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TRI-ETHNIC DIFFERENCES: AN EXAMINATION OF ASSOCIATED SYMPTOMS WITHIN AN INPATIENT SETTING

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TRI-ETHNIC DIFFERENCES: AN EXAMINATION OF ASSOCIATED SYMPTOMS WITHIN AN INPATIENT SETTING

by

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Dedication

To my Mom and Dad, who instilled in me the importance of valuing others, and who

taught me the importance of an education.

Chincho

To Dr. Patricia Mary Averill for her support, encouragement, scholarship, and, most

importantly, her friendship.

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iv

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Tri-Ethnic Differences: An Examination of Associated
Symptoms Within an Inpatient Setting

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The study examined the interactions among race, gender, age, length of stay, legal status on admission, clinical symptoms, and psychiatric diagnosis. The study analyzed archived data from a sample of inpatients admitted to a large urban teaching psychiatric mental health facility between January 1, 2004 and December 31, 2007.

The extant literature suggests that African Americans are more likely to have a discharge diagnosis of a psychotic disorder and Caucasians are more likely to have a mood disorder; but it is not clear whether there is a predominant psychiatric diagnosis for Hispanics. The literature also suggests there may be differences in patient-reported versus clinician-identified symptoms.

Archived data were included from patients who were 18 years or older and who self-identified as African American, Caucasian, or Hispanic. The archived data included completed admission and discharge data from the Physician-Rated Anchored Brief Psychiatric Rating Scale (BPRS-A), the Nurse-Rated Affective Disorder Rating Scale (ADRS), and the patient self-reported Brief Symptom Inventory (BSI).

The study used analyses of covariance (ANCOVA) to analyze continuous variables and Chi-square analyses to explore categorical variables. Descriptive analyses were conducted on demographic and study variables to evaluate data integrity, to assess

homogeneity, and to quantify normality. Relative and absolute difference scores were computed within ethnicity x gender subgroups.

Findings from the study of 1,115 cases demonstrated significant and persistent differences across ethnic and gender categories confirming general findings from earlier studies (Lawson et al., 1994; Mukherjee et al., 1983; Neighbors et al., 1989; Strakowski et al., 1996). In addition, the study also demonstrated significant differences in clinical evaluations of physicians and nurses of the same patients. Using an innovative methodology, relative and absolute difference scores were computed between the patient's evaluation and that of both physician and nurse providers. A comparison of the distributions of the difference scores across providers and ethnicity x gender groups provided insight into the differences in agreement/disagreement patterns by clinician when gender and ethnic factors were involved. The findings indicated clear patterns of differences between the study participants' self-evaluations and the clinician-evaluations of the patient. Physicians appear to show a bias against females and minorities, rating them in a more negative manner. There also is a similar, but less dramatic, pattern of negative assessment by nurses. The study findings demonstrate the need for enhanced awareness of the impact of race during psychiatric diagnostic processes and emphasize the need for culturally specific research.

TABLE OF CONTENTS

List of Tables

List of Figures

List of Abbreviations

ADRS	Affective Disorder Rating Scale
AAF	African American female
AAM	African American male
ANCOVA	Analyses of covariance
BPRS-A	Anchored Brief Psychiatric Rating Scale
BSI	Brief Symptom Inventory
CF	Caucasian female
CM	Caucasian male
DO	Disorder
DSM-IV	Diagnostic and Statistical Manual-IV
DSM-IV-TR	Diagnostic and Statistical Manual-IV-Text Revision
Dx	Diagnosis
HF	Hispanic female
HM	Hispanic male
KW-H	Kruskal Wallis ANOVA
LOS	Length of Stay
MDD	Major Depressive Disorder
MW-U	Mann Whitney U

CHAPTER ONE: INTRODUCTION TO STUDY

INTRODUCTION

Chapter One provides an introduction of the dissertation's subject matter and details the problem statement, purpose of the study, and rationale for the study. Three specific aims as well as six sub-hypotheses are presented. A definition of key terms, assumptions, delimitations, and limitations are provided. The chapter concludes with a summary of the study's significance.

PROBLEM STATEMENT

Soren Kierkegaard's social criticisms hold continued relevance, as evidenced by his statement that "once you label me, you negate me" (Kierkegaard, n.d.). This commentary is important because individuals are labeled by various entities and through many means. Although some of these labels may be welcomed, others are not. Moreover, labels can affirm or detract from our overall well-being, how others see us, and how we view ourselves.

Not only does labeling occur in everyday life, but also in the context of healthcare. The act of labeling is particularly impactful when it corresponds with a malady or disorder that others consider repugnant. Psychiatric labels are often most damaging because they may extend beyond their intended use and describe behavior or state-of-being. Examples include "well, he is a little crazy," or "her thoughts are really bizarre; she's a schizophrenic." Given the gravity of these labels, one may ask: 1) who makes these diagnoses, and 2) how are these diagnoses made?

Prior studies give clues of labels' origins in mental health diagnoses. A 2001 study authored by the U.S. Surgeon General detailed the influence of culture on mental health diagnoses. The report noted cultural characteristics of ethnic and racial minority patients can influence mental illness diagnoses and psychiatric healthcare protocols. Indeed, minorities "are at risk for mental disorders such as depression and anxiety" due, in part, to racism or discrimination they have experienced (Department of Health and

Human Services [DHHS], 2001). Thus, clinicians should be cognizant of the diverse cultures contained in ethnic populations served in order to be more effective providers of care.

The psychiatric dialect is a complex and often convoluted system comprised of verbal and non-verbal interchanges between clinician and patient. Clinicians must accurately interpret the information presented by their patients. Further, clinicians must view psychiatric patients holistically, analyzing, synthesizing and interpreting the patient's signs, symptoms, and behaviors to correctly formulate a psychiatric diagnosis. A complicating factor is that patients' presentation will be influenced by their own characteristics, including factors such as race, gender, culture and age. The outcome of this interchange between patient and clinician is the culmination of all information presented and the establishment of a psychiatric diagnosis.

Ruiz (1995) addressed how culture influences psychiatry while taking into account these complicated interactions:

> The cultural identity of providers and consumers, their cultural perceptions of mental illness and its treatment and their psychosocial and socioeconomic environment all could have a major impact on the psychiatric diagnosis that is assigned, the treatment chosen and the ultimate outcome of a therapeutic intervention (p. 329).

A clinical case conference by Ruiz (1998) noted that culture plays a major role in physical and mental health care. Specifically, Ruiz (1998) suggested that, "Psychiatrists need to understand not only the concept of 'disease' as a pathophysiological phenomenon but the concept of 'illness' as well, with its host and environment connotations" (p. 1764). In other words, providers must be mindful of patients' socio-cultural backgrounds when assessing individuals' mental health.

Interest in cross-cultural mental health research began in the 1960s, when Pasamanick (1963) published his article on differences in racial prevalence of mental disorders. The author reported that racial differences in mental disorders have been attributed to stress related to accelerated acculturation, striving for equality, and feelings of inferiority. Since the 1960s, there have been several studies that examined race and psychiatric diagnosis (Adebimpe, 1981; Adebimpe et al., 1982; Brekke & Bario, 1997;

Dohrenwend et al., 1980a; Fabrega et al., 1968; Fisher, 1969; Gullatee, 1969; Neighbors et al., 1989; 2003). It is noteworthy that a majority of the studies included African American and Caucasian participants. The literature search revealed few studies that examined other minorities such as Hispanics, Asians, Pacific Islanders, or Native Americans. This imbalance jeopardizes the validity and reliability of the clinicians as well as the accuracy of any diagnoistic instruments. Kleinman (2004) also highlights the need to provide evidence for the efficacy of culturally-sensitive approaches: do such approaches improve the outcomes for psychiatric patients who are minorities?

PURPOSE OF STUDY

The purpose of this study was to examine whether differences exist between a group of tri-ethnic (African American, Caucasian, and Hispanic) patients in an inpatient setting with respect to selected psychiatric diagnoses. The study also examined what psychiatric differences, if any, exist between length of hospital stay and legal admission status.

A number of studies have examined variations in psychiatric diagnoses by race or ethnicity. African American patients are often overly diagnosed with schizophrenia compared to Caucasian patients, although African Americans are less likely to be diagnosed with psychotic depression based upon first-rank symptoms (Lawson et al., 1994; Mukherjee et al., 1983; Neighbors et al., 1989; Strakowski et al., 1996). In particular, Strakowski et al.'s (1996) study found that African American patients were more likely to receive a psychiatric diagnosis of schizophrenia compared to Caucasian patients. These research findings revealed that mean symptom scores for schizophrenia were significantly greater for African American patients. In addition, the researchers concluded that racial differences in psychiatric symptomology resulted from small- and medium-effects from a number of psychotic symptoms such as delusions or hallucinations, thought insertion or removal, and thought-broadcasting rather than large-effects from few psychotic symptoms. The study did not identify whether differences in symptom profiles were a result of bias; however, the disproportionate scores suggested that additional research is needed to clarify influences of race and culture in the expression of psychosis or first-rank symptoms.

3

Psychiatric symptomology can differ among different racial/ethnic groups (Brekke & Barrio, 1997; Thakker & Ward, 1998). Lu (1995) pointed out that behaviors normally exhibited in some racial/ethnic groups may be regarded as delusional or psychotic in others. Mukherjee et al. (1983) posited that racial disparities in mental health reflect clinicians' tendency to diagnose affective symptoms in African American patients as relating to psychotic disorders rather than mood disorders. Although the lifetime prevalence of bipolar disorder is one percent for all races (Hilty et al., 1999), Caucasians receive a diagnosis of bipolar disorder significantly more often than African Americans (Strakowski et al., 1996). Strakowski et al. (1996) noted "the reasons for this racial disparity in diagnosis are unclear, but have been hypothesized to be, at least in part, due to racial differences in symptomatic presentations of affective and psychotic disorders" (p. 118).

Alternatively, Trujillo (2008) advocated for "cultural psychiatry." Trujillo defined cultural psychiatry as striving: 1) to understand variations for various ethnicities and cultures in the occurrences of common psychiatric disorders; 2) to illustrate patterns, symptoms, and behaviors closely associated with certain cultures and ethnicities, including those groups' belief systems and "idioms of distress;" and 3) to describe pathways that transform culturally derived stresses into symptoms, syndromes, and behaviors (p. 68).

Rationale for the Study

Few quantitative studies have explored variations in psychiatric diagnosis by race. Studies that have investigated these discrepancies are typically bi-ethnic in nature—that is, they focus on African American and Caucasian ethnic groups. Variations in other ethnic groups (e.g., Hispanic, Asian, Pacific Islander, Native American) remain poorly understood. Further studies investigating race and ethnicity bias in psychiatric diagnoses and treatment experiences could help clinicians to provide culturally sensitive care to all patients.

Specific Aims and Research Questions

The purpose of the study was to examine the influences of ethnicity (African American, Caucasian, and Hispanic) on three major categories of psychiatric diagnosis (schizophrenia, bipolar disorder, and major depressive disorder) and clinical characteristics (symptomatology as evidenced by patient self-rated scales [BSI] and clinician rated scales: nurse [ADRS] and physician [BPRS-A]), as well as hospital-related variables (legal status and length of stay [LOS]) and gender among a tri-ethnic sample of adult psychiatric inpatients who have been hospitalized with an acute psychotic episode.

SPECIFIC AIM 1

Explore the differences between ethnicity and gender on discharge diagnosis.

SA1RQ1: Is there a difference across ethnic x gender groups on discharge diagnoses?

SA1RQ1 Analysis: Chi-square analysis was conducted across each ethnic x gender group (e.g., male Caucasian, female Caucasian) across discharge diagnoses.

SPECIFIC AIM 2

Explore the differences between ethnicity x gender and clinical characteristics.

SA2RQ1: Are there differences between the self-ratings and clinician ratings within each ethnic x gender group with the greatest differences occurring in African American and Hispanic groups?

SA2RQ2: Is there a difference between ethnic x gender groups and self-report scales?

SA2RQ3: Are there differences between ethnic x gender groups and clinician reported scales?

SA2RQ1, SA2RQ2, SA2RQ3 ANALYSES

SA2RQ1: Involves a transformation of those dimensions that have comparable subscales (e.g., all three groups have depression equivalent scales) into z scores in order to compare across subscales to address the first issue. To address the issue of differences, two sets of difference scores between self-evaluations by the patient and each provider

group (self *vs.* physicians and self *vs.* nurses) were then calculated. Relative difference scores indicate the degree of difference between self and provider as well as direction, i.e., whether patients' evaluation was lower or higher than that of the provider. Absolute difference scores ignore direction and provide summative information for degree of difference only. Relative and absolute difference scores were computed within race and gender subgroups. A comparison of the distribution of these difference scores across providers and race/gender groups allowed for insight into the cumulative proportion that fall within a range of agreement.

