables increases the chances of discovering what changes as a result of differing characteristics, which makes the MANOVA a more powerful test.

In order to use a MANOVA, the following assumptions must be met: (1) the observations within each sample must be independent of each other; (2) the observations

on all dependent variables must follow a multivariate normal distribution in each group; (3) the population covariance matrices for the dependent variables in each group must be equal (e.g., assumption of homoscedasticity); and (4) the relationship among all pairs of dependent variables for each cell in the data matrix must be liner (Mertler & Vannatta, 2013).

To test null hypothesis one, a MANOVA was utilized with client race as the independent variable (e.g., either African American or European American). The dependent variables included FARS ratings of positive psychotic symptoms and ability to care for self. To test null hypothesis two a MANOVA was used with client race as the independent variable (e.g., either African American or European American). The dependent variables included FARS ratings of depression, anxiety, mania, and traumatic stress. To investigate null hypothesis three a MANOVA was utilized with client race as the independent variable (e.g., either African American or European American). The dependent variables including FARS ratings of interpersonal relationship problems, family relationship problems, and work or school problems. To investigate null hypothesis four a MANOVA was used with client race as the independent variable (e.g., either African American or European American). The dependent variables included FARS ratings of homicidality, suicidality, and perception of need for an immediate inpatient admission.

Summary of Methodology

The purpose of the present research study was to investigate whether licensed professional counselors' biopsychosocial symptomatology severity ratings statistically significantly differ by race (e.g., between African American and European American clients) with schizophrenia. Specifically, this study investigated whether licensed professional counselors assigned disproportionately higher severity ratings for symptoms on the FARS for African American clients compared to European American clients. A total of 101 participants were included in this study with participant information obtained from archival data at a large community mental health agency serving a 10-county area in a Southeastern state. This sample of participants were delimited to presenting clients having a confirmed *DSM-IV-TR* diagnosis of schizophrenia. All participants were aged 18 years and older and were located in a geographical Southeastern region in the United States. All participants self-reported their race as either African American or European American. An ex post facto cross-sectional descriptive research design was used. Tests of alternative hypotheses utilizing four separate MANOVAs were utilized in order to statistically test the four null hypotheses. In all four statistical analyses race was included as the independent variable. In each MANOVA, different groups of dependent variables were used based on four FARS symptomatology categories. Psychometric properties for the FARS showed very good interrater agreement, test-retest reliability, construct validity, and concurrent validity and is an appropriate instrument for assessing clinicians' symptomatology severity ratings with clients diagnosed as having schizophrenia.

CHAPTER IV

RESULTS

The purpose of this study was to investigate whether licensed professional counselors' schizophrenia symptomatology severity ratings differed based on clients' race (i.e., African American and European American participants). This study examined a more specific scope of clinicians' symptomatology judgments related to the race of the client with schizophrenia for a range of psychological and social symptoms. First, pre-analysis data screening procedures will be discussed. Then descriptive statistics for the dependent variables will be provided for the entire data sample and testing assumptions for MANOVA will be reviewed. Finally, results of the MANOVA statistical analyses testing the four null hypotheses will be explained.

Pre-analysis Data Screening Procedures

Pre-analysis data screening was conducted for accuracy of the data collected, determining if any missing data were present, and assessing any extreme values such as outliers to help ensure valid results of the statistical analyses (Mertler & Vannatta, 2013). Upon screening the data obtained, there were missing data of biological sex for two participants, which was determined not to be removed as a result of this data not directly affecting the statistical outcome. Additional missing data for 10 items were discovered on a combined total of six different FARS ratings out of 1,515 total items (.66% missing data for all values) for all participants. Since these missing data were scattered

throughout and deletion of these values would result in substantial loss of data, one proposed method for addressing the missing data involves calculation of the means for available data in each of the six separate FARS areas, then replacing the missing data with these means (Mertler & Vannatta, 2013). This is a conservative procedure because the overall mean will not change by inserting the mean value for missing data and the researcher will not have to guess for the missing values. Therefore, the mean is the best estimate for the missing value when no other information is available to the researcher (Mertler & Vannatta, 2013). Mean substitution for the 10 missing data were used for the following six FARS ratings: (1) one mean substitution (mean score of 2) for mania; (2) one mean substitution (mean score of 2) for traumatic stress; (3) one mean substitution (mean score of 4) for positive psychotic symptoms; (4) two mean substitutions (mean score of 2) for homicidality; (5) three mean substitutions (mean score of 1) for suicidality; and (6) two mean substitutions (mean score of 2) for perception of need for an immediate inpatient admission. Next, multivariate outliers were assessed, which can be detected using graphical methods such as box plots (Tabachnick & Fidell, 2007). It was determined no FARS items represented extreme values and therefore outliers were determined unnecessary to be addressed in the present study.

Descriptive Statistics for Dependent Variables

Descriptive statistics for all 12 dependent variables in the entire data sample were analyzed. Suicidality showed the lowest ratings (i.e., least severe symptom) with a mean score of 1.26 (*SD* = .95). Positive psychotic symptoms showed the highest ratings (i.e.,

highest severe symptom) with a mean score of 3.99 (*SD* = 2.09). Traumatic stress showed the narrowest range (e.g., 1-6) between the lowest and highest reported ratings while positive psychotic symptoms, work or school problems, and homicidality all showed the widest range (e.g., 1-8) between the lowest and highest reported ratings. See Table 1 for details.

Table 1

Descriptive Statistics for Dependent Variables

Dependent Variable	Mean	SD	Minimum	Max	Range
Depression	1.99	1.32	1	7	6
Anxiety	2.5	1.62	1	7	6
Mania	2.32	1.64	1	7	6
Traumatic Stress	1.67	1.15	1	6	5
Positive Psychotic Symptoms	3.99	2.09	1	9	8
Interpersonal Problems	3.37	1.80	1	7	6
Work or School Problems	3.93	2.27	1	9	8
Ability to Care for Self	2.91	1.97	1	8	7
Family Relationship Problems	2.00	1.54	1	7	6
Homicidality	1.87	1.75	1	9	8

Suicidality	1.26	.95	1	7	6
Perception of Need For Inpatient Admission	1.99	1.75	1	7	6

Note. SD = standard deviation; Max = maximum

MANOVA Statistical Tests of Assumptions

After completing pre-analysis data screening, the four statistical assumptions for MANOVA were analyzed to ensure the statistical test is appropriate to apply and to avoid any biased results of the analysis if one or more assumptions are violated (Kennedy & Bush, 1985; Mertler & Vannatta, 2013). First, the observations within each sample must be independent of each other (Mertler & Vannatta, 2013). Because the treatment was individually administered and did not involve interactions among persons that may influence each other, observations were determined to be independent (Stevens, 2009). The second MANOVA assumption asserts that observations on all dependent variables follow a multivariate normal distribution in each group, which can be assessed by using specific statistical and graphical methods (Mertler & Vannatta, 2013). One identified statistical method, the Kolmogorov-Smirnov statistic, is used to assess univariate normality and tests the null hypothesis that the population is normally distributed. A rejection of this null hypothesis observed through significance level serves as an indication that the variable is not normally distributed (Mertler & Vannatta, 2013). The

results of this statistical test yielded significance for all 12 variables ($p < .05$ for all variables) demonstrating the data is not normally distributed (see Table 2).

Table 2

Pre-Analysis Test of Normality for Dependent Variables

	Kolmogorov-Smirnov			Shapiro-Wilk		
Dependent Variable	Statistic	df	Sig.	Statistic	df	Sig.
Depression	.30	101	.00	.76	101	.00
Mania	.28	101	.00	.79	101	.00
Traumatic Stress	.38	101	.00	.65	101	.00
Anxiety	.23	101	.00	.82	101	.00
Interpersonal	.15	101	.00	.91	101	.00
Positive Psychotic	.12	101	.00	.94	101	.00
Work or School	.14	101	.00	.92	101	.00
Ability to Care for Self	.26	101	.00	.85	101	.00
Homicidality	.43	101	.00	.57	101	.00
Family Relationship	.35	101	.00	.70	101	.00
Suicidality	.51	101	.00	.31	101	.00
Perception of Need	.36	101	.00	.62	101	.00

Note. df = degrees of freedom; Sig. = significance. Significance at the $p < .05$ level.