SA2RQ2 & SA2RQ3: A two-way analysis of covariance (ANCOVA) across ethnicity (3 [African American, Caucasian, and Hispanic]) x gender (2 [male and female]) co-varying on age assessed differences on self-reported scales and clinician scales.

SPECIFIC AIM 3

Explore the differences between ethnicity x gender groups and hospital related variables.

SA3RQ1: Is there a difference across ethnic x gender groups and legal status?

SA3RQ2: Is there a difference across ethnic x gender groups and length of stay?

SA3RQ1, SA3RQ2 Analyses

SA3RQ1: Chi-square was conducted across ethnic x gender groups (6 [each gender in each ethnicity]) by legal status (2) (voluntary and involuntary).

SA3RQ2: Two-way ANCOVA across ethnicity (3) x gender (2) on length of stay was performed co-varying on age.

ASSUMPTIONS

This study used the following assumptions:

1. Psychiatric patients honestly and accurately report their mental health behaviors in the BSI.
2. Clinicians (physicians and nurses) are not biased in their interpretation of the psychiatric patients' responses as reflected in the BPRSA and ADRS.

DELIMITATIONS

The study had the following delimitations:

1. The study sample was drawn from an archived database of psychiatric patients.

2. Patients in the archived database were admitted to an acute care, inpatient psychiatric mental health facility in a large urban city in the southwestern United States.

3. The study site is a university-affiliated institution.

4. The study utilized archived data that were collected from January 1, 2004 to December 31, 2007.

5. Only patients who met the study's inclusion criteria had their data analyzed.

LIMITATIONS

The study included the following limitations:

1. Data were taken from an existing archived database and should thus be considered a convenience sample.

2. Participants provided responses by self-report; therefore, subject-bias may exist.

3. The study sample was limited to patients who self-identified as African American, Caucasian, or Hispanic.

4. The study sample was limited to patients who were diagnosed with three core psychiatric diagnoses: schizophrenia, bipolar disorder, and major depressive disorder.

5. The study sample consisted of African American, Caucasian, and Hispanic patients who lived in Houston, Texas and surrounding areas of Harris County.

6. The overall sample size was 1,115 participants; racial groups were not equally distributed by gender or ethnicity.

7. The facility may not be reflective of all socio-economic groups.

8. Race and gender of the clinician were not known.

Definitions of Terms

For the purposes of this study, research terms are defined as follows:

AFFECTIVE DISORDER RATING SCALE

The Affective Disorder Rating Scale (ADRS), developed by the National Institutes of Mental Health (Murphy et al., 1982), includes global ratings of functioning on ratings of mania, depression, psychosis, anxiety, anger and social disorder, and has a rating scale of 1 (very superior functioning) to 15 (very severe impairment). The ADRS is completed by the psychiatric nursing staff.

ANCHORED BRIEF PSYCHIATRIC RATING SCALE

The Anchored Brief Psychiatric Rating Scale (BPRS-A) is a modification of the original Brief Psychiatric Rating Scale (BPRS) (Overall & Gorham, 1962). The BPRS-A yields a total pathology score by summing the scores from all dimensions; sub-scores can be derived by summing scores on specific items. Dimensions and sub-scores include: 1) thinking disturbance with sub-scores of conceptual disorganization, hallucinatory behavior, and unusual thought content; 2) withdrawal/retardation, and sub-scales of emotional withdrawal, motor retardation, and blunted affect; 3) hostile/suspicion, and sub-scales of hostility, suspiciousness, and uncooperativeness; and 4) anxious/depression, and subscales of anxiety, feelings of guilt, and depressive mood. The BPRS-A is completed by psychiatrists and used to identify the symptomology specific to a psychiatric diagnoses process.

BRIEF SYMPTOM INVENTORY

The Brief Symptom Inventory (BSI) is a short (53-question) test used to assess patterns of symptoms in patients who are undergoing psychiatric or medical treatment. The psychiatric patient completes the BSI, which is useful for initial patient evaluation, clinical situations of patient debilitation, outpatient clinics, and measuring the progress of treatment (Derogatis & Melisaratos, 1983).

CLINICIAN-REPORTED MEASURE

Instruments identifying various components of psychopathology used in this study were: (1) the Anchored Brief Psychiatric Rating Scale (BPRS-A), and (2) the Affective Disorder Rating Scale (ADRS). The BPRS-A is completed by a physician within 48 hours of patient admission and immediately prior to discharge, while the ADRS is completed by a nurse within 48 hours of patient admission and immediately prior to discharge.

DSM

The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) provides a categorization of mental disorders and diagnostic criteria for mental disorders. A subsequent revision, the *DSM-IV*, was designed for use across various settings, including inpatient, outpatient, partial hospital, consultation-liaison, clinic, private practice, and primary care community populations; it can be used by a wide spectrum of health professionals.

FIRSTRANK SYMPTOMS

First-rank symptoms are as the most important diagnostic indicators of schizophrenia in the absence of organic brain disorders (Schneider, 1959). First-rank symptoms include key symptomatology such as hallucinations, delusions, thought insertion, thought removal, and thought broadcasting.

LEGAL STATUS

Legal status refers to whether patients were admitted to the psychiatric hospital voluntarily or involuntary. Involuntary admission is the use of legal means to force individuals into a psychiatric mental health facility or institution against their will or protest (legal psychiatric commitment); voluntary admission allows individuals to admit themselves to a psychiatric mental health facility or institution. Patients who voluntarily admit themselves into a psychiatric mental health facility may request to be released against medical advice via formal notice. Patients admitted under involuntary status cannot request release from the facility against medical advice (AMA), and may not be

released until it is determined that they are well enough by a physician, in agreement with legal authorities, and in compliance with any judicial mandates.

LENGTH OF STAY

For the purpose of this study, length of stay is the time from patient admission to the hospital until the time of the patient's discharge, and is measured in days.

RACE

This study uses the term race as it is defined by the Merriam-Webster Online Dictionary (2013): race denotes "a family, tribe, people, or nation belonging to the same stock . . . unified by shared interests, habits, characteristics, or distinctive physical traits." Using the term this way means that the term, race, includes concepts associated with the terms, ethnicity and culture.

SELF-REPORT MEASURE

A self-report inventory used to measure symptomatology such as anxiety, depression, and psychoticism. This study used the Brief Symptom Inventory (BSI) (Derogatis & Melisaratos, 1983). Patients completed the BSI within 48 hours of admission and immediately prior to discharge.

SUMMARY

The extent to which culture and ethnicity contribute to the determination of psychiatric diagnoses remains undefined. To date, the majority of studies have focused on African Americans and Caucasians; studies focused on other ethnic groups, such as Hispanics, Asian and Pacific Islanders, and Native Americans, have been limited. This descriptive quantitative study examined the influences of ethnicity on psychiatric diagnosis and clinical characteristics in three ethnic groups: African American, Caucasian, and Hispanics. In addition, the study examined the impact of variables such as length of stay and legal status upon hospital admission. The study design was a secondary data analysis of archival data utilizing a convenience sample of inpatients admitted to a large urban psychiatric mental health teaching facility in the southwestern U.S. The

findings of this descriptive study help to explain how race and ethnicity influence psychiatric diagnoses in a tri-ethnic population.

CONTENTS OF DISSERTATION

The dissertation is divided into five chapters. Chapter One has presented the introduction, statement of the problem, purpose and research hypotheses, delimitations and limitations, definition of terms, and the significance for the study. Chapter Two presents a review of literature, including an overview of the *DSM*, research on race, ethnicity, and psychiatric diagnosis, culture, children, and a theoretical framework of the study. Chapter Three describes the research design, methodology, and procedures used to identify the study population and sample, data collection, and data analysis. Chapter Four presents the results of the data analysis. Chapter Five presents a discussion of the findings, summary, implications, and recommendations for further research.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

INTRODUCTION

Chapter Two presents a literature review addressing the complicated relationships between psychiatric diagnosis, race, gender, and age. Development of a psychiatric diagnosis is a complex process centered on how patients relate to themselves, to others, and with their environments. These assessed interactions serve as key indicators to individuals' behavioral and societal functioning, and also are considered to encompass the biopsychosocial model of psychiatry (World Health Organization, 2002). Although the biopsychosocial model is considered "comprehensive . . . [and to place more emphasis] . . . on the patient" (Mezzich et al., 1992, p. xvii), ethnicity/race, culture, gender, or significant life events tend not to be considered in current psychiatric diagnostic approaches (Lewis-Fernandez & Diaz, 2002; Lu, 2006; Rogler, 1993).

Psychiatric diagnoses are categorized predominantly from a symptom-based approach. Moreover, there is no single objective or quantifiable diagnostic test for psychiatric and mental health illnesses. Psychiatric diagnoses increasingly have relied on the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM)*, first published in 1952.

The remainder of Chapter Two will examine the evolution, current usage, and criticisms of the *DSM*. The chapter also will review literature that addresses race/ethnicity, gender, and age, and the relationships among those three variables and the assignment of a psychiatric diagnosis.

EVOLUTION OF THE DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS

The *DSM,* distributed by the American Psychiatric Association, is used by psychiatrists, psychologists, social workers, psychiatric nurses, researchers, and other mental health professionals. Clinicians throughout the world use the *DSM* as a guidebook to psychiatric diagnoses. The manual provides diagnostic criteria in a standardized format with an American Psychiatric Association (APA)-nomenclature appropriate to various

treatment settings, including, but not limited to, inpatient, outpatient, partial hospital, clinic, and private practice.

The United States Census began to classify mental disorders, labeling them "idiocy/insanity," in 1840. The 1880 United States Census expanded the mental disorder categories to seven: mania, melancholia, monomania, paresis, dementia, dipsomania, and epilepsy. The Committee on Statistics, formed in 1917 and now known as the APA, teamed with the National Commission on Mental Hygiene to develop a guide for mental hospitals called the *Statistical Manual for the Use of Institutions for the Insane.* This manual expanded mental illness categories to 22 diagnoses. During World War II, the manual evolved from a census-based system to record psychiatric hospital statistics to a classification system for mental disturbances during the selection, processing, assessment, and treatment of soldiers with mental disorders.

The first *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-I)* was compiled by the U.S. Army and published in 1952 (Grob, 1991). The *DSM-I* separated mental disorders into three main categories: psychophysiological, personality, and acute. Adolf Meyer developed many of the *DSM-I*'s 106 mental disorders, which were deemed "reactions." Dr. Meyer was a German psychiatrist who viewed mental disorders as reactions of the individual's entire being; these phenomena encompassed psychological, social, and biological factors. Today, Dr. Meyer's approach is known as the biopsychosocial approach, and it separates disorders into three main categories: psychophysiological, personality, and acute.

The second version of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-II)* (APA, 1968) attempted to correlate the American *DSM* with the World Health Organization's *International Classification of Diseases and Related Health Problems* (ICD). The *DSM-II* listed 182 disorders, removed the term "reaction" and retained the term "neurosis." Mayes and Horwitz (2005) noted that both the *DSM-I* and the *DSM-II* reflected psychodynamic (Freudian) psychiatry, which was the dominant psychiatric methodology when *DSM-I* and *DSM-II* were published. Wilson (1993) added that although *DSM I* and *DSM II* incorporated sociological and biological knowledge, neither clearly delineated the boundary between normality and abnormality of psychiatric phenomena.

The *DSM-III* (APA, 1974) attempted to standardize global psychiatric diagnostic practices. In addition to expanding the DSM-*III* to 265 diagnostic categories, the task force incorporated tenets from Feighner's Research Diagnostic Criteria (FRDC). The *DSM-III* specified diagnostic criteria for affective disorders and schizophrenia, making their diagnosis consistent between the United States and Europe (Mayes & Horwitz, 2005; Wilson, 1993).

The *DSM-III* also provided five dimensions, or axes, for assessing all aspects of patients' mental and emotional health. This system uses a multidimensional approach to diagnose how personal life factors influence patients' mental health. These five dimensions, or axes, include:

Axis I: Clinical Syndromes: underlying clinical disorders.

- Clinical Disorders: depression, schizophrenia, social phobias, including major mental disorders.

Axis II: Developmental Disorders and Personality Disorders: underlying pervasive or personality conditions.