The use of the quantitative coefficient measures of skewness (degree of symmetry of a distribution about the mean) and kurtosis (degree of peakedness of a distribution) can be used for assessing univariate normality (Mertler & Vannatta, 2013). A positive value

(i.e., skewness value > 0) indicates a positive skew, while a negative value (i.e., skewness < 0) indicates a negative skew (Mertler & Vannatta, 2013). Similarly, values for kurtosis that are positive indicate the distribution is too peaked with long, thin tails (known as leptokurtosis), while negative values indicate the distribution is too flat, with many cases in the tails (known as platykurtosis) (Mertler & Vannatta, 2013). A simple graphical method to assess univariate normality involves the examination of a histogram (Mertler & Vannatta, 2013). Depression showed a positive skew (1.42 skewness and 1.76 kurtosis) indicated by a histogram observation. Mania showed a positive skew (1.05 skewness and .051 kurtosis) indicated by a histogram. Traumatic stress showed a positive skew (1.92 skewness and 3.54 kurtosis) indicated by a histogram observation. Anxiety showed a positive skew (1.03 skewness and .20 kurtosis) indicated by a histogram observation. Interpersonal problems showed a positive skew (.10 skewness and -1.06 kurtosis) indicated by a histogram observation. Positive psychotic symptoms showed a positive skew (.22 skewness and -.76 kurtosis) indicated by a histogram observation. Work or school problems showed a positive skew (.14 skewness and -1.15 kurtosis) indicated by a histogram observation. Ability to care for self showed a positive skew (.53 skewness and -.94 kurtosis) indicated by a histogram observation. Homicidality showed a positive skew (2.08 skewness and 3.68 kurtosis) indicated by a histogram observation. Family relationship problems showed a positive skew (1.54 skewness and 1.54 kurtosis) indicated by a histogram observation. Suicidality showed a positive skew (4.46 skewness and 21.24 kurtosis) indicated by a histogram observation. Perception of need for an immediate inpatient admission showed a positive skew (1.91 skewness and 2.60 kurtosis) indicated by a histogram observation.

Although all 12 variables showed a positive skew, MANOVA is robust (relative insensitivity of a statistical test to violations of the underlying inferential assumptions) to moderate violations of normality, provided the violation is created by skewness and not outliers (Tabachnick & Fidell, 2007; Mertler & Vannatta, 2013). Therefore, it was determined that the data obtained reflected actual ratings (i.e., skewed toward more mild severity on FARS items) and adjustment was not needed for statistical purposes.

The next MANOVA assumption tests the population covariance matrices wherein the dependent variables in each group must be equal (often referred to as the homogeneity of covariance matrices assumption or the assumption of homoscedasticity) (Mertler & Vannatta, 2013). In multivariate situations, this assumption is statistically assessed by interpreting the results of Box's M test for equality of variance-covariance matrices, which provides a test of the hypothesis that the covariance matrices are equal (Mertler & Vannatta, 2013). If the Box's M test shows a level of non-significance ($p >$ .05), then the null hypothesis that the covariance matrices are equal will not be rejected, showing homoscedasticity (Mertler & Vannatta, 2013). Therefore, if Box's M test is statistically significant, then this assumption will be violated.

For the psychosis-related psychological symptomatology category using the dependent variables of positive psychotic symptoms and ability to care for self, Box's M test of equality of covariance matrices did not show significance ($p = .25$), indicating homoscedasticity. For the non-psychotic psychological symptomatology category using the dependent variables of depression, anxiety, mania, and traumatic stress, Box's M test of equality of covariance matrices did not show significance ($p = .26$), indicating homoscedasticity. For the social impairment-related symptomatology category using the

dependent variables of interpersonal relationship problems, family relationship problems, and work and school problems, Box's M test of equality of covariance matrices did not show significance (p = .25), indicating homoscedasticity. For the dangerous-related symptomatology category using the dependent variables of homicidality, suicidality, and perception of need for an immediate inpatient admission, Box's M test of equality of covariance matrices did show statistical significance (p = .00), demonstrating that the covariance matrices were not equal and therefore violated the assumption of homoscedasticity. However, Box's M is very sensitive to nonnormality, and as a result of the data set showing a positive skew lacking normality, one may reject the assumption that covariance matrices are equal due to a lack of multivariate normality, and not because the covariance matrices are different (Mertler & Vannatta, 2013; Stevens, 2009). Violations of this assumption will not prove fatal to an analysis because the linear relationship will still be accounted for, although results would be improved if the lack of homoscedasticity were corrected (Tabachnick & Fidell, 2007). Therefore, when the assumption of homoscedasticity is violated, Pillai's criteria is the recommended choice for interpreting significance of inferential statistical results (compared to Wilk's criteria) (Tabachnick & Fidell, 2007). Pillai's criteria will therefore be used in the present study when interpreting MANOVA results for the dangerous-related symptomatology category. See Table 3 for the results of Box's M test of equality of covariance matrices for each of the four symptomatology categories.

Table 3

Results of Box's M Test of Equality of Covariance Matrices

Symptomatology Category	Box's M	F	df1	df2	Sig.
Psychosis-Related Psychological Symptomatology	4.25	1.38	3	17896037.02	.25
Non-Psychotic Psychological Symptomatology	13	1.24	10	44814.70	.26
Social Impairment-Related Symptomatology	8.14	1.31	6	67371.03	.25
Dangerousness-Related Symptomatology	22.51	3.62	6	67371.03	.01

Note. F = f statistic; df1 = degrees of freedom one; df2 = degrees of freedom two; Sig. = significance. Significance at the $p < 0.05$ level.

The final MANOVA assumption expects the relationships among all pairs of dependent variables for each cell in the data matrix to be linear, which is best assessed through a subjective process inspecting bivariate scatterplots (Mertler & Vannatta, 2013). If both pair of variables are normally distributed and linearly related, then the scatterplot shape will be oval-shaped or elliptical, while nonlinearity is indicated by a curved pattern (Mertler & Vannatta, 2013). The dependent variables for psychosis-related psychological symptomatology (e.g., depression, anxiety, mania, and traumatic stress) were entered into a scatterplot matrix with results not displaying a curved patter, therefore linearity is assumed (see Figure 1). The dependent variables for non-psychotic psychological symptomatology (e.g., depression, anxiety, mania, and traumatic stress) were entered into a scatterplot matrix with results not displaying a curved pattern, therefore linearity is assumed (see Figure 2). The dependent variables for social impairment-related symptomatology (e.g., interpersonal problems, family relationship problems, and work or

school problems) were entered into a scatterplot matrix with results not displaying a curved pattern, therefore linearity is assumed (see Figure 3). The dependent variables for dangerousness-related symptomatology (e.g., homicidality, suicidality, and perception of need for an immediate inpatient admission) were entered into a scatterplot matrix with results not displaying a curved pattern, therefore linearity is assumed (see Figure 4).