- Developmental disorders include autism and mental retardation, disorders which typically are first evident in childhood.
- Personality disorders last most of the person's life and involve how the person relates to his or her environment and to others; these may include paranoid, antisocial, and borderline personality disorders.

Axis III: Physical Conditions: acute medical conditions and physical disorders (such as brain injury, HIV/AIDS) that can cause mental illness and affect Axis I and II disorders.

Axis IV: Severity of Psychosocial Stressors: psychosocial and environmental factors, e.g., death of a loved one, starting a new job, unemployment; these events may exacerbate Axis I and II syndromes.

Axis V: Highest Level of Functioning: a Global Assessment of Functioning (GAF) based upon an individual's level of functioning now and the highest level within the previous year and is rated on a scale of one to 100.

The *DSM-III-R* (APA, 1987) removed six categories of disorders, including premenstrual dysphoric disorder and masochistic personality disorder. The revisions also

contained 292 renamed and reorganized diagnoses. A task force that included four psychologists produced the *DSM-IV* (APA, 1994), which listed 297 disorders. Many experts consider the *DSM-IV* to be a significant accomplishment in psychiatric diagnoses, due not only to the sheer number of disorders, but also to the addition of task force members from mental health disciplines other than psychiatry. The diagnostic categories published in the *DSM-IV* were field tested prior to publication of the manual; in addition, the manual provided literature to support the diagnostic categories (Frances et al., 2000; Schaffer, 1996). The *DSM-IV-TR* (APA, 2000) attempted to integrate culture, age, and gender into psychiatric diagnosis guidelines.

CRITICISMS OF THE DSM

Although the *DSM-IV-TR* is considered the gold standard for diagnosis of psychiatric and mental health illnesses, it is not without controversy. Unlike tools utilized to diagnose medical illnesses, there is no single objective or quantifiable diagnostic test for psychiatric and mental health illnesses. Moreover, conflicts of interest issues have been raised because a number of *DSM* editors currently have or have had financial relationships with the pharmaceutical industry (Cosgrove et al., 2006). Indeed, an editorial by Steven Sharfstein (2005), president of the APA, acknowledged that American psychiatry has "allowed the biopsychosocial model to become the bio-bio-bio model" (totally biologically-based) and has routinely accepted " 'kickbacks and bribes' in the form of gifts by drug company representatives" (p. 3).

An additional critique of the *DSM-IV-TR* concerns the validity and reliability of the diagnostic categories and criteria (Baca-Garcia et al., 2007; Kendell & Jabiensky, 2003; Pincus, 1998). Although the categories and criteria have become more standardized, some scientists have posited that the definitions continue to be more intuitive in nature (Bentall, 2006; Krueger et al., 2005; Maser & Akiskal, 2002; Spitzer et al., 2001).

A majority of the *DSM* diagnostic criteria, such as schizophrenia, bipolar disorder, and major depressive disorder, are symptom-based. Many scientists argue that the *DSM* fails to take into account issues such as psychological responses to adverse situations or the environment in which the person is living (Chodoff, 2005). Some psychiatrists have

argued that the *DSM* fails to detect subtleties that underlie patients' psychiatric symptoms. McHugh (2005) noted that "unlike the approach taken in general medicine, the *DSM* is not as systematic an approach, but is more appearances driven" (p. 2527). Other criticisms of the *DSM* are the inclusion of certain sexual orientations as disorders and the distinction of poor adaptations to common stressors versus true psychopathology.

One unanswered question is the relevance of culture in psychiatric diagnoses. Rogler (1992) posited that even the *DSM-IV* task force has acknowledged the need for enhanced cultural sensitivity of the current guidelines. He stated that "the injection of a cultural orientation into professional assessments of mental health, significant as it is, is still only the beginning of a phase in the drive toward a culturally sensitive psychiatry" (Rogler, 1992, p. 747).

The APA attempted to address the impact of cultural factors on psychiatric illness in the *DSM-IV* by incorporating their Cultural Formulation Model (Lewis-Fernández & Diaz, 2002; Lu, 2006). The Cultural Formulation model recommends that the diagnostician assess: "cultural identity, cultural explanations of the illness, cultural factors related to the psychosocial environment and levels of functioning, cultural elements of the clinician-patient relationship, and the overall impact of culture on diagnosis and care . . . in order to render an accurate diagnosis across cultural boundaries and formulate treatment plans acceptable to the patient, clinicians need a systematic method for eliciting and evaluating cultural information in the clinical encounter" (Lewis-Fernandez & Diaz, 2002, p. 271).

The Cultural Formulation model is not without critics. Martinez's (2009) review of the limitations of the *DSM-IV-TR* Cultural Formulation suggested that "further development of the CF must meet the challenge of preserving its capacity to capture the cultural dimensions of illness experience while simplifying its implementation" (p. 521). Martinez states that challenges include:

1. Defining a procedure for identifying which cultural information (CF) is most relevant for a given clinical setting or clinical purpose;
2. Linking the CF to the general clinical formulation of the case and integrating it with other elements of psychiatric assessment;

3. Demonstrating the effectiveness of the CF in improving clinicians' ability to understand patients' illness experience, arrive at a differential therapeutics, suggest clinical management options, garner patients' acceptance of and adherence with these options, and achieve treatment response (p. 521).

Adebimpe investigated the use of diagnostic standards originally established for Caucasian patients but which have now been used to diagnose African Americans and other minorities (Adebimpe, 1981, 1982; Arnold et al., 2004; Strakowski et al., 2003). Adebimpe also suggested that additional clinical psychiatric research is needed to modify the *DSM-V*, which is slated for publication in 2013.

The *DSM* has evolved from a census instrument to the primary psychiatric diagnostic tool. The *DSM-IV-TR* reflects the input from a variety of mental health professionals and has a broad perspective on psychiatric disorders. Nevertheless, it is subject to criticism—in particular that it is not culturally sensitive.

RESEARCH ON RACE, ETHNICITY, AGE AND GENDER WITH PSYCHIATRIC DIAGNOSIS

The following sections will explore the relationships among of race, ethnicity, age, gender, and psychiatric diagnosis. Research on race, ethnicity and mental illness are not novel. Prior studies have addressed race and mental illness with a focus on African American and Caucasian patients (Fabrega et al., 1968; Fisher, 1969; Gullatee, 1969). The primary emphasis of these studies was on race and diagnosis at the time of admission to a psychiatric facility. Rather than examine the interrelationships between race and psychiatric diagnosis, previous studies have limited themselves to counts of patients with various psychiatric diagnoses by race; for example, the number of African American patients with schizophrenia, and/or the number of Caucasian patients with schizophrenia.

Simon et al. (1973) used a structured mental state examination to investigate the relationship of race and diagnosis in 192 hospitalized mental patients. Study findings revealed an association between race and diagnosis. The study found that African American patients were diagnosed more frequently with schizophrenia than with affective illnesses, such as depression. The study compared patterns of psychopathology exhibited by African Americans and Caucasians. Although African American and

Caucasians psychiatric symptoms were similar, African American patients were more depressed than the Caucasians.

Adebimpe et al. (1982) conducted a study that compared the psychopathology of African American and Caucasian schizophrenic patients residing in rural and urban settings. The study spanned more than three and a half years, and included 273 patients admitted to seven hospitals and mental health centers. The results revealed that first-rank symptoms indicating schizophrenia were more severe in African American patients than in Caucasian patients. The researchers found that African American patients were more likely to be described by staff as angry, impulsive, hallucinating, dysphonic and asocial than were Caucasian patients. They also determined that rural schizophrenic patients were considered angrier, more aggressive, sillier, more negativistic and less cooperative compared to urban schizophrenic patients. Conversely, urban patients were described as more anxious, rigid, ambivalent, and asocial than those from rural settings.

Research prior to 1989 on race and symptomatology focused primarily on differences between African Americans and Caucasians, and often dealt with the relation of race to depression and schizophrenia. The research focus paradigm shifted when Neighbors et al. (1989) conducted a study on Caucasian and African Americans diagnosed with schizophrenia and depression. The researchers reviewed earlier studies to determine the prevalence of misdiagnosis of mental health disorders based on symptoms by race. Study findings suggest that African Americans were more likely to be diagnosed with schizophrenia and less likely to be considered depressed compared to Caucasians. The study findings led the authors to suggest that mental health research should include racial and ethnic groups other than Caucasians and African Americans (Neighbors et al., 1989). Also noted was that diagnosticians appear to unaware of or ignore the fact that individuals of different cultures act and behave different than others; they recommend research to explore the impact of race/ethnicity and culture on psychiatric symptoms.

Behavior that is considered normal in one culture may be considered abnormal in others. Other studies (Brekke & Barrio, 1997; Thakker & Ward, 1998) have concluded that differences in symptom presentation among people of different racial backgrounds could lead to disparities in diagnosis of psychiatric and mental health issues. Findings by other researchers suggest that racial disparity in mental health may reflect a tendency by

clinicians to view affective symptoms in African American patients as being related to a psychotic disorder rather than to a mood disorder (Hilty et al., 1999; Murkherjee, et al., 1983). Although the lifetime prevalence of bipolar disorder for all races is generally accepted to be one percent (Murkherjee et al., 1983), Strakowski et al. (1996) found that Caucasians receive a diagnosis of bipolar disorder significantly more often than African Americans. The study examined the presentation of psychosis in 330 subjects; it revealed African American patients were more likely to receive a diagnosis of schizophrenia compared to Caucasian patients. The researchers concluded that their study did not identify whether there were differences in symptoms presented by the patients of different races or whether those differences reflected differences in perception on the part of the research raters. The authors also noted that "research is clearly warranted" (p. 123) to clarify racial and cultural differences in the expression of psychosis.

Brekke and Barrio (1997) conducted a cross-ethnic mental health study that examined: (1) competing hypotheses about cross-ethnic symptom differences in schizophrenia, and (2) cultural mediators of the presented symptom differences. The 184 person study population was 32.6% African American, 15.8% Latino, and 51.6% Caucasian; all subjects had been given a diagnosis of schizophrenia. The Brief Psychiatric Rating Scale (BPRS) and the Quality of Life Scale (QLS) provided the symptom variables. The non-minority (Caucasian) group was consistently more symptomatic than the minority groups (African Americans and Latinos).

Strakowski et al. (1997) compared clinicians' diagnoses made in Psychiatric Emergency Service with diagnoses made by researchers during structured interviews conducted as a part of the research study. The study results indicated a relationship between race and psychiatric diagnoses; race may influence the information obtained from the patients during clinical evaluations in the psychiatric emergency service.

Vega et al. (1998) explored whether there was a difference in lifetime prevalence rates of psychiatric disorders among Mexican-born immigrants in the U.S compared to Mexican Americans born in the United States. The study population was comprised of 3,012 individuals who sought mental health services in Fresno County, California. Research findings indicated that rates for psychiatric disorders in Mexican-American immigrants (24.9%) were lower than rates in U.S.-born Mexican-Americans (48.1%).

Additionally, a higher prevalence rate for psychiatric disorders was reported for Mexican-Americans living in large cities (35.7%) compared to those living in towns (32.1%) or rural areas (29.8%). (The authors do not provide population numbers for "large cities," "towns," or "rural areas.") The study indicated that, over their lifetime, Mexican Americans had lower rates of psychiatric illness compared to the U.S. population.

Neighbors et al. (1999) examined whether African Americans are at a higher risk for misdiagnosis of psychiatric conditions than Caucasians. The study had two phases: phase one was a clinician-structured interview, and phase two was an interview with a semi-structured diagnostic instrument. The authors also addressed: 1) the relationship between race and hospital diagnosis; 2) the relationship of race to diagnosis in research and clinical interviewing conditions; 3) variation of research interview condition to hospital diagnosis and research diagnosis; and 4) the influence of patient race to hospital and research diagnosis. The study population consisted of African Americans (n = 208) and Caucasians (n = 83); phase two consisted of African Americans (n = 540) and Caucasians (n = 124). The researchers found that hospitalized African American patients were more likely to be diagnosed as schizophrenic and less likely to be diagnosed with depression or bipolar disorder. Findings of the first phase of study revealed a relationship between patients' race to the research diagnoses produced in the clinician-structured research setting. Phase two results indicated that a higher percentage of African Americans received a diagnosis of schizophrenia than their Caucasian counterparts, while Caucasian patients were more likely to be diagnosed with mood disorders than African American patients. The authors concluded that ". . . psychiatric diagnosis will remain a social construction dependent on informed subjective judgment, knowledge of racial differences, and a comprehensive knowledge of *DSM* symptom criteria sets" (p. 610).