Figure 1

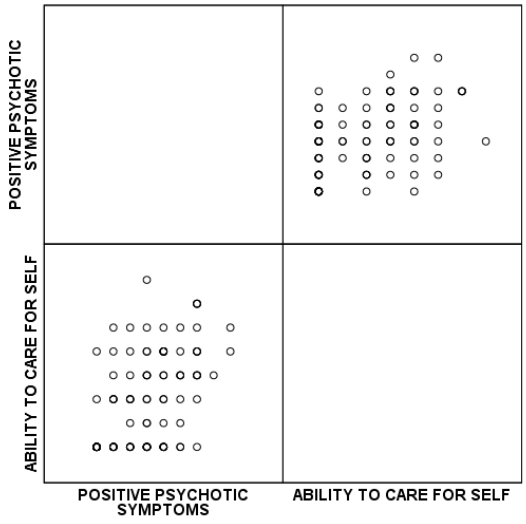


Figure 2

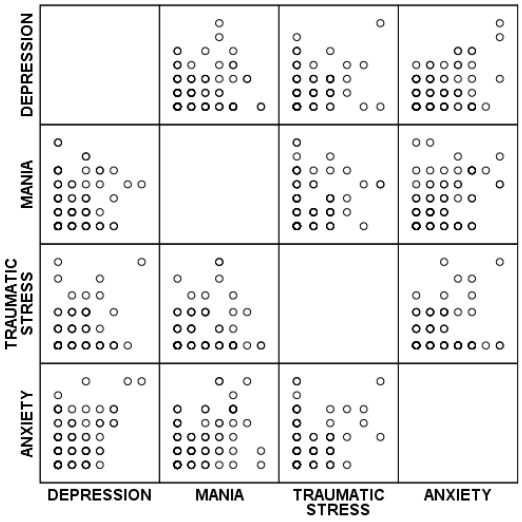


Figure 3

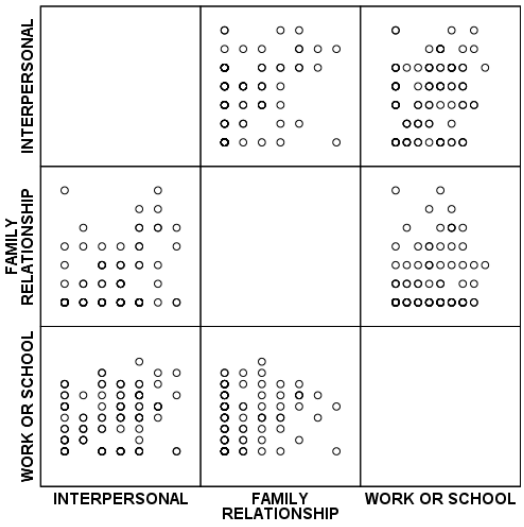
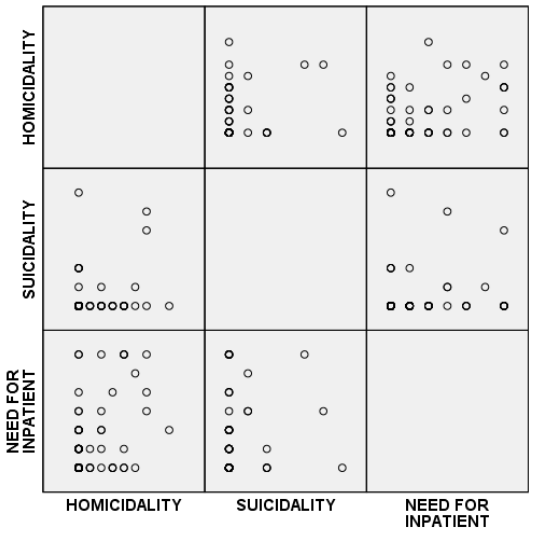


Figure 4



Statistical Results for Research Hypothesis One

Null hypothesis one stated there is no statistically significant difference in licensed professional counselors' FARS psychosis-related psychological symptomatology ratings (i.e., positive psychotic symptoms and self-care deficits) between African American and European American clients with schizophrenia. In order to statistically test this hypothesis a MANOVA was conducted. Results showed no statistical significance for the main effect of race, Wilk's $\Lambda = .98$, $F\ (2, 98) = .98$, $p = .34$, $\eta^2 = .02$, observed power .24. Therefore, null hypothesis one was not rejected.

Statistical Results for Research Hypothesis Two

Null hypothesis two stated there is no statistically significant difference in licensed professional counselors' FARS non-psychotic psychological symptomatology

ratings (i.e., depression, anxiety, mania, and traumatic stress) between African American and European American clients with schizophrenia. In order to statistically test this hypothesis, a MANOVA was conducted. Results showed no statistical significance for the main effect of race, Wilk's $\Lambda = .97$, F (4, 96) = .74, $p = .57$, $\eta^2 = .03$, observed power .24. Therefore, null hypothesis two was not rejected.

Statistical Results for Research Hypothesis Three

Null hypothesis three stated there is no statistically significant difference in licensed professional counselors' FARS social impairment-related symptomatology ratings (i.e., interpersonal relationship problems, family relationship problems, and work or school problems) between African American and European American clients with schizophrenia. In order to statistically test this hypothesis, a MANOVA was conducted. Results revealed a statistically significant multivariate main effect for race, Wilk's $\Lambda = .85$, F (3, 97) = 5.70, $p = .00$, $\eta^2 = .15$. This is a medium effect size (Cohen, 1988) and the observed power to detect the effect was .94. See Table 4. Therefore, null hypothesis three was rejected.

Table 4

Social Impairment-Related Symptomatology Multivariate Tests

Effect	Value	F	Hypothesis df	Error df	Sig.	η^2	Observed Power
INTERCEPT							
Pillai's Trace	.87	213.28	3	97	.00	.87	639.82
Wilks' Lambda	.13	213.28	3	97	.00	.87	639.82
Hotelling's Trace	6.60	213.28	3	97	.00	.87	639.82
Roy's Largest Root	6.60	213.28	3	97	.00	.87	639.82
RACE							
Pillai's Trace	.15	5.70	3	97	.00	.15	.94
Wilks' Lambda	.85	5.70	3	97	.00	.15	.94
Hotelling's Trace	.18	5.70	3	97	.00	.15	.94
Roy's Largest Root	.18	5.70	3	97	.00	.15	.94

Note. F = F statistic; df = degrees of freedom; Sig. = significance; η^2 = partial eta squared. Significance at the $p < .05$ level.

Given the significance of the omnibus test, univariate ANOVA tests were conducted as a follow-up to determine which specific social impairment-related symptomatology variables contributed to the main effect. Results indicated that interpersonal problems [F (1, 99) = 14.10, p = .00, η^2 = .13, observed power of .96] and family relationship problems [F (1, 99) = 7.16, p = .01, η^2 = .07, observed power of .76] statistically significantly differed according to participant race, both yielding a medium effect size (Cohen, 1988). However, work and school problems did not statistically significantly differ based on race F (1, 99) = .69, p = .42, η^2 = .01, observed power of .13. See Table 5.

Table 5

Social Impairment-Related Symptomatology Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	η^2	Observed Power
Corrected Model								
	Interpersonal	40.20	1	40.20	14.05	.00	.12	.96
	Family Relationship	15.92	1	15.92	7.16	.01	.07	.76
	Work or School	3.41	1	3.41	.66	.42	.01	.13
Intercept								
	Interpersonal	1168.91	1	1168.91	408.55	.00	.81	1.0
	Family Relationship	413.23	1	413.23	185.88	.00	.65	1.0
	Work or School	1563.09	1	1563.09	301.59	.42	.00	1.0
Race								
	Interpersonal	40.20	1	40.20	14.05	.00	.12	.96
	Family Relationship	15.92	1	15.92	7.16	.01	.07	.76
	Work or School	3.41	1	3.41	.66	.42	.01	.13
Error								
	Interpersonal	283.25	99	2.86				
	Family Relationship	220.08	99	2.22				
	Work or School	513.10	99	5.18				
Total								
	Interpersonal	1468.00	101					
	Family Relationship	640.00	101					
	Work or School	2077.00	101					
Corrected Total								
	Interpersonal	323.45	100					
	Family Relationship	236.00	100					

Work or School	516.52	100	

Note. df = degrees of freedom; F = F statistic; Sig. = significance; η^2 = partial eta squared. Significance at the $p < 0.05$ level.

Estimated marginal means revealed that findings indicated licensed professional counselors rated European Americans with schizophrenia as having statistically significant higher severity of social impairment-related symptomatology compared to African Americans. Specifically, that European Americans (e.g., 4.04 mean score) received higher ratings compared to African Americans (e.g., 2.78 mean score) for interpersonal problems. Likewise, European Americans (e.g., 2.43 mean score) received higher ratings compared to African Americans (e.g., 1.63 mean score) for family relationship problems. See Table 6.

Table 6

Social Impairment-Related Symptomatology Estimated Marginal Means

Dependent Variable	Race	Mean	Standard Error	95% Confidence Interval Lower Bound	Upper Bound
Interpersonal Problems					
	European American	4.04	.25	3.55	4.53
	African American	2.78	.23	2.32	3.24
Family Relationship Problems					
	European American	2.43	.22	1.99	2.86
	African American	1.63	.20	1.23	2.03
Work or School Problems					

European American	4.13	.33	3.47	4.79
African American	3.76	.31	3.15	4.37

Statistical Results for Research Hypothesis Four

Null hypothesis four states there is no statistically significant difference in licensed professional counselors' FARS dangerousness-related symptomatology ratings (i.e., homicidality, suicidality, and perception of need for an immediate inpatient admission) between African American and European American clients with schizophrenia. In order to statistically test this hypothesis, a MANOVA was conducted. Results showed no statistical significance for the main effect of race, Pillai's Trace = .02, F (3, 97) = .60, p = .61, η^2 = .02, observed power .17. Therefore, null hypothesis four was not rejected.

Summary of Results

Results of hypothesis one revealed that a MANOVA test showed no statistical significance in the main effect of race, therefore the null hypothesis was rejected showing no difference in licensed professional counselors' FARS psychosis-related psychological symptomatology ratings (i.e., positive psychotic symptoms and self-care deficits) between African American and European American clients with schizophrenia. Results of hypothesis two revealed that a MANOVA test showed no statistical significance in the

main effect of race, therefore the null hypothesis was rejected showing no difference in licensed professional counselors' FARS non-psychotic psychological symptomatology ratings (i.e., depression, anxiety, mania, and traumatic stress) between African American and European American clients with schizophrenia. Results of hypothesis three revealed that a MANOVA test showed statistical significance in the main effect of race. Therefore the null hypothesis was rejected, showing a difference in licensed professional counselors' FARS social impairment-related symptomatology ratings between African American and European American clients with schizophrenia. Specifically, that European Americans with schizophrenia showed statistically significantly higher severity on FARS social impairment-related symptomatology compared to African American clients. For example, results revealed that European Americans had higher severity ratings for interpersonal relationship problems and family relationship problems compared to African Americans. Results of hypothesis four revealed that a MANOVA test showed no statistical significance in the main effect of race, therefore the null hypothesis was rejected showing no difference in licensed professional counselors' FARS dangerousness-related symptomatology ratings (i.e., homicidality, suicidality, and perception of need for an immediate inpatient admission) between African American and European American clients with schizophrenia.

CHAPTER V

DISCUSSION

Descriptive Summary and Interpretation of Statistical Results

The present study investigated whether licensed professional counselors' schizophrenia symptomatology severity ratings differed based on clients' race, specifically between African American and European American participants. Clinicians' symptomatology judgments were explored related to the race of a client with schizophrenia using four MANOVAs in four categories of symptomatology: (1) psychosis-related psychological symptomatology; (2) non-psychotic psychological symptomatology; (3) social impairment-related symptomatology; and (4) dangerousness-related symptomatology.

Results revealed that null hypothesis one was not rejected, showing no statistically significant differences in licensed professional counselors' FARS psychosis-related psychological symptomatology ratings (i.e., positive psychotic symptoms and self-care deficits) between African American and European American clients with schizophrenia. Null hypothesis two was not rejected, showing no statistically significant difference in licensed professional counselors' FARS non-psychotic psychological symptomatology ratings (i.e., depression, anxiety, mania, and traumatic stress) between African American and European American clients with schizophrenia. Null hypothesis four was not rejected, showing no statistically significant difference in licensed professional counselors' FARS dangerousness-related symptomatology ratings (i.e.,

homicidality, suicidality, and perception of need for an immediate inpatient admission) between African American and European American clients with schizophrenia.

Null hypothesis three was the only hypothesis rejected. Results showed statistical significance for the category of social impairment-related symptomatology, specifically for interpersonal relationship problems and family relationship problems. Directional hypothesis three stated licensed professional counselors will rate African American clients with schizophrenia as having statistically significantly higher severity on FARS social impairment-related symptomatology compared to European American clients. However, findings revealed that licensed professional counselors rated European Americans with schizophrenia as having statistically significantly higher severity on FARS social impairment-related symptomatology compared to African American clients. This phenomenon occurred in the opposite direction of what was hypothesized. Therefore, the results showed that professional counselors gave higher severity ratings for European Americans having interpersonal relationship problems and family relationship problems compared to African Americans with schizophrenia.

Discussion of Results Compared to Related Research

To date, no studies have been found that investigated differences in symptomatology severity ratings by race of clients with schizophrenia using licensed professional counselors. However, two studies explored symptomatology severity differences among African American and European American clients with schizophrenia.

Adebimpe et al. (1982) compared symptomatology severity differences between 273 African Americans and European Americans with schizophrenia. Using MANOVA statistical analysis, Adebimpe et al. (1982) found African Americans were rated with more severe schizophrenia symptoms compared to European Americans. The researchers concluded that clinicians interpret symptomatology differently for African Americans than European Americans. This study, with a larger sample size, similarly used a MANOVA statistical analysis as was used in this present study, which is a stronger analysis compared to other studies (e.g., chi-square) allowing the researcher to compare mean scores between groups (Mertler & Vannatta, 2013). However, diagnosticians were unidentified and the *DSM-II* was used for diagnostic guidelines, which is a much older diagnostic manual absent of the multicultural considerations that appeared in the *DSM-IV* and later versions, where were used in the present study.

The second study, conducted by Lim et al. (2011) in Singapore with a sample size of 503 participants, explored the relationship between symptomatology severity and race using psychiatrists and the *DSM-IV*. They found that race predicted symptomatology severity, and using ANOVA analyses, the researchers noted that Malays (the indigenous people of the island and minority population) presented with more severe schizophrenia symptomatology compared to the dominant racial majority (e.g., Chinese) while concluding that differences may result from clinician bias.

The results of these studies do not match the findings of the current research study, which showed European Americans were rated with statistically significantly more severe schizophrenia symptomatology compared to African Americans. Febrega et al. (1988), using a large sample size (N = 6,673) and ANOVA statistical analyses, similarly

found statistical significance shown on seven items of symptomatology, six of which European Americans with schizophrenia had higher symptomatology severity compared to African Americans with schizophrenia. The researchers concluded the differences may support the phenomenon that African Americans are diagnostically mislabeled with schizophrenia. Additionally, Fabrega et al. (1988) noted that African Americans showing less severe schizophrenia symptomatology may reflect selection factors such as social-related supports (e.g., family and community provisions) when dealing with psychopathology. This conclusion is consistent with the findings of this research study that showed European Americans with schizophrenia were rated with higher symptomatology severity ratings for specifically interpersonal relationship problems and family relationship problems (e.g., social impairment-related symptomatology), which may reflect positive social-related supports in the African American culture when dealing with symptoms of a mental disorder. This ultimately may result in African Americans showing lower mean scores for social impairment-related symptomatology compared to European Americans.