Kales et al. (2000) compared race, psychiatric diagnosis, and age in a population of elderly in-patient U.S. veterans. The study sample was 23,758 veterans, 60 or older, hospitalized in Department of Veterans Affairs inpatient psychiatric units. The researchers found that more elderly African American patients were admitted with diagnoses that included cognitive and/or substance abuse disorders than were elderly Hispanic or Caucasian patients; the African American elders also were less likely to be diagnosed with anxiety or mood disorders. Hispanics and African Americans were

diagnosed more often as being psychotic than were Caucasian patients. Elderly African American patients were diagnosed with mood disorders half as often as were elderly Caucasians. The researchers noted that the differences could be due to a combination of patient (e.g., presentation of symptoms) and provider (e.g., clinician bias) factors.

Trierweiler et al. (2006) compared clinicians' diagnoses of schizophrenia in African American versus schizophrenia diagnoses in non-African American patients; the researchers found that African Americans were more likely to be diagnosed with schizophrenia (62% versus 40%). The authors observed that differences in diagnoses rates should cause mental health workers to be concerned about whether races are viewed equivalently. The researchers also suggested that racial difference may impact patients' level of trust and comfort during the diagnostic process. This study indicated a need for further research on race and the expression of psychiatric symptoms as well as clinicians' interpretation of psychiatric symptoms.

Minsky et al. (2003) examined whether there were differences in psychiatric symptoms, their severity, and diagnosis in Latino patients compared to Caucasians and African Americans patients. Data were obtained from mental health care facilities in New Jersey; sources included demographic data, clinical diagnoses, clinician-rated global levels of functioning, and patients' self-reported symptoms. The Carter and Newman Global Level of Functioning (GLOF) (Carter & Newman, 1976), administered by clinicians, and the Behavior and Symptom Identification Scale (BASIS-32) (Elsen et al., 1986), completed by patients, were used to assess the patient's symptoms and functional status. The sample consisted of new male and female admissions to the system and represented African Americans, Latinos, and European Americans. The study examined the main effects of ethnicity in relation to major depression, bi-polar disorder, and schizophrenia. Study findings revealed that Latinos' self-reported psychotic symptoms were at significantly higher levels than those of other ethnic groups. In addition, Latinos were diagnosed more frequently with major depression and exhibited increased levels of psychotic and depressive symptoms. African Americans were diagnosed more often with schizophrenia although their self-reported psychotic symptoms were not significant. The authors noted that further empirical study is needed in order to determine the accuracy of clinical diagnosis of major depression among these ethnic groups.

Strakowski et al. (2003) conducted a follow-up study to examine whether presentation of first-rank symptoms distracted clinicians and possibly prevented accurate identification and diagnoses of affective disorders in African Americans. The researchers examined 195 African American and Caucasian patients who had exhibited at least one psychotic symptom at time of admission to a psychiatric facility. Each patient received three independent *DSM-IV* diagnoses: 1) a clinical diagnosis obtained from the discharge summary by the primary inpatient psychiatrist; 2) a structured-interview and diagnosis performed by a clinical staff member, such as Doctoral or Master's-level psychologists or social workers; and 3) an expert-consensus diagnosis by board-certified psychiatrists. Clinicians completing the structured-interview were aware of the study, although they were not aware of the specific aims and study hypotheses, nor were they aware of patients' ethnicities. The researchers noted that first-rank symptoms were more commonly identified in African American men; however, they identified no explanation as to differences in diagnoses.

Neighbors et al. (2003) examined the relationship between race and schizophrenia spectrum disorder (such as schizophrenia and schizoaffective disorder) and affective disorders (such as depression and bipolar disorder) in 665 African American and Caucasian patients from an inpatient state psychiatric facility. All patients had an admitting diagnosis of schizophrenia (excluding schizophreniform disorder) or mood disorder (including bipolar, manic episode, and major depression). A clinician who was unaware of the hospital admitting diagnosis interviewed each patient and completed a *DSM-III-R* Symptom Checklist. The clinician then reviewed and analyzed the *DSM-III-R* Symptom Checklist to determine the diagnosis. Study findings indicated a significant difference between African Americans and Caucasians in their admitting diagnoses. More African American patients were diagnosed with schizophrenia (44%) compared to Caucasian patients (32%), and African American patients had a lower diagnosis rate of bipolar disorder (5.4%) compared to Caucasian patients (14.3%). No racial differences were noted in affective disorders. The study also revealed differences in diagnoses between races: a higher percentage of African Americans (33%) were diagnosed with schizophrenia than were Caucasians (24%), and a lower percentage of African Americans (6.5%) were diagnosed with bipolar disorder than were Caucasians (18.5%). The authors

note that study results agreed with earlier research results linking psychiatric diagnosis to race despite the use of standardized diagnostic criteria.

Arnold et al. (2004) examined differences among African Americans and European Americans hospitalized for psychosis. The goal of the study was to examine whether African Americans with psychotic disorders exhibited first-rank symptoms more commonly than European Americans. Findings revealed that African American men were more likely to be diagnosed with first-rank symptoms. African American men also were diagnosed as having significantly more total psychotic symptoms than European American men, and had an increased rate of schizophrenia. The authors conclude by cautioning diagnosticians to look beyond race and evaluate psychotic symptoms in relation to all other symptoms presented by the patient.

The National Survey of American Life (NSAL) (Jackson et al., 2004) provides additional insight into race and psychiatric diagnosis. The NSAL investigated mental disorders among African American and non-Hispanic Caucasians in the United States. The NSAL sample included African Americans (N = 3,570), Afro-Caribbeans (N = 1,623), and Caucasians (N = 1,006); it encompassed immigrant, second generation, and older generation populations. The study found that African Americans remain disadvantaged compared to the general population. The survey authors associated African American's lack of educational and financial resources with their inhibited ability to improve and enhance their social, legal, and economic status.

Breslau et al. (2005) analyzed data from the National Comorbidity Survey (NCS), which compared Hispanics, Non-Hispanic African Americans, and Non-Hispanic Caucasians in the U.S. with respect to their lifetime risk and persistence of mood disorders, anxiety disorders, and substance use disorders. Hispanics were found to have a lower lifetime risk of substance use disorder relative to Non-Hispanic Caucasians. Non-Hispanic African Americans had a lower lifetime risk of mood, anxiety, and substance use disorders. Hispanics and Non-Hispanic African Americans diagnosed with mood or anxiety disorders were more likely to be chronically ill. The authors noted that these differences were generally consistent across population subgroups within a given race, such as Hispanics and Non-Hispanic African Americans. The study concluded that while

members of ethnic minorities in the United States do not have a greater risk for psychiatric disorders, their psychiatric disorders are more likely to be chronic.

Kunen et al. (2005) examined the discharge records of 33,000 psychiatric patients to determine, among other things, whether psychiatric disorders were underdiagnosed. The study found that African Americans were underdiagnosed with psychiatric disorders more often than Caucasians, although each group was noted to be underdiagnosed overall in regard to psychiatric disorders. The study also found that younger patients (15 to 24 years of age) had fewer psychiatric diagnoses than older patients (25 to 104 years of age), and that men had higher rates of psychiatric diagnoses of all types. Meanwhile, women were diagnosed as having more mood and anxiety diagnoses.

Bolden and Wicks (2005) explored the experiences of African American patients entering the mental health system by examining differences in length of psychiatric hospitalization, their most common psychiatric diagnoses, and how well the African American patients could access mental health treatment. The researchers compared demographic characteristics of African Americans to other U.S. racial groups included in the 2001 Nationwide Inpatient Sample (NIS) (HCUP, 2011). The NSI database contains data from five to eight million psychiatric inpatient stays from 986 inpatient psychiatric, short-term rehabilitation, and long-term hospitals in 33 states; it does not include data from alcoholism and chemical dependency treatment facilities. There were 4,474,732 adults 18 years of age and older in the sample that included African Americans (n = 576,737; 74%), Caucasian (n = 3,322,677; 13%), Hispanic (n = 459, 507; 10%), Asian/Pacific Islanders (n = 96,481; <2%) and Native Americans (n = 19,330; <1%). Comparison of the length of stay (LOS) in the inpatient psychiatric facilities revealed that African Americans had the longest average length of stay compared to Caucasians, Hispanics, Asians/Pacific Islanders, and Native Americans. The authors noted that the length of stay for African Americans was significantly different from all other groups, with African American males having a longer length of stay than African American females. The authors noted that the trend of diagnoses was consistent with other research findings that African Americans are diagnosed as schizophrenics than with mood disorders

Bao et al. (2008) examined data from the Agency for Health Care Administration-Florida Agency for Health Care Administration's (AHCA-FAHCA) report of the Florida Inpatient Discharge Data (2004) to elucidate African American and Caucasian differences in behavioral inpatient psychiatric diagnoses across populations. The study data used information from 269 inpatient psychiatric healthcare facilities throughout Florida. The researchers focused on differences in discharge rates concerning patients who identified themselves either as non-Hispanic Caucasian or as non-Hispanic African American. The study was limited to patients whose primary psychiatric discharge diagnosis was schizophrenia or psychosis, affective disorders, and mental disorders related to substance abuse. Study findings demonstrated substantial African American and Caucasian differences in inpatient behavioral diagnosis. Most of the African American patients were male and over half were diagnosed with schizophrenia or psychosis, compared to 23 percent of Caucasians who were diagnosed with schizophrenia or psychosis. Caucasians were diagnosed more often with affective or substance abuse disorders (53.9 percent male and 23.2 percent female) compared to African Americans (34.5 percent male and 11.2 percent female).

DISCUSSION & SUMMARY

The assignment of psychiatric diagnosis is a complicated and complex process involving accurate observation and interpretation of signs and symptoms presented by the patient. Once patients are assigned a diagnosis, it will follow them throughout their lives.

Throughout its history, the *Diagnostic and Statistical Manual of Psychiatric Disorders* (*DSM*) has been the primary diagnostic tool used to guide psychiatric mental health workers in the assimilation of patient information and assignment of a psychiatric diagnosis. The *DSM* approach identifies clusters of symptoms associated with particular psychiatric diagnoses. The *DSM* utilizes a biopsychosocial approach to the identification of symptoms and behaviors leading to the assignment of a psychiatric diagnosis. Though the *DSM* was first used primarily by statisticians, it now includes mental health professionals in the development, testing, and implementation of its diagnostic criteria.

Further, although the *DSM* is widely used in the United States, it is not without its criticisms. In particular, experts disagree about the relevance of race, ethnicity, and

culture in the presentation of symptoms and behaviors, the interpretation of the patient symptoms and behaviors, and the assignment of psychiatric diagnosis. Although revisions to the *DSM* have attempted to expand and enhance its cultural sensitivity, it continues to be criticized for being inadequately culturally relevant and sensitive.

Early studies of race, ethnicity and assignment of psychiatric diagnosis suggested that psychiatric diagnosis may be influenced by misinterpretation of behaviors and symptoms in specific racial and ethnic groups. Moreover, particular diagnoses appear to be assigned disproportionally to certain racial groups. For example, the diagnosis from the schizophrenia spectrum appears to be prevalent in African Americans, while their Caucasian counterparts tend to be assigned psychiatric diagnoses from the affective disorders.

The existing research on race in relation to psychiatric diagnoses has focused largely on African Americans and Caucasians. Few studies have explored psychiatric diagnoses in relation to Hispanics. Prior research does not suggest that Hispanics are being diagnosed predominately with any particular disorder (unlike African Americans and Caucasians); nonetheless, there is limited research exploring the relationship between psychiatric diagnoses and Hispanics.

Gender and age in relation to psychiatric diagnosis have been considered in some studies. Nevertheless, studies that focus on the relationship of gender and or age to psychiatric diagnoses are less common and less definitive than those addressing race; there is a need for more such studies.

Research study findings suggest that race and ethnicity may affect psychiatric diagnoses. Most studies compare African Americans and Caucasians, with little research that includes Hispanics. Moreover, very few investigations include age and gender in the comparisons. This study examined how race, gender, and age affected psychiatric diagnoses among a sample of African American, Caucasian, and Hispanic adults hospitalized with an acute psychiatric episode.

Chapter Three will present the methodology used to answer this study's research questions. These questions include the three specific aims: are there differences between ethnicity and gender on discharge diagnosis, are there differences between

ethnicity/gender and clinical characteristics, and are there differences between ethnicity/gender and hospital related variables?

CHAPTER THREE: METHODOLOGY

Chapter Three contains a description of the research design used in this study of symptoms identification and diagnosis of African-American, Caucasian, and Hispanic populations in an inpatient psychiatric setting. The chapter also includes a description of study population and sample, procedures for data collection, instruments used to collect data, and statistical and quantitative analysis.

OBJECTIVE AND SPECIFIC AIMS

The purpose of this descriptive quantitative study was to determine the differences between ethnicity, gender, psychiatric symptom identification, and diagnosis in an inpatient psychiatric setting. The primary objective of a quantitative study is the systematic empirical investigation of the differences between the attributes of a characteristic and phenomena. The findings of this descriptive study may contribute to enhanced knowledge of how gender and ethnicity influence the presentation and interpretation of symptoms leading to a psychiatric diagnosis in African-American, Caucasian, and Hispanic patients.

METHODS

Research Design

The study design was a secondary data analysis of archival data utilizing a convenience sample of in-patients admitted to a large urban psychiatric mental health teaching facility in the Southwestern United States.

Definition of Major Variables

The study uses the terms *race* and *ethnicity* interchangeably. The racial and ethnic groups of interest in the study were Caucasian, African-American, and Hispanic. Other racial and ethnic populations were too small and were not used in the study. *Psychiatric diagnosis* is defined as the psychiatric diagnoses at time of discharge. The three primary psychiatric diagnoses of the study populations were schizophrenia, bipolar disorder, and

major depressive disorder. The *self-rated* scale is the patient-rated score on the Brief Symptom Inventory (BSI) at the time of discharge. The *clinician-rated* scales are defined as the (1) nurse-rated Affective Disorder Rating Scale (ADRS) and the physician-rated Anchored Brief Psychiatric Rating Scale (BPRS-A), all of which are completed at time of the patient's discharge. *Hospital variables* include the legal status and length of stay (LOS). *Legal status* is defined as involuntary admission and voluntary admission status. *Length of stay* is defined as the time of the patient's admission until the time of the discharge and is measured in total days.

INSTRUMENTS

The archived patient data used in the study consisted of data collected using two clinician-reported measures and one patient self-report measure. The two clinician-report measures were the Anchored Brief Psychiatric Rating Scale (BPRS-A) (Lachar et al., 2001) and the Affective Disorder Rating Scale (ADRS) (Murphy et al., 1982); the one patient self-report measure used was the Brief Symptom Inventory (BSI) (Derogatis & Melisaratos, 1983).

Clinician-reported Measures

ANCHORED BRIEF PSYCHIATRIC RATING SCALE (BPRS-A)

The Anchored Brief Psychiatric Rating Scale (BPRS-A) (Lachar et al., 2001) is a modification of the original Brief Psychiatric Rating Scale (BPRS) (Overall & Gorham, 1962). The BPRS-A consists of 18 items that describe various manifestations of psychopathology. Items, or areas of pathology, are rated on a 7-point scale ranging from "not present" to "very severe"; behavior examples or anchors also are provided for each item's rating options. The BPRS-A has subscales that identify positive symptoms (symptoms that appear to reflect an excess or distortion of normal functions) (Hollister, 2009), negative symptoms (symptoms that appear to reflect a diminution or loss of normal functions) (Hollister, 2009), resistance, and distress (Murphy et al., 1982). The attending psychiatrist completed the measures within 48 hours of the patient's admission, and again prior to the patient's discharge. Clinical medical staff are trained and validated

in the use of the BPRS-A by the institution in which the achieved data are maintained (see Appendix A).

AFFECTIVE DISORDER RATING SCALE (ADRS)

The Affective Disorder Rating Scale (ADRS) was developed by the National Institutes of Mental Health (Murphy et al., 1982) and includes global ratings of the functional domains of mania, depression, psychosis, anxiety, anger, and social disorder. These domains are rated from 1 (very superior functioning) to 15 (very severe impairment). The clinical nursing staff completed the measures within 48 hours of admission, and again prior to discharge. Clinical nursing staff are trained and validated in use of the ADRS by the institution where the achieved data are maintained (see Appendix B).

Patient Self-Report Measure

BRIEF SYMPTOM INVENTORY (BSI)

The Brief Symptom Inventory (BSI) (Derogatis & Melisaratos, 1983) is a 53-item self-report inventory used to measure nine primary symptom dimensions, including somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The instrument also identifies three global scores: the General Severity Scale (GSI), the Positive Symptom Distress Index (PSDI), and the Positive Symptom Total (PST). The GSI indicates the level of current distress. The PSDI can determine whether an individual is increasing the distress level by the way he or she responds. The PST measure is the total number of symptoms the client reports experiencing, even at low levels (Morian & Tan, 1998) (see Appendix C). Study patients completed the BSI within 48 hours of admission and just prior to discharge.

Sampling

The study sample included archived data of patients who met the inclusion criteria described below. The archival data were obtained from patients admitted to an acute-care

in-patient psychiatric mental health facility between January 1, 2004 and December 31, 2007. The site is a university-affiliated, free-standing psychiatric institution.

INCLUSION CRITERIA

The archived data of patients who met the following criteria were utilized in the study:

(a) 18 years of age or older at time of admission, or less than 70 years old at time of admission.

(b) African-American, Caucasian, or Hispanic by self-report.

(c) No history of substance abuse as evidenced by *DSM-IV-TR* AXIS I discharge diagnosis.

(d) No diagnosis of mental retardation as evidenced by *DSM-IV-TR* AXIS II discharge diagnosis.

(e) At least two psychiatric admissions at the same hospital.

(f) Last two discharge diagnoses were consistently schizophrenia, bipolar disorder, or major depressive disorder (depression).

(g) Completed admission and discharge rating scales (Physician-Rated Anchored Brief Psychiatric Rating Scale – BPRS-A, and Nurse-Rated Affective Disorders Rating Scale - ADRS) and a self-report measure (Brief Symptom Inventory - BSI).

Archived data of patients who did not meet each of these criteria were excluded from the study.

Protection of Human Subjects

Permission to conduct the proposed study was obtained from the University of Texas Medical Branch Institutional Review Board (IRB) (see Appendix D). Additional review and approval was obtained from the University of Texas Health (UT) Institutional Review Board (IRB) through the Committee for the Protection of Human Subjects (CPHS) (see Appendix B), the Institutional Review Board (IRB) for the University of Texas Health Science Center at Houston (UTHSC-H) (see Appendix E). Additional permission also was obtained from the University of Texas Harris County Psychiatric

Center (UT – HCPC) Research Committee (see Appendix F), which provides oversight of patient data within the institution.

The in-patient psychiatric hospital where the data were collected has established mechanisms to protect patient confidentiality and to ensure strict adherence to laws and regulations as applicable to patients in a psychiatric mental health setting, as well as those regulations established by the American Health Insurance Portability and Accountability Act (HIPAA) of 1996. The data archive is maintained by the inpatient site's senior statistician, who de-identified the database prior to dissemination to the researcher for use in this study. At no time did the researcher have access to files or data that contained patient identifiers. The de-identified data provided by the senior statistician was protected by means of electronic encryption and password protection for the purposes of the study. Any written materials maintained by the investigator were located in locked file cabinets in a private locked office. In addition, electronic information, such as the data archive, is protected by limited access and operationalized by use of password-protected access.

Data Collection

The study analyzed de-identified variables from an archival database. The data were compiled at the time of the patient's admission and discharge and included demographic data such as ethnicity, age and gender; hospital-related variables, such as legal status at admission and length of stay; and diagnostic and symptom variables, such as Diagnostic Statistical Manual (*DSM-IV-TR*) discharge diagnosis, as well as admission and discharge scores. Two clinician-report instruments, the nurse-rated Affective Disorder Rating Scale (ADRS) and the physician-rated Anchored Brief Psychiatric Rating Scale (BPRS-A), as well as the patient self-report instrument, the Brief Symptom Inventory (BSI), are well-established instruments that demonstrate consistent reliability in numerous populations (Faustman & Overall, 1999; Lachar et al., 2001; Murphy et al., 1982; Overall et al., 1972; Overall & Woodward, 1975; Woerner et al., 1988). Study participation did not require the direct involvement of the patient. The study used only data taken from the archival database, from which all specific patient identifiers were removed prior to commencement of the study (see Appendix D). In addition, no

educational sessions about the research study were necessary as there was no direct patient involvement.

Data Analysis Procedures

Data were analyzed using SPSS (Version 20.0). The significance was calculated at $\partial = .05$ and a power $= 0.8$. Descriptive analyses were conducted on demographic and study variables to evaluate data integrity, and to assess homogeneity and normality. Continuous variables were analyzed using Analysis of Covariance (ANCOVA). Categorical variables are analyzed using Chi-square analyses. Nonparametric equivalents to analysis of variance and t-test (Kruskal Wallis ANOVA and Mann Whitney U) were utilized as needed.

Variables for the study included the admission and discharge scores from the (a) self-report subscale scores from the Brief Symptom Inventory [BSI], the clinical scales from the Physician-Rated Anchored Brief Psychiatric Rating Scale [BPRS-A], and the Nurse-Rated Affective Disorders Rating Scale [ADRS], demographic variables (ethnicity, age and gender); hospital-related variables, (legal status at admission and length of stay); diagnostic and symptom variables (e.g., Diagnostic Statistical Manual (*DSM-IV-TR*) discharge diagnosis). Several new variables were created as well: (a) a combined ethnic x gender grouping variable that represents six groups (Caucasian females, Caucasian males, African American females, African American males, Hispanic females, Hispanic males), (b) *absolute* difference scores for each subscale computed by taking the absolute value of the Patient self-evaluation score and subtracting the equivalent relevant Provider clinical subscale score (e.g., |BSI Depression-BPRS-A Depression| and |BSI Depression-ADRS Depression|) and (c) *relative* difference scores computed the same way but allowing for indications of directionality (e.g., patient scores that were lower than provider ratings or higher than provider ratings).

Specific Aim 1

Explore the differences between ethnicity and gender on discharge diagnosis.

SPECIFIC AIM 1, RESEARCH QUESTION 1

Are there differences across ethnic categories (African American, Caucasian, and Hispanic) by gender groups (male and female) on discharge diagnoses? Analyses included computation of Chi-square between the subscale of each ethnic and gender group (e.g., male Caucasian, female Caucasian) across discharge diagnoses.

Specific Aim 2

Explore the differences between ethnicity x gender and clinical characteristics.

SPECIFIC AIM 2, RESEARCH QUESTION 1

Are there degrees of difference between the self-ratings and clinician ratings within each ethnic x gender group, with the greatest differences occurring in African American and Hispanic (minority) groups? The scales and subscales of the instruments used (BSI, BPRS-A, and ADRS) are not similar in format or scale. These dissimilarities were addressed using an informative descriptive analysis that characterized the pattern of agreement between patients' and provider evaluations. This involved a transformation of the dimensions that had comparable subscales (e.g., all three groups have depression equivalent scales) into z scores in order to compare subscales.

Another issue was how to address the difference scores between self-evaluation by the patient and each provider group (self vs. physicians and self vs. nurses). Relative difference scores indicate the degree of difference between self and provider as well as direction, i.e., whether the patient's evaluation was lower or higher than those of the providers. Absolute difference scores ignore direction and provide summative information for degree of difference only. Relative and absolute difference scores were calculated within race and gender subgroups as originally proposed. A comparison of the distribution of these difference scores across providers and race and gender groups allows for insight into the cumulative proportion of patients that fall within a range of agreement.

SPECIFIC AIM 2, RESEARCH QUESTION 2

Is there a difference between ethnic x gender groups and self-report scales? Two-way analyses of covariance (ANCOVA) were employed to examine differences between the subscales across ethnicity (3) by gender groups (2) while co-varying on age to assess differences on self-reported scales (BSI) and clinician-reported scales (BPRS-A and ADRS).

SPECIFIC AIM 2, RESEARCH QUESTION 3

Are there differences between ethnic x gender groups and clinician reported scales (ADRS and BPRS-A)? Two-way analyses of covariance (ANCOVA) were employed to examine differences between the subscales of ethnicity (3) by gender groups (2) while co-varying on age to assess differences on self-reported scales (BSI) and clinician-reported scales (BPRS-A and ADRS).

Specific Aim 3

Explore the differences between ethnicity x gender groups and hospital related variables (Length of Stay and Legal Status).

SPECIFIC AIM 3, RESEARCH QUESTION 1

Is there a difference across ethnicities x gender groups and legal status? Chi-square was conducted across subscales of each ethnic (3) by gender group (2) by legal status (2) (voluntary and involuntary).

SPECIFIC AIM 3, RESEARCH QUESTION 2

Is there a difference across ethnicities x gender groups and length of stay? A two-way ANCOVA across ethnicity (3) by gender (2) on length of stay was performed which co-varied on age.