The previous three studies investigated differences in schizophrenia symptomatology severity ratings by race. While all three studies had larger sample sizes, none of the previous studies used licensed professional counselors as diagnosticians and symptomatology severity raters for schizophrenia. Although the findings from this present study demonstrated that licensed professional counselors do in fact rate schizophrenia symptomatology severity differently based on race, the results unexpectedly showed the severity ratings were higher for European Americans instead of African Americans, as was initially hypothesized. This opposite directional hypothesis

was surprising, yet may help shed some light on the phenomenon of symptomatology severity rating differences by race and diagnostic racial disparities.

Discussion of Results Compared to Related Theory

Research has shown that client race is consistently a contributing factor to the misdiagnosis of African Americans (Minsky et al., 2006; Neighbors et al., 1989; Schwartz & Blankenship, 2014; Schwartz & Feisthamel, 2009). Race has been shown to be the most significant predictor of a schizophrenia diagnosis (Barnes, 2008; Barnes, 2013) with a racial identification of African American being specifically a predictor of receiving a diagnosis of schizophrenia (Pavkov et al., 1989). This phenomenon has also been demonstrated in the present study in that African American clients with schizophrenia accounted for 53.5% of the participant sample size who came from a geographical area represented by only 14.6% African Americans (U.S. Census Bureau, 2000b). These statistics related to race and diagnosis support the research trend showing disproportionate racial disparities in schizophrenia wherein African Americans are diagnosed with schizophrenia up to four times a higher rate compared to European Americans (Barnes, 2004; Barnes, 2008; Blow et al., 2004; Schwartz & Blankenship, 2014).

Some researchers have called for the use of more structured standardized diagnostic instruments to improve objectivity hoping to decrease this diagnostic racial disparity (Barnes, 2013; Malgady, 1996; Minsky et al., 2006). However, Neighbors et al. (2003) found that client race continues to be related to a diagnosis (e.g., schizophrenia)

regardless of the use of structured standardized diagnostic measures. Whaley (2004) found lower percentages of schizophrenia diagnoses compared to original chart diagnoses supporting that clinician bias may still exist. This occurrence was also demonstrated in the present study through the use of the Structured Clinical Interview for the *DSM-IV*, the Structured Clinical Interview for the Functional Assessment Rating Scale, the standardized FARS instrument, and agency-wide standardized clinical intake form, where African Americans continue to be overrepresented with a schizophrenia diagnosis.

This present study used nine licensed professional counselors (eight who self-identified as European American, and one who self-identified as being of mixed race) who participated as clinicians providing the diagnostic clinical judgment and FARS symptomatology ratings. Although, one may naturally speculate that clinicians of a different race as their clients would generate a difference in diagnostic clinical judgment when giving a mental disorder diagnosis, Whaley (2004) demonstrated that clinicians self-reporting the same race as clients did not produce a difference in giving a schizophrenia diagnosis. Therefore, clinician race that differs from the client may not influence clinical judgments (e.g., bias).

Prior research has shown several proposed reasons for diagnostic racial disparities including: (1) delayed help-seeking mental health services in African Americans resulting in a more severe and untreated mental disorder (Alexandre et al., 2010; Boa et al., 2008; Kales et al., 2000; Muroff et al., 2008; Pavkov et al., 1989; Perry et al., 2013; Schwartz & Feisthamel, 2009; Vitols et al., 1963); (2) the need for increased multicultural awareness and training in diagnostic clinicians particularly with psychiatrists, (Barnes, 2004; Boa et al., 2008); (3) clinician bias (Adeponle et al., 2012; Fruech et al., 2002; Garb 1997; Kales

et al., 2000; Kales et al., 2005; Kilbourne et al., 2004; Kilgus et al., 1995; Lim et al., 2011; Minsky et al., 2006; Minsky et al., 2003; Mizock & Harkins, 2011; Muroff et al., 2008; Neighbors et al., 2003; Perry et al., 2013; Schwartz & Feisthamel, 2009; Whaley, 2004); and (4) racial differences in symptomatology (Ainsah et al., 2008; Arnold et al., 2004; Eack et al., 2012; Strakowski et al., 1996).

Several empirical studies proposed clinician bias as the most consistent and prevalent hypothesis reported by researchers for diagnostic racial disparities and it is the most frequently cited and best possible etiological factor leading to misdiagnosis (Kales et al., 2005). Although this phenomenon was not overtly observed in this study, clinician bias could still be present since European Americans having higher severity ratings for interpersonal problems and family relationship problems may not have had a direct influence on a schizophrenia diagnosis. Also, African Americans continued to be over-diagnosed with schizophrenia, accounting for 54% of the participants while only 14.6% of African Americans are represented in the geographical location of this sample population (U.S. Census Bureau, 2000b). Therefore, clinician bias may still exist, however it was not investigated in this study, which may be indicative of some difficulty detecting where clinician bias truly occurs.

Neighbors et al. (2003) hypothesized that symptoms may be weighted for African Americans and European Americans differently resulting from bias in unconscious clinical judgment. This hypothesis was also echoed by Trierweiler et al. (2000) who concluded that diagnostic differences may stem from clinicians attributing symptomatology differently to clients of differing races because misinterpreted symptomatology may explain racial differences in symptom attribution and not

necessarily from clinician bias. While clinician bias has been shown to represent the best possible explanation leading to misdiagnosis, it is still unclear whether this factor was an operating variable in this study or a result in diagnostic differences in symptomatology attribution (i.e., misinterpretation of symptoms) by clinicians.

The purpose of this research study was to investigate whether licensed professional counselors assigned disproportionately higher symptomatology severity ratings between African Americans and European Americans. This study attempted to explore clinician bias at the level of symptomatology evaluation to understand if licensed professional counselors assigned contrasting severity ratings based on client race. This was to establish whether diagnostic racial disparities of African Americans receiving a schizophrenia diagnosis originates in clinicians' appraisal of the symptoms that make up a mental disorder. The results showed that while professional counselors do rate schizophrenia symptomatology severity differently by race, findings revealed that higher severity ratings were given to European Americans, while lower severity ratings were given to African Americans, which is contrary to prior research findings. While African Americans continued to be overrepresented having schizophrenia in this study, results did not produce more severe symptomatology as would be expected. When comparing these results to the diagnostic criteria of schizophrenia, interpersonal problems and family relationship problems are not distinct symptomatology features that particularly characterize the disorder. Although these social impairment-related symptomatology may influence the severity of the more prominent schizophrenia symptoms (e.g., hallucinations, delusions, disorganized behavior) and compliance with treatment (e.g., psychotropic medication regimen, treatment services), this phenomenon is difficult to

investigate and may be independent of clinicians' schizophrenia diagnoses or symptomatology ratings. Therefore, it is difficult to accurately conceptualize how these findings meaningfully contribute to schizophrenia, diagnostic racial disparities, and clinician symptomatology severity rating differences based on clients' race. The only other hypothesized explanations expressed in research are the need for increased multicultural awareness and training, and African Americans displaying untreated and severe mental disorders as a result of delayed help-seeking mental health services. Although it is important for clinicians to demonstrate multicultural awareness and competency through training, this would not explain the results in this study due to the findings being in the opposite direction than was hypothesized showing European Americans yielding higher symptomatology severity ratings for schizophrenia compared to African Americans. However, African Americans displaying untreated mental disorders from a delay in seeking help for health services would provide a plausible explanation.

Feisthamel and Schwartz (2009) proposed that actual racial differences in symptomatology between African Americans and European Americans may explain the phenomenon of African Americans being overrepresented with certain mental disorders. The researchers suggested a conceptual pathway described by: (1) persons of color may experience greater sociocultural challenges (e.g., discrimination, poverty, unemployment) disproportionately compared to European Americans leading to psychosocial distress; (2) unequal access to mental health treatment sources and care that is less available; (3) mistrust of the healthcare system and community stigma against mental health treatment may lead to not seeking professional assistance; (4) symptoms progressively get worse

over time with a decline in function; (5) when clients of color present for treatment, they display extreme distress or social impairment; and (6) clinicians ultimately correctly diagnose clients of color with impairing mental disorders. Evidence for this model has been reported in research literature.