SUMMARY

While research has previously been conducted on race and assignment of a psychiatric diagnosis, the research does not provide clarity as to why differences appear

to exist among different ethnic groups with regard to an assigned psychiatric diagnosis. Because an understanding in the variations among races and psychiatric diagnosis is lacking, continued research would be of great benefit to mental health professionals in furthering understanding of the variations of symptomology in the assignment of a psychiatric diagnoses. This study focused on a population consisting of African-American, Caucasian, and Hispanic individuals and their assigned psychiatric diagnoses. Chapter Three presented the research methodology for this study. Research specific aims and research questions were summarized. The research methodology, protection of human subjects, and data collection and analysis were also discussed.

CHAPTER FOUR: FINDINGS

Chapter Four reports the results of data analysis. Findings regarding the characteristics of the study participants as well as culture and psychiatric diagnoses are presented. Specific aims and hypotheses are tested and the chapter is summarized.

DESCRIPTION OF THE SAMPLE OF PARTICIPANTS

The study sample included the archived data of patients who meet the inclusion criteria. The archival data were obtained from patients admitted to an acute-care in-patient psychiatric mental health facility between January 1, 2004 and December 31, 2007. The site was a university-affiliated freestanding psychiatric institution.

The sample was comprised of males and females who were African Americans, Caucasians, and Hispanics. African American males (AAM) comprised the largest sample, followed by African American females (AAF). Caucasian males (CM) and Caucasian females (CF) were fairly evenly distributed, with Hispanic females (HF) and Hispanic males (HM) making up the least represented group (see Table 4.1).

African American females had the highest mean age, followed by CF, while HM had the lowest mean age of the sample. African American males and CM had members who were at the upper limit of the age criteria (74 to 75 years of age), while all groups had members at the lower age limit (18 years of age) (see Table 4.2).

FINDINGS FOR EACH SPECIFIC AIM AND RESEARCH QUESTION

The following sections address how research questions of each specific aim were analyzed and the results of the analysis. Tables and graphs are provided to illustrate the findings. (Please note: Specific Aim 1 had only one research question.)

Table 4.1 Demographic Data of The Sample (N=1,115)

		F	%
		Race & Gender	
	AAF	246	22.1
	AAM	320	28.7
	CF	182	16.3
	CM	171	15.3
	HF	99	8.9
	HM	97	8.7
Total		1115	100.0

Table 4.2 Race x Gender x Age

		F	M	SD	Range (Years)
	AAF	246	41.74	12.536	18 – 69
	AAM	320	37.19	11.605	18 – 75
	CF	182	43.35	11.016	18 – 68
	CM	171	39.54	12.545	18 – 74
	HF	99	35.82	10.622	18 – 68
	HM	97	32.57	11.883	18 – 67
Total		1115			

SA1RQ1: Is there a difference across ethnic x gender groups on discharge diagnoses?

Table 4.3 presents the percentage of each discharge diagnostic group that was comprised of each ethnicity x gender group. African American males comprised almost 40% of those with a discharge diagnosis of schizophrenia, followed closely by AAF, CM, CF, HM, and HF. The pattern for bipolar disorder indicated that both African American females and Caucasian females were the most frequently diagnosed, followed by

Caucasian males, African American males, and Hispanic females, respectively; Hispanic males were proportionately less likely to be diagnosed with bipolar disorder. Major depression (MDD) yielded similar results to bipolar disorder with AAF, which demonstrated the highest proportional frequency for the discharge group. Caucasian females came in second, followed by Hispanic females, AAM, and CM; Hispanic males yielded the lowest percentage for the discharge group in major depression. Chi-square analyses of each ethnic x gender group across discharge diagnoses indicated significant differences in gender and ethnic representations in discharge diagnoses, X^2 (10, N = 1,115) = 106.94, p = .000. In summary, schizophrenia was most often diagnosed in AAM; bipolar disorder was most often diagnosed in AAF and CF; major depressive disorder in all three female groups.

SA2RQ1: Are there differences between the self-ratings and clinician ratings within each ethnic x gender group with the greatest differences occurring in African American and Hispanic groups?

SA2RQ1 Analyses: Both absolute and relative difference scores were calculated for patient self-evaluations compared to physician evaluations and to nurse evaluations for those dimensions possessing comparable subscales across provider types.

Comparable elements from the respective scales (BSI, BPRS-A, and ADRS) were identified in order to explore the differences between patient self-evaluations and provider evaluations, across ethnicity and gender. An examination of the three instruments (see Table 4.4) revealed some non-comparable elements among the subscales, while other elements could be compared across at least one, and sometimes each, provider type (nurse and physician).

Table 4.3 Ethnicity x Gender Groups across Discharge Diagnosis

Diagnostic Group	AAF	AAM	CF	CM	HF	HM	Total
			Ethnicity/Gender				
- Schizophrenia	130	249	76	89	34	63	641
% within Dx Grp	20.3%	38.8%	11.9%	13.9%	5.3%	9.8%	100%
-Bipolar DO	95	59	87	72	49	25	387
% within Dx Grp	24.5%	15.2%	22.5%	18.6%	12.7%	6.5%	100%
-MDD	21	12	19	10	16	9	87
% within Dx Grp	24.1%	13.8%	21.8%	11.5%	18.4%	10.3%	100%
TOTAL	246	320	182	171	99	97	1115
	22.0%	28.69%	16.32%	15.33	8.87%	8.69%	100%

Table 4.4 Comparison of Like Elements from BSI, BPRS-A and ADRS

BSI (Self-Rated)	BPRS-A (Physician-Rated)	ADRS (Nurse-Rated)
BSI Somatic	BPRS-A; Distress – Somatic Concern	-
BSI Obsessive Compulsive	-	-
BSI Interpersonal Sensitivity	-	-
BSI Depression	BPRS-A; Distress-Depressed Mood	ADRS Depression
BSI Anxiety	BPRS-A; Distress-Anxiety	ADRS Anxiety
BSI Hostility	BPRS-A; Resistance-Hostility	ADRS Anger
BSI Phobic Anxiety	-	-
BSI Paranoid Ideation	BPRS-A; Positive Symptoms-Suspiciousness	-
BSI Psychoticism	BPRS-A; Positive Symptoms-Hallucinatory Behavior	ADRS Psychoticism

ABSOLUTE AND RELATIVE DIFFERENCES BETWEEN PATIENT SELF RATINGS AND CLINICIAN RATINGS WITHIN EACH ETHNIC X GENDER GROUP

Two types of difference scores were calculated to compare patient self-ratings according to race and gender groups to clinician (nurse and physician) ratings: absolute differences and relative differences. Absolute differences reflected the amount of disagreement, i.e., difference between self and clinician ratings (x_i) and proportion of the sample with that amount of disagreement (C%) regardless of whether the patient or clinician rated higher or lower in comparison to one another. Quantifying the amount of absolute disagreement can identify the point at which the magnitude of differences among assessments becomes clinically relevant, reflecting a gap in evaluations between providers and the self-perceptions of patients.

Relative differences reflected the amount and *direction* of disagreement (x_i) and proportion (C%) of the sample with that same amount/direction of disagreement between patient self-evaluations and clinical evaluations. Those instances in which self-evaluations were lower than clinical evaluations are indicated by negative numbers and those in which self-evaluations were higher were indicated by positive numbers. Such relative difference information indicated dimensions in which patients may have differed in a particular direction (under-estimating or over-estimating) compared to a particular provider group (nurses or physicians). Thus, the smaller the amount of absolute or relative difference scores, the smaller the degree of difference between the evaluators (patient self-evaluation compared to provider evaluation).

There are many possible approaches to evaluating the resulting data generated from these two approaches. Several options were chosen to examine differences between clinical providers across gender and ethnic subgroups in accordance with the focus of this study. Therefore, a scrutiny of magnitude of disagreement, as well as proportional disagreement, across providers was chosen. For instance, comparisons of patient providers for both relative and absolute differences could be made by an examination of the proportion of difference scores that could be judged to be similar or of minimal difference, e.g., comparison of the cumulative percentage of each provider whose difference scores are no more than 1.0. Since there is no established clinical criterion to determine the point at which a difference is unacceptable or even meaningful, these

analyses are purely descriptive and are intended to characterize the patterns noted. Further research is necessary to identify the point at which critical degrees of disagreement have implications for practice.

Absolute Differences Results

Tables 4.5 – 4.14 display results of absolute differences between self-evaluations and providers (physicians and nurses) for dimensions available for analysis noted in Table 4.4. Unavailable comparisons are denoted by a dash.

SOMATICISM

The absolute difference scores for *Somaticism* between self-evaluations and *physician* evaluations (Distress – Somatic Concern) across ethnicity and gender subgroups yielded various findings (see Table 4.5.) When examining difference scores, the first consideration was the smallest (indicative of high agreement, or low disagreement, between patient and provider) and largest (indicative of low agreement, or high disagreement, between patient and provider) magnitude demonstrated for each group. All ethnic and gender groups showed remarkable similarity across the smallest difference values for each group ranging in the 0.07 to 0.13 range. However, there were some notable differences in the proportion of agreements falling within these minimum difference scores. For example, Caucasian males had the smallest percentage of subjects in the minimum disagreement level (2.8%) while HM had the greatest (20.0%), indicating a higher degree of consensus (agreement, across a greater proportion of patients) at the lowest levels of disagreement between physicians and HM. Analysis of maximum disagreement or the highest difference scores indicated that African American females had the largest maximum difference score (5.41) while HM had the lowest (1.63) maximum value. Just as low minimum difference scores reflect greater agreement, greater extremes in maximum scores would reflect greater disparities between provider and patient groups. Thus, it appears that physician evaluations concur sooner with self-evaluations for AAF (as reflected by the smallest minimum difference score) as well as differ most dramatically (as reflected by the largest maximum difference score). A review of the range of difference scores reveals wide differences in distribution indicating

42

substantial variability in agreement congruence across groups. Most notably, minority females exhibited the greatest variance across agreement while HM showed the highest consistency (lower range reflects more agreement).

An examination of the point where the median scores (the 50th percentile, which reflects the point where half of the sample has scores above and below that difference score) allows for a comparison of the distribution of differences between patient and provider. Taking the point at which agreement with half of the patient population occurs to be a global indicator of overall congruence, lower difference scores at the 50th percentile would reflect better agreement than higher scores at this midpoint. For Somaticism, the median point for all ethnicity and gender combinations with physician evaluations occurred at approximately the same difference score, e.g., 0.43 to 0.49. Hispanic males were slightly lower with a median occurring at approximately 0.36 reflecting higher agreement whereas HF were slightly higher with a median of 0.59 reflecting less agreement. (Note: Table 4.5 spans three pages.)

DEPRESSION

Two patterns emerged in analysis of the absolute difference scores for *Depression* between patient self-evaluations and *physician* evaluations (Distress – Depressed Mood) across ethnicity and gender subgroups (See Table 4.6.). Minority males had minimum difference scores twice as large as all other ethnic and gender groups, although these differences were not of sufficient magnitude to suggest importance. There were also some notable differences in the proportion at the minimum difference scores. African American females had the smallest percentage of subjects (1.6%) in the smallest disagreement level (0.06), while HM had the greatest (30.0% at 0.12). African American males had a similarly large proportion (41.5%) at the second lowest difference value (0.24). African American females displayed the largest maximum difference score (4.40), while HM had the lowest (1.49). The median points for AAM were lowest (~ 0.24), followed closely by HM (0.29) (reflecting higher agreement). Conversely, Caucasian females were considerably higher, with a median of 0.62, reflecting less agreement at midpoint. (Note: Table 4.6 spans three pages.)

The absolute differences scores for *Depression* between *nurse* evaluations (Depression) and patient self-evaluations across ethnicity and gender subgroups yielded considerably different values (See Table 4.7.). All ethnic and gender groups showed remarkable similarity in the smallest values, i.e., the 0.03 to 0.06 range. African American females had the smallest percentage of subjects in the smallest disagreement level (1.6%), followed closely by AAM (1.8%); in contrast, HM had the greatest (53.3%), indicating a higher degree of consensus for a larger percentage of patients at the lowest levels of disagreement between nurse ratings and patient ratings. Caucasian females also showed a high degree of consensus, with 30.8% agreement at the lowest difference score for that group. In agreement with the pattern for physician maximum difference scores, AAF had the largest maximum difference score (4.58) compared to nurse evaluations, while HM had the lowest (1.71). A review of the range of difference scores revealed that: 1) AAF had the highest degree of variability (4.55), and 2) HM had the highest consistency (1.65) compared to nurse ratings. The median point for depression for most ethnicity and gender groups occurred at approximately the same level: 0.36—0.44. In contrast, HM were substantially lower, with a median occurring at approximately 0.06 (which was also the minimum difference score), followed closely by AAM (0.25) reflecting higher agreement. (Note: Table 4.7 spans two pages.)

Table 4.5 Absolute Difference Scores for Somaticism (Distress – Somatic Concern) between Self-Evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

						BPRS-A (Physician-Rated)											
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	F	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.11	1	2.8	.13	2	4.3	.13	4	10.0	.07	2	3.3	.13	2	20.0	.13	2	12.5
.13	4	13.9	.19	1	6.4	.23	13	42.5	.09	3	8.2	.23	2	40.0	.43	3	31.3
.15	1	16.7	.23	12	31.9	.25	1	45.0	.11	2	11.5	.49	2	60.0	.55	1	37.5
.23	7	36.1	.25	1	34.0	.29	1	47.5	.13	5	19.7	.60	1	70.0	.59	1	43.8
.27	1	38.9	.29	2	38.3	.43	2	52.5	.23	14	42.6	.83	1	80.0	.63	3	62.5
.43	1	41.7	.43	5	48.9	.48	1	55.0	.24	1	44.3	.87	1	90.0	.65	1	68.8
.49	3	50.0	.49	1	51.1	.51	1	57.5	.27	1	45.9	1.63	1	100.0	1.08	1	75.0
.51	1	52.8	.60	1	53.2	.63	5	70.0	.43	2	49.2				1.82	1	81.3
.56	1	55.6	.63	2	57.4	.67	2	75.0	.47	1	50.8				2.95	1	87.5
.83	2	61.1	.84	4	66.0	.75	1	77.5	.49	2	54.1				3.22	1	93.8
.84	3	69.4	.96	2	70.2	.84	2	82.5	.63	2	57.4				4.81	1	100.0
.87	1	72.2	1.22	3	76.6	1.02	1	85.0	.65	1	59.0						
.95	1	75.0	1.56	1	78.7	1.22	1	87.5	.80	1	60.7						

Table 4.5 Absolute Difference Scores for Somaticism (Distress – Somatic Concern) between Self-Evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
1.36	1	77.8	1.62	2	83.0	1.27	1	90.0	.84	1	62.3						
1.36	1	80.6	1.71	1	85.1	1.66	1	92.5	.87	3	67.2						
1.52	1	83.3	1.92	2	89.4	2.19	1	95.0	1.02	1	68.9						
1.92	1	86.1	2.07	1	91.5	2.27	1	97.5	1.11	2	72.1						
2.02	1	88.9	2.26	1	93.6	3.62	1		1.16	1	73.8						
2.27	1	91.7	2.27	1	95.7				1.20	2	77.0						
2.43	2	97.2	2.95	1	97.9				1.22	2	80.3						
2.63	1	100.0	3.30	1	100.0				1.27	1	82.0						
									1.39	1	83.6						
									1.51	1	85.2						
									1.56	1	86.9						
									2.02	1	88.5						
									2.06	1	90.2						
									2.27	1	91.8						
									2.42	1	93.4						

Table 4.5 Absolute Difference Scores for Somaticism (Distress – Somatic Concern) between Self-Evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
									2.43	1	95.1						
									3.06	1	96.7						
									4.41	1	98.4						
									5.41	1	100.0						
Range=2.52			3.17			3.49			5.34			1.5			4.68		

Table 4.6 Absolute Difference Scores for Depression (Distress – Depressed) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.07	1	2.7	.07	1	2.1	.12	3	7.3	.06	1	1.6	.12	3	30.0	.07	2	11.8
.09	1	5.4	.10	1	4.2	.24	17	48.8	.07	3	6.6	.24	1	40.0	.11	1	17.6
.12	3	13.5	.12	1	6.3	.26	2	53.7	.10	1	8.2	.29	1	50.0	.24	2	29.4
.24	7	32.4	.24	12	31.3	.29	1	56.1	.12	6	18.0	.43	2	70.0	.32	1	35.3
.26	1	35.1	.27	1	33.3	.43	3	63.4	.24	14	41.0	.47	1	80.0	.43	3	52.9
.45	1	37.8	.28	1	35.4	.47	1	65.9	.29	1	42.6	1.19	1	90.0	.62	1	58.8
.45	2	43.2	.32	1	37.5	.62	1	68.3	.43	2	45.9	1.49	1	100.0	.83	1	64.7
.47	4	54.1	.43	3	43.8	.64	1	70.7	.45	1	47.5				.94	1	70.6
.49	1	56.8	.47	1	45.8	.77	1	73.2	.45	1	49.2				.99	1	76.5
.79	1	59.5	.62	3	52.1	.82	1	75.6	.47	5	57.4				1.18	1	82.4
.83	1	62.2	.81	1	54.2	.83	2	80.5	.62	1	59.0				3.33	1	88.2
.96	1	64.9	.81	1	56.3	1.01	1	82.9	.64	2	62.3				3.82	1	94.1
1.18	3	73.0	.83	5	66.7	1.18	1	85.4	.73	1	63.9				4.00	1	100

Table 4.6 Absolute Difference Scores for Depression (Distress – Depressed) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
1.43	1	75.7	.98	1	68.8	1.43	1	87.8	.81	2	67.2						
1.55	1	78.4	.99	2	72.9	1.95	1	90.2	.83	1	68.9						
1.62	1	81.1	1.18	1	75.0	2.26	1	92.7	.99	1	70.5						
1.88	1	83.8	1.37	1	77.1	2.79	1	95.1	1.18	1	72.1						
1.90	2	89.2	1.50	1	79.2	3.63	1	97.6	1.19	2	75.4						
2.05	1	91.9	1.53	1	81.3	3.82	1	100.0	1.22	1	77.0						
2.62	2	97.3	1.55	2	85.4				1.55	2	80.3						
3.06	1	100.0	1.60	1	87.5				1.60	1	82.0						
			1.90	1	89.6				1.93	1	83.6						
			1.95	1	91.7				2.26	1	85.2						
			2.26	1	93.8				2.43	1	86.9						
			2.88	1	95.8				2.73	1	88.5						
			2.95	1	97.9				2.95	1	90.2						

Table 4.6 Absolute Difference Scores for Depression (Distress – Depressed) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
			3.31	1	100.0				3.06	1	91.8						
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
									3.08	2	95.1						
									3.63	1	96.7						
									4.38	1	98.4						
									4.40	1	100.0						
Range=2.99			3.24			3.7			4.34			1.37			3.93		

Table 4.7 Absolute Difference Scores for Depression (Depression) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

										ADRS (Nurse-Rated)								
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.05	2	4.1	.06	16	30.8	.03	1	1.8	.03	1	1.6	.06	8	53.3	.06	2	12.5
.06	12	28.6	.14	1	32.7	.06	20	37.5	.06	18	31.1	.25	3	73.3	.24	1	18.8
.19	1	30.6	.19	1	34.6	.14	1	39.3	.24	1	32.8	.63	1	80.0	.25	4	43.8
.25	1	32.7	.25	2	38.5	.25	6	50.0	.25	6	42.6	1.10	1	86.7	.36	1	50.0
.42	2	36.7	.33	1	40.4	.33	1	51.8	.33	1	44.3	1.68	1	93.3	.44	1	56.3
.44	6	49.0	.34	1	42.3	.37	1	53.6	.36	1	45.9	1.71	1	100.0	.52	1	62.5
.52	7	63.3	.39	1	44.2	.44	1	55.4	.42	1	47.5				1.01	1	68.8
.57	1	65.3	.44	3	50.0	.52	5	64.3	.44	3	52.5				1.32	1	75.0
.58	1	67.3	.52	7	63.5	.53	1	66.1	.52	2	55.7				1.51	1	81.3
.63	1	69.4	.53	1	65.4	.63	1	67.9	.56	1	57.4				1.57	1	87.5
.94	2	73.5	.55	1	67.3	.72	1	69.6	.63	2	60.7				2.65	1	93.8
1.01	3	79.6	.63	4	75.0	.91	2	73.2	.82	1	62.3				3.64	1	100.0

Table 4.7: Absolute Difference Scores for Depression (Depression) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

ADRS (Nurse-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
1.74	1	81.6	.74	1	76.9	1.01	1	75.0	.91	2	65.6						
1.90	1	83.7	.82	2	80.8	1.10	2	78.6	1.10	4	72.1						
1.95	1	85.7	.91	1	82.7	1.13	1	80.4	1.18	1	73.8						
2.07	1	87.8	.92	1	84.6	1.30	1	82.1	1.50	1	75.4						
2.26	2	91.8	1.01	1	86.5	1.38	1	83.9	1.57	2	78.7						
2.27	1	93.9	1.10	1	88.5	1.76	1	85.7	1.68	2	82.0						
2.48	1	95.9	1.30	1	90.4	2.09	1	87.5	2.07	1	83.6						
2.89	1	98.0	1.68	1	92.3	2.26	1	89.3	2.13	1	85.2						
3.26	1	100.0	1.88	1	94.2	2.32	1	91.1	2.26	3	90.2						
			2.26	1	96.2	2.87	1	92.9	2.84	2	93.4						
			2.70	1	98.1	3.06	1	94.6	2.87	1	95.1						
			3.83	1	100.0	3.45	2	98.2	3.26	1	96.7						
						3.64	1	100.0	4.20	1	98.4						
									4.58	1	100.0						
Range=3.21			3.77			3.61			4.55			1.65			3.58		

52

The absolute difference scores for *Anxiety* between patient self-evaluations and *physician* evaluations (Distress – Anxiety) across ethnicity and gender subgroups showed two patterns along gender lines at the smallest disagreement levels (See Table 4.8.) Lowest values for males of all three ethnicities (AA, C, H) were identical (0.03), whereas lowest values for females of all three ethnicities were higher but similar in range (0.12-0.18). African American males had the smallest percentage of subjects (2.4%) in the minimum disagreement level (0.03), followed closely by AAF (3.3%). Caucasian females had the greatest proportion (18.8%) at the lowest difference score for females, their absolute difference score (0.18) was also the highest minimum value of all the groups regardless of gender. Therefore, there was a notably greater degree of disagreement at the minimum level between physician evaluations and CF self-evaluations. In contrast, HM had a higher percentage (10.0%) at very low minimum difference score (0.03), reflecting a high degree of consensus at the lowest levels of disagreement between physicians and HM self-evaluations. African American females had the largest maximum difference score (4.31) while HM had the lowest (2.45). A review of the range of difference scores revealed similarities within Caucasian and African American groups, despite gender; HM differed from all other groups with a substantially smaller range (2.42); HF were more similar to African American males and females. The median point for anxiety for CM, CF, and AAF occurred at approximately the same difference score—0.44 – 0.54. African American males (0.18) and HM (0.18) were equal but substantially lower, reflecting a higher level of agreement with physicians. On the other hand, median scores for HF were notably higher (0.61) than all other groups, indicating higher levels of disagreement. (Note: Table 4.8 spans three pages.)

Absolute difference scores for *Anxiety* between *nurse* evaluations (Anxiety) and patient self-evaluations across ethnicity and gender subgroups were varied (See Table 4.9). Most of the ethnicity x gender groups showed remarkable similarity in the smallest values, in the 0.03 to 0.04 range. African American males displayed a slightly higher minimum difference score of 0.10, while HF displayed a notably higher minimum difference score (0.23) with higher minimum scores indicating greater disagreement.

Hispanic males, followed closely by Hispanic females, had notably a greater proportion (13.3% and 12.5%, respectively) in agreement with minimal differences in nurse evaluations, contrasted to CM at 2.1%, CF at 1.9%, AAM at 1.8%, and AAF at 1.7%. An examination of maximum disagreement reveals that AAF had the largest maximum difference score (4.37), while HM had the lowest (2.51). The range of difference scores was similar for CM (3.65) and CF (3.3). The range of distribution scores between genders of African Americans and Hispanics indicated substantial variability in ethnicity x gender groups: AAM (3.79), AAF (4.33), HM (2.47), and HF (3.18). Hispanic males showed the smallest variability (2.47) while AAF showed the greatest variability (4.33). The median point of disagreement with nurses for anxiety for all ethnicity x gender combinations covered a wide variation in scores: 0.23 to 0.85. At the high end were AAF (0.85), and at the low end were HM (<0.23). (Note: Table 4.9 spans three pages.)