Studies have shown that regardless of the high prevalence and severity of mental disorders among racial minorities (e.g., African Americans), they are less likely to seek mental health assistance and are more likely to terminate treatment prematurely when they do (Owen, Imel, Adelson, & Rodolfa, 2012; Sue & Chu, 2003; U.S. Surgeon General, 2001; Wierzbicki & Pekarik, 1993). Diala et al. (2000) suggested African Americans who rely on racially different providers (e.g., predominantly European American) may face discrimination or underdeveloped multicultural skills, which may negatively influence their attitudes towards mental health services. Research has also suggested that for racial minority groups, experiences of racial discrimination can influence help-seeking behaviors and their use of formal health and social services (Smedley, Smith, & Nelson, 2003). Additionally, racial discrimination experiences have been associated with reduced use of preventative health services (Trivedi & Ayanian, 2006), delayed seeking medical help and reduced treatment regimen compliance (Casagrande, Gary, LaVeist, Gaskin, & Cooper, 2007), and decreased use of mental health services (Richman, Kohn-Wood, & Williams, 2007). Perceived discrimination may also increase an existing significant stress burden, exacerbate chronic stressors, and restrain help-seeking actions (Williams, Neighbors, & Jackson, 2003).

Many factors have been identified to explain these disparities, such as mistrust toward health care system, lack of culturally competent providers and poor access to

treatment (U.S. Surgeon General, 2001). However, the primary barrier reported preventing racial minorities from reaching treatment are negative attitudes (e.g., stigma) towards seeking mental health services (U.S. Surgeon General, 2001). With regard to schizophrenia, African Americans are less likely than European Americans to receive formal mental health treatment (Barrio et al., 2003; Diala et al., 2000).

Interestingly, Diala et al. (2000) found that prior to actual use of mental health services, Africa Americans' attitudes towards seeking services were comparable to European Americans and in some instances more favorable. They also found African Americans who demonstrated need for services and received them held more negative attitudes about mental health services and were less likely to use them again than European Americans who showed comparable needs and usage. Yamada, Barrio, Atuel, and Hough (2009) investigated mental health treatment delay in adults with schizophrenia. The researchers found the mean delay in treatment initiation was 7.4 ± 7 years, with African Americans having the largest mean gap between reported symptom onset and treatment initiation (10 ± 10.6 years) compared to European Americans (6.6 ± 6.7 years).

Actual racial differences in symptomatology between African Americans and European Americans may explain why African Americans are overrepresented with a schizophrenia diagnosis. These racial differences may be a result of delayed help-seeking behaviors by African Americans for mental health services, which may provide some understanding into the phenomenon depicted in this study that showed African Americans are rated by licensed professional counselors with less severe symptomatology while continuing to be more frequently diagnosed with schizophrenia

compared to European Americans. Negative attitudes appear to be the most prominent element contributing to delayed help-seeking behaviors, among many other factors such as discrimination, less access to services, and mistrust in the system. The implications of this phenomenon are important to highlight for counselor training, supervision, counselor practice.

Implications for Counselor Training and Supervision

The ACA *Code of Ethics* (2014) stated that "counselor educators infuse material related to multiculturalism/diversity into all courses and workshops for the development of professional counselors" (p. 14). It is important for counselor educators to continue incorporating relevant multicultural issues such as persons of color experiencing greater sociocultural challenges (e.g., discrimination, poverty, unemployment), unequal access to mental health treatment sources, and mistrust of the healthcare system and social stigma (Feisthamel & Schwartz, 2009). Additionally, it is important for counselor educators to be aware of and educate counselor trainees regarding the role of clinician bias in diagnostic practices. Specifically, the phenomenon of African Americans being overrepresented with certain mental disorders and how symptoms can progressively get worse over time as a product of a delay in help-seeking behaviors resulting in a clinical presentation of a more severe mental disorder. Particularly, this information is valuable in classes taught regarding diagnostic practices where multicultural competence and sensitively is important in establishing an accurate diagnosis.

Similar to the ACA, the American Mental Health Counselors Association (AMHCA) *Code of Ethics* has established "standards for education and training, professional practice, and professional ethics for clinical mental health counselors" (AMHCA, 2015, p. 1). According to standard D.1.a. mental health counselors utilize diagnostic assessment techniques and tools that are reliable, valid, and appropriate based on the client's age, gender, race, ability and other characteristics (AMHCA, 2015). Standard D.2.a. stated that mental health counselors determine diagnoses on multiple sources of data whenever possible (AMHCA, 2015). Similarly, standard D.2.c. stated mental health counselors consider multicultural factors such as gender, race, religion, age, ability, class, ethnicity, and sexual orientation in diagnosis and treatment recommendations (AMHCA, 2015). It is important for counselor educators and supervisors to educate students and trainees regarding ethical standards of clinical practice that serve as guidelines for the profession of counseling. Advocacy is another important role counselors can play. Standard F.2. stated mental health counselors may serve as advocates at individual, institutional, and societal levels to foster sociopolitical change to meet the needs of the client or community (AMHCA, 2015). Counselor educators can encourage students to engage in advocacy efforts for clients, especially minority populations and persons of color.

Although counselors may be actively practicing ethical standards to reduce diagnostic errors and ensure quality services for all clients, it is also important for counselor educators and supervisors to instruct students in the importance of social justice counseling. Sue and Sue (2013) described social justice counseling as:

> An active philosophy and approach aimed at producing conditions that allow for equal access and opportunity; reducing or eliminating disparities in education, healthcare, employment, and other areas that lower the quality of life for affected populations; encouraging mental health professionals to consider micro, meso, and macro levels in the assessment, diagnosis, and treatment of client and client systems; and broadening the role of the helping professional to include not only counselor/therapist but advocate, consultant, psychoeducator, change agent, community worker, and so on (p. 108).

By informing new upcoming counselors of the role of social justice counseling, not only will they be more multiculturally informed and sensitive, they can proactively make efforts to be change agents in their agencies and communities to help reduce disparities that lower the quality of life for certain populations. As Warren and Constantine (2007) expressed, if counselors are concerned with the welfare of all persons, then they must ultimately be concerned with the injustices and obstacles that harm and oppress those in our society. Social justice counseling takes a perspective that focuses on social changes such as ending oppression and discrimination in our society (Sue & Sue, 2013). In 2014, the Association for Multicultural Counseling and Development (AMCD) revised the Multicultural Counseling Competencies (MCC) developed by Sue, Arrendondo, and McDavis (1992) to help address the growing need to update the MCC and reflect a more inclusive understanding of cultural and diversity, as well as, address the expanding role of professional counselors to include social justice advocacy (Ratts, Singh, Nassar-McMillan, Butler, & McCullough, 2015).

These Multicultural and Social Justice Counseling Competencies (MSJCC) were intended to provide a framework for counseling professionals to deliver multicultural and social justice competent counseling training and practice, clinical supervision, research, and advocacy (Ratts et al., 2015). Counselor educators and supervisors can use the MSJCC to help provide a heightened focus on multicultural and social justice competence in counselor training to establish a safe, supportive, and affirming counseling relationship with culturally diverse clients (Ratts et al., 2015). The MSJCC can be infused in classes with students to practice utilizing this framework while increasing familiarity. The combination of social justice counseling with the MSJCC framework can help counselor educators and supervisors instruct counselors-in-training to be more multiculturally competent in working with marginalized populations and ultimately combat disparities experienced by certain individuals who experience obstacles such as a lack of access to counseling services, mistrust of the mental health system, prejudice and discrimination, and other harmful impediments that may lead to delayed help-seeking behaviors seen in African Americans.

The CACREP standards that guide counseling education programs specifically outline in the social and cultural diversity course, one of the necessary core areas of curricular requirements for master's level counselors, that counselor education programs incorporate awareness of "help-seeking behaviors of diverse clients" (CACREP, 2016, p. 10). It is important for counselor educators to specifically be aware of the delayed help-seeking behaviors of diverse clients, and how this action has deleterious effects such as presenting for diagnostic assessment with potentially more severe symptomatology and mental disorders (e.g., schizophrenia). Additionally, how delayed help-seeking behaviors

can lead minority clients to be overrepresented compared to European Americans. Furthermore, it is vital that counselor educators instill multiculturalism into additional core classes such as ethical practice, human growth and development, and assessment and testing.

Another consideration would be for counselor educators to instruct students on assessment instruments that more precisely appraise schizophrenia symptomatology to increase accuracy of their assessment. For example, the Positive and Negative Syndrome Scale (PANSS) for schizophrenia (Kay et al., 1987) is the most widely used scale to assess a variety of symptoms in clients with schizophrenia and other psychotic disorders (van der Gaag et al., 2006). The PANSS is a 30-item, relatively brief interview measuring symptom severity of clients with schizophrenia (Kay et al., 1987). Counselor educators could instruct students on how to use the PANSS, specifically in their counseling assessment class to be used as a reliable and valid instrument for the appraisal of schizophrenia symptomatology severity.

In consideration of clinical supervision, counselor supervisors should be aware of the role of clinician bias in diagnostic practices of supervisees and counselor trainees. Supervisors should actively be able to identify clinician bias in their supervisees and discuss ways to decrease this occurrence through increased awareness, ongoing training and supervision. Supervisors should monitor supervisee's interactions with clients, particularly when there are cultural differences between supervisee and client to mitigate any countertransference, stereotypes, and biases.

Implications for Counselor Practice

Counselors in practice should be aware of clinician bias during the assessment and diagnostic process and seek supervision if they become aware of any such conflicting issues that may be present. Counselors should seek continuing education opportunities to stay current with counseling trends related to multiculturally-informed practice. When working with clients of differing cultural backgrounds, counselors should be educated and sensitive to multicultural factors affecting the therapeutic relationship such as mistrust of the mental health system, previous discriminatory experiences and prejudices. In particular, counselors should be aware of the delayed help-seeking behaviors of African Americans and other minority populations.

Schwartz and Dougall (2011) reported that counselors' cognitive reactions can impact their clinical judgments and expressed how countertransference reactions to clients can also significantly affect their decision-making process. Countertransference is defined as a counselor's reaction to a client originating from the counselor's own unresolved internal conflicts (Gelso & Hayes, 1998). If counselors have certain unresolved cultural biases, then not only can their clinical practice can be negatively affected, but they could be impaired and practicing unethically (ACA, 2014). However, if counselors acknowledge, understand, and manage the countertransference reactions, they can actually advance the counseling process in healthier and more appropriate ways (Gelso & Hayes, 1998; Kiesler, 2001).

Counselors should also advocate in the community for other counselors to practice cultural competence and sensitivity when working with minority populations and clients with differing cultural backgrounds. Goodman et al. (2004) expressed that

counselors should engage in social justice counseling to help ensure that all people have equal access to the resources, employment, services, and opportunities they require to develop more fully. This may entail counselors providing local training to educate the community and other professionals on cultural disparities and ways to improve equal access to services. Counselors could participate on community boards to provide a multicultural perspective and become involved in outreach activities to serve underrepresented populations where quality mental health services may be lacking.

Limitations and Recommendations for Future Research

Although the results of this study contribute to the literature and the counseling profession, the research was not without limitations. One limitation involved missing data during the pre-analysis data screening process. There were missing data for 10 participants: (a) one for non-psychotic psychological symptomatology; (b) one for psychosis-related psychological symptomatology; and (c) and seven for dangerousness-related symptomatology. Additionally, gender for two participants were not reported, however this was determined not to have an effect on the statistical analyses. Although this missing data only represented .66% of data values, results can still be affected. A second limitation involved the sample size. While the sample size was adequate for this study, a larger sample size would be more accurately representative of the population and decrease the sampling error between the sample mean and the population mean (Gravetter & Wallnau, 2013). A larger sample size would also influence statistical power and achieve an increased probability to successfully reject the null hypothesis, thus

increasing the likelihood of finding significance in this study (Gravetter & Wallnau, 2013). Relatedly, participants in the sample were from a homogenous geographical area (semi-urban areas on one southeastern state), which contributes to the threat of external validity. Another limitation would be that none of the diagnosticians self-identified as African American. Although, a counselor having the same identified race as the client has not shown any differences in diagnostic racial disparities for schizophrenia (Whaley, 2004), this has not been investigated with licensed professional counselors' symptomatology severity ratings for clients with schizophrenia , which may involve bias and ultimately influence decision making and severity ratings.

Similarly, during the period of diagnostic assessment and FARS severity ratings, the clinicians participating in the present study were functioning under the *ACA Code of Ethics and Standards of Practice* (1995) that were the ethical guidelines nation-wide for counselors. In comparison to the current *ACA Code of Ethics* (2014), the following relevant ethical codes were found to be substantially similar between both standards of practice: (a) A.2. regarding counselors respecting diversity and not engaging in discriminatory practices while respecting cultural differences; (b) E.5. regarding proper diagnosis of mental disorders emphasizing counselors' exercise of cultural sensitivity; (c) E.6. regarding test selection cautioning counselors to carefully select tests for culturally diverse populations; (d) E.8. regarding diversity in testing cautioning counselors to recognize cultural effects (e.g., race) when administering and interpreting test results; and (e) F.2. regarding multicultural diversity training in counselor education and training programs. However, through the newly established and updated ethical codes since the time of client assessment and data collection of the archival data used in this study, there

has been a greater emphasis in multicultural awareness and training established in the current *ACA Code of Ethics* (2014). For example, (a) ethical code B.1.a. regarding multicultural/diversity considerations highlights the importance of counselors maintaining awareness and sensitivity concerning cultural meanings of confidentiality and privacy information; (b) ethical code E.5.c. further stressed historical and social prejudices in the diagnosis of pathology and in the misdiagnosis and pathologizing of certain individuals while striving to be aware of such biases; (c) ethical code F.7.c. emphasized counselor educators infusing multiculturalism material into all courses and workshops for the development of professional counselors; and likewise (d) ethical code F.11. underscored the importance of counselor education training programs recruiting diverse faculty (e.g., F.11.a) and also training students to gain awareness, knowledge, and skills in multicultural practice and competence (F.11.c) (ACA, 2014). Although these important and necessary updates did not exist in the ethical codes for the counselors' training and practice in this study, it is difficult to determine the impact it may have on the findings of this present study.

As described in pages 84-85, during the period that archival data were collected for the present study, CACREP 2001 accreditation standards were in effect nation-wide. The clinicians participating in the present study received master's degrees in Community Counseling (versus Clinical Mental Health Counseling, as described in CACREP 2016 accreditation standards) or doctoral degrees in Counselor Education and Supervision. The following factors were found to be substantially similar between both accreditation guidelines: (a) the eight foundational core areas for all entry-level counselor education graduates; (b) the emphasis on and standards related to multicultural counseling

knowledge, awareness, and skills; (c) the minimum clock hours and supervision requirements for practicum and internship experiences; and (d) the general requirements for counselor educator faculty (CACREP, 2001, 2016). In a comparison of the CACREP 2001 standards and current CACREP 2016 standards, no substantial differences in core educational requirements relevant to the present study were identified. Therefore, the date of archival data obtained and the training received by participating clinicians is generalizable to current standards of practice. Additionally, diagnostic training principles have not changed substantially between prior and current counseling program accreditation standards (CACREP, 2001, 2016). However, it is uncertain the impact these changes in accreditation standards may have on the results in this study.

It is unclear in this study whether the participants were presenting for a first-episode assessment, or if they have received prior diagnostic assessment (e.g., reassessment), which could not only influence clinician decision-making (i.e., confirmatory bias), but also affect the development and course of the disorder through early detection (Larsen et al., 2001). Few studies have focused on the distinct descriptive differences (e.g., symptomatology) between first-episode clients and chronic clients diagnosed with schizophrenia (Wang et al., 2013). However, Wang et al. (2013) conducted a study that compared first-episode and chronic clients hospitalized with a schizophrenia diagnosis in China and found that few differences on socio-demographic characteristics were present. Nevertheless, several differences in the clinical presentation of first-episode schizophrenia were detected such as more positive symptoms and fewer negative symptoms. Specifically, more severe positive and less severe negative symptoms distinctly characterized first-episode schizophrenia clients,

which the researchers suggested are inherent features of a different phase of the disorder (Wang et al., 2013). This would indicate an observable difference in symptomatology presentation between first-episode clients diagnosed with schizophrenia compared to clients having a more long-term chronic diagnosis. This factor was not identified in this study and may contribute to the potential limitations.

A final limitation of this study involves the use of the *DSM-IV-TR* (APA, 2000) for diagnostic criteria in making a schizophrenia diagnosis that does not involve the most recent edition of the *DSM-5* (APA, 2013) that was released in 2013. While the majority of diagnostic criteria for schizophrenia are unchanged between editions, one particular revision in criterion A may affect diagnostic "caseness," which is referred to the prevalence or overall number of individuals diagnosed with a given disorder (Reddy, Horan, & Green, 2014). For example, the *DSM-5* added a requirement that at least one of the minimum two necessary characteristic symptoms must be delusions, hallucinations, or disorganized speech out of the five available characteristics in criterion A: (1) delusions; (2) hallucinations; (3) disorganized speech; (4) grossly disorganized or catatonic behavior; and (5) negative symptoms (APA, 2013). This is in comparison to the *DSM-IV-TR* that required at least any two of the five characteristics in criterion A be present. This difference in criterion requirements could affect caseness, however Tandon et al. (2013) reported that most individuals who did (or did not) meet the *DSM-IV* criteria for schizophrenia should continue to meet (or not meet) the *DSM-5* criteria. Specifically, Tandon et al. (2013) stated the change will have limited impact on caseness with less than 2% of cases diagnosed with *DSM-IV* schizophrenia criteria no longer meeting the required diagnostic conditions under the *DSM-5* schizophrenia criteria. Therefore, this

present study using the *DSM-IV-TR* instead of the most recent *DSM-5* should have a very limited impact.

There are several recommendations for future research. Conducting a similar study using a larger sample size with several African American and European American clinicians to investigate symptomatology severity ratings by race with *DSM-5* criteria would be promising. Researchers may benefit from using other instruments that assess schizophrenia symptomatology more closely to diagnostic criteria such as the PANSS for schizophrenia (Kay et al., 1987) and investigate qualitative symptomatology differences between first-episode clients diagnosed with schizophrenia compared to chronic clients who have been previously diagnosed. Also, using a participant sample from differing geographical locations to increase generalizability would be ideal. Researchers may want to include additional minority populations such as Latino Americans and Asian Americans to investigate diagnostic racial disparities and symptomatology severity rating differences given by clinicians.

The proposed theory to explain the findings of this research study hypothesized that delayed help-seeking behaviors may explain why African Americans continue to be overrepresented among clients diagnosed with schizophrenia, yet were rated with less severe symptomatology ratings by licensed professional counselors. Yamada et al. (2009) suggested future research should examine which cultural factors are embedded in treatment seeking patterns that contribute to the delayed initiation of mental health treatment. Therefore, it is recommended to further investigate delayed help-seeking behaviors of African Americans and how this influences symptomatology presentation and diagnostic decision making by clinicians.

Summary of Discussion and Implications

The present study investigated whether licensed professional counselors' schizophrenia symptomatology severity ratings differed based on clients' race between African American and European American participants. Only null hypothesis three was rejected that showed statistical significance for the category of social impairment-related symptomatology, specifically for interpersonal problems and family relationship problems. These findings revealed that licensed professional counselors rated European Americans with schizophrenia as having statistically significantly higher severity FARS social impairment-related symptomatology compared to African Americans, which was in the opposite direction of what was hypothesized.

Prior research has proposed several reasons for diagnostic racial disparities with clinician bias as the most consistent and prevalent hypothesis given by researchers. Although this phenomenon was not overtly observed in this study, clinician bias may still be present but difficult to identify. Additionally, clinicians may misinterpret client symptomatology in African Americans compared to European Americans causing a misdiagnosis. This misdiagnosis may therefore result in diagnostic differences in symptomatology attribution by clinicians. The conceptual pathway proposed by Feisthamel and Schwartz (2009) provided a plausible explanation highlighting that delayed help-seeking behaviors in African Americans may result in them presenting for treatment when symptoms over time have progressively worsened, and ultimately displaying a more severe mental disorder (e.g., schizophrenia) compared to European

Americans. Counselor educators are encouraged to continue incorporating relevant multicultural issues in counseling curriculum and stay current with research trends demonstrating how client factors (e.g., race) may influence clinician judgment and decision making. Counselor educators and supervisors should educate counselor trainees regarding the role of clinician bias in diagnostic practices and the importance of social justice counseling. If counselors have certain unresolved cultural biases, then their clinical practice can be negatively affected through countertransference.

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APPENDICES

APPENDIX A

TO: The University of Akron Dissertation Committee Members and Institutional Review Board

FROM: Robert C. Schwartz, research data owner

RE: Approval of dissertation use of research data by David Blankenship, Counselor Education and Supervision Doctoral Program

DATE: June 1, 2016

This memorandum verifies that, as owner of Functional Assessment Rating Scale archival research data for approximately 101 participants with schizophrenia, I fully and freely allow David Blankenship use of such data specifically for the purposes of a dissertation research project under the direction of his dissertation committee members and after approval by the university institutional review board. Use of the specified archival research data is limited to data analyses directly related to completion of the dissertation.

_____

Robert C. Schwartz, Ph.D., LPCC-S

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College of Health Professions
Akron, OH 44325-5007
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APPENDIX B

INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

Office of Research Administration
Akron, OH 44325-2102

NOTICE OF APPROVAL

Date: September 19, 2016

To: David Blankenship,
School of Counseling

From: Sharon McWhorter SM

IRB Number: 20160906

Title: The Influence of Race on Professional Counselors' Symptomatology Ratings Among Persons with Schizophrenia

Approval Date: September 16, 2016

Thank you for submitting your IRB Application for review. Your protocol represents minimal risk to subjects and matches the following federal category for exemption:

- ☐ **Exemption 1** – Research conducted in established or commonly accepted educational settings, involving normal educational practices.
- ☐ **Exemption 2** – Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior.
- ☐ **Exemption 3** - Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior not exempt under category 2, but subjects are elected or appointed public officials or candidates for public office.
- ☑ **Exemption 4** – Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens.
- ☐ **Exemption 5** – Research and demonstration projects conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine public programs or benefits.
- ☐ **Exemption 6** – Taste and food quality evaluation and consumer acceptance studies.

Annual continuation applications are not required for exempt projects. If you make changes to the study's design or procedures that increase the risk to subjects or include activities that do not fall within the approved exemption category, please contact the IRB to discuss whether or not a new application must be submitted. Any such changes or modifications must be reviewed and approved by the IRB prior to implementation.

Please retain this letter for your files. This office will hold your exemption application for a period of three years from the approval date. If you wish to continue this protocol beyond this period, you will need to submit another Exemption Request. If the research is being conducted for a master's thesis or doctoral dissertation, the student must file a copy of this letter with the thesis or dissertation.

☐ Approved consent form/s enclosed