Table 4.8 Absolute Difference Scores for Anxiety (Distress – Anxiety) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

| | | | | | | | | BPRS-A | | | | | | | | | |
| | | | | | | | (Physician-Rated) | | | | | | | | | | |

| Caucasian | | | | | | African American | | | | | | Hispanic | | | | | |
| M | | | F | | | M | | | F | | | M | | | F | | |
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.03	2	5.6	.18	9	18.8	.03	1	2.4	.12	2	3.3	.03	1	10.0	.14	1	5.9
.12	1	8.3	.18	2	22.9	.11	1	4.9	.18	20	36.1	.08	1	20.0	.18	6	41.2
.18	7	27.8	.22	1	25.0	.12	1	7.3	.23	1	37.7	.18	3	50.0	.26	1	47.1
.25	1	30.6	.27	1	27.1	.18	18	51.2	.33	2	41.0	.33	1	60.0	.61	1	52.9
.27	1	33.3	.33	2	31.3	.38	4	61.0	.38	3	45.9	1.00	1	70.0	.80	1	58.8
.33	1	36.1	.38	5	41.7	.48	1	63.4	.41	1	47.5	1.05	1	80.0	.89	1	64.7
.38	2	41.7	.46	1	43.8	.54	1	65.9	.44	3	52.5	2.06	1	90.0	1.00	1	70.6
.44	1	44.4	.48	1	45.8	.59	3	73.2	.48	1	54.1	2.45	1	100.0	1.42	1	76.5
.48	1	47.2	.54	1	47.9	.69	1	75.6	.54	2	57.4				2.86	1	82.4
.50	1	50.0	.59	3	54.2	.80	1	78.0	.59	2	60.7				3.40	1	88.2
.54	2	55.6	.69	2	58.3	.85	1	80.5	.63	1	62.3				3.48	1	94.1
.59	1	58.3	.78	1	60.4	.89	1	82.9	.65	1	63.9				4.31	1	100

Table 4.8 Absolute Difference Scores for Anxiety (Distress – Anxiety) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

						BPRS-A (Physician-Rated)											
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.89	1	61.1	.80	2	64.6	1.00	1	85.4	.70	1	65.6						
.97	1	63.9	.84	1	66.7	1.47	1	87.8	.85	1	67.2						
1.21	1	66.7	.89	2	70.8	2.00	1	90.2	.89	1	68.9						
1.25	1	69.4	.99	1	72.9	2.32	1	92.7	1.00	1	70.5						
1.42	1	72.2	1.00	3	79.2	2.83	1	95.1	1.06	1	72.1						
1.61	1	75.0	1.21	1	81.3	3.48	1	97.6	1.25	2	75.4						
1.83	1	77.8	1.32	1	83.3	4.10	1	100.0	1.32	1	77.0						
1.97	2	83.3	1.61	1	85.4				1.53	1	78.7						
2.32	1	86.1	1.62	1	87.5				1.61	2	82.0						
2.47	2	91.7	1.97	2	91.7				2.04	1	83.6						
2.68	1	94.4	2.32	1	93.8				2.09	1	85.2						
3.24	1	97.2	2.51	1	95.8				2.24	1	86.9						
3.48	1	100.0	2.98	1	97.9				2.32	1	88.5						

Table 4.8 Absolute Difference Scores for Anxiety (Distress – Anxiety) between Self-evaluations and Physician Evaluations across
Ethnicity and Gender Subgroups

						BPRS-A											
						(Physician-Rated)											
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
			3.55	1	100.0				2.36	1	90.2						
									2.47	1	91.8						
									2.47	1	93.4						
									2.86	1	95.1						
									2.92	1	96.7						
									3.90	1	98.4						
									4.31	1	100.0						
Range=3.45			3.37			4.07			4.19			2.42			4.17		

57

Table 4.9 Absolute Difference Scores for Anxiety (Anxiety) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

ADRS (Nurse-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.03	1	2.1	.03	1	1.9	.10	1	1.8	.04	1	1.7	.04	2	13.3	.23	2	12.5
.04	3	8.3	.04	3	7.7	.23	13	25.0	.11	1	3.4	.11	2	26.7	.25	3	31.3
.11	1	10.4	.10	3	13.5	.25	6	35.7	.17	1	5.1	.23	5	60.0	.38	1	37.5
.17	3	16.7	.11	2	17.3	.31	2	39.3	.23	11	23.7	.25	1	66.7	.44	1	43.8
.23	2	20.8	.17	2	21.2	.44	3	44.6	.25	4	30.5	.52	1	73.3	.65	1	50.0
.25	5	31.3	.23	10	40.4	.52	3	50.0	.31	1	32.2	.86	1	80.0	.85	1	56.3
.37	1	33.3	.24	1	42.3	.65	5	58.9	.37	1	33.9	1.06	1	86.7	.93	1	62.5
.44	1	35.4	.25	7	55.8	.73	3	64.3	.38	1	35.6	1.69	1	93.3	1.13	1	68.8
.51	1	37.5	.31	2	59.6	.85	1	66.1	.44	2	39.0	2.51	1	100.0	1.21	2	81.3
.65	4	45.8	.37	1	61.5	1.00	1	67.9	.59	1	40.7				1.62	1	87.5
.73	5	56.3	.44	3	67.3	1.27	1	69.6	.59	1	42.4				2.92	1	93.8
.79	1	58.3	.52	3	73.1	1.48	1	71.4	.73	2	45.8				3.41	1	100.
.79	1	60.4	.59	1	75.0	1.61	2	75.0	.79	1	47.5						

58

Table 4.9 Absolute Difference Scores for Anxiety (Anxiety) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

ADRS (Nurse-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.85	1	62.5	.65	1	76.9	1.69	4	82.1	.85	2	50.8						
1.00	1	64.6	.73	3	82.7	1.83	1	83.9	.99	1	52.5						
1.21	1	66.7	1.00	1	84.6	1.89	2	87.5	1.06	1	54.2						
1.27	1	68.8	1.06	1	86.5	1.96	1	89.3	1.07	1	55.9						
1.34	1	70.8	1.21	1	88.5	2.09	1	91.1	1.20	1	57.6						
1.41	1	72.9	1.27	1	90.4	2.17	1	92.9	1.21	6	67.8						
1.47	2	77.1	1.41	1	92.3	3.20	1	94.6	1.27	2	71.2						
1.48	1	79.2	1.47	1	94.2	3.47	1	96.4	1.47	2	74.6						
1.69	2	83.3	1.75	1	96.2	3.54	1	98.2	1.48	1	76.3						
1.97	1	85.4	1.96	1	98.1	3.89	1	100.0	1.61	1	78.0						
2.17	1	87.5	3.33	1	100.0				1.69	4	84.7						
2.30	2	91.7							1.82	1	86.4						
2.92	1	93.8							1.89	1	88.1						

Table 4.9 Absolute Difference Scores for Anxiety (Anxiety) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

ADRS (Nurse-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
3.06	1	95.8							1.96	1	89.8						
3.13	1	97.9							2.09	1	91.5						
3.68	1	100.0							2.99	1	93.2						
									3.33	1	94.9						
									3.40	1	96.6						
									3.67	1	98.3						
									4.37	1	100.0						
Range=3.65			3.3			3.79			4.33			2.47			3.18		

The absolute difference scores for *Hostility* (Resistance – Hostility) of patient self-evaluations were compared to *physician* evaluations across ethnicity and gender groups (See Table 4.10). All ethnicity and gender groups showed remarkable similarity, with the smallest values ranging from 0.02 to 0.07. Hispanic males had the highest proportion of minimal disagreement (44.4%), indicating greater consensus with the physician evaluations, while AAM had the smallest proportion (2.5%); the other groups clustered on the lower end with CM at 2.8%, AAF at 4.9%, HF at 5.9%, and CF at 6.3%. A comparison of maximum difference scores revealed that AAF had the largest maximum difference score (5.21), while HM had the lowest (0.81). There was substantial variability in the range of difference scores among the ethnicity x gender groups. Most notably, AAF exhibited the greatest variance (5.19) of all the ethnicity x gender groups, while Hispanic males showed the lowest (HM=0.74, AAM=2.74, CF=3.05, HF=3.64, CM=4.85, and AAF=5.19. There was wide variation in the median point of difference scores for Hostility (Resistance) for all ethnicity and gender group combinations compared with physician evaluations: 0.14 to 0.67. Hispanic males were the lowest, and HF were the highest. (Note: Table 4.10 spans two pages.)

Absolute difference scores for *Hostility* (*Anger*) for *nurse* evaluations were compared to patient self-evaluations across ethnicity x gender (see Table 4.11). There were three groups with substantially high agreement between patient self-evaluations and the nurse evaluations. HM had the greatest percentage (64.3%) of minimal disagreement with nurse ratings, followed by AAF with 43.5%, and CM with 35.4%. AAM had the lowest percentage of minimal disagreement with nurse ratings (1.8%), followed closely by CF (2.0%), then HF (12.5%). An examination of maximum disagreement for nurse evaluations compared to patient self-evaluations across ethnicity x gender subgroups scores revealed that the highest score was for AAF (5.24), and the lowest value was for HM (2.27), the CM score was second highest (4.67) (AAM = 4.10, CF = 3.59, HF = 3.47). A review of the range of difference scores revealed that AAF exhibited the largest range of difference scores (5.11), followed by CM (4.54); HM showed the highest consistency (i.e., lower range reflects more agreement) at 2.14. The median point for

Hostility (Anger) for all ethnicity and gender combinations compared with nurse evaluations showed relatively low thresholds due to the large proportions populating the lowest difference scores (0.13 to 0.17). Hispanic females were an exception with a notably higher median score of 0.77, reflecting a greater distribution of disagreement. (Note: Table 4.11 spans two pages.)

Table 4.10 Absolute Difference Scores for Hostility (Resistance – Hostility) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	F	*C%	x_i	f	*C%
.02	1	2.8	.02	3	6.3	.03	1	2.5	.02	3	4.9	.07	4	44.4	.03	1	5.9
.07	5	16.7	.07	17	41.7	.07	17	45.0	.07	17	32.8	.14	1	55.6	.07	2	17.6
.27	1	19.4	.28	7	56.3	.27	1	47.5	.28	5	41.0	.28	1	66.7	.37	3	35.3
.28	3	27.8	.32	2	60.4	.28	2	52.5	.33	1	42.6	.67	2	88.9	.44	1	41.2
.33	2	33.3	.33	1	62.5	.37	1	55.0	.37	5	50.8	.81	1	100	.63	1	47.1
.37	2	38.9	.37	5	72.9	.51	1	57.5	.46	1	52.5				.67	2	58.8
.39	1	41.7	.39	2	77.1	.67	5	70.0	.62	1	54.1				.97	2	70.6
.57	1	44.4	.63	1	79.2	.98	1	72.5	.63	2	57.4				1.27	1	76.5
.63	3	52.8	.67	2	83.3	1.06	1	75.0	.67	5	65.6				1.57	1	82.4
.67	3	61.1	.74	1	85.4	1.27	1	77.5	.98	4	72.1				2.17	1	88.2
.87	1	63.9	1.27	1	87.5	1.34	3	85.0	1.04	1	73.8				3.67	2	100
.92	1	66.7	1.34	2	91.7	1.57	1	87.5	1.17	1	75.4						
.97	2	72.2	1.87	1	93.8	2.04	1	90.0	1.27	3	80.3						
.98	5	86.1	2.17	1	95.8	2.39	1	92.5	1.69	1	82.0						

63

Table 4.10: Absolute Difference Scores for Hostility (Resistance - Hostility) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups BPRS-A (Physician-Rated)

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	F	*C%	x_i	f	*C%
1.27	1	88.9	2.39	1	97.9	2.47	1	95.0	1.87	1	83.6						
1.34	1	91.7	3.07	1	100	2.75	1	97.5	2.47	1	85.2						
1.69	1	94.4				2.77	1	100.0	2.56	1	86.9						
2.04	1	97.2							2.75	1	88.5						
4.87	1	100.0							2.77	1	90.2						
									3.07	1	91.8						
									3.67	1	93.4						
									3.97	1	95.1						
									4.27	1	96.7						
									5.16	1	98.4						
									5.21	1	100.0						
Range=4.85			3.05			2.74			5.19			0.74			3.64		

Table 4.11 Absolute Difference Scores for Hostility (Anger) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

						ADRS (Nurse-Rated)											
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.13	17	35.4	.06	1	2.0	.10	1	1.8	.13	27	43.5	.13	9	64.3	.13	2	12.5
.17	7	50.0	.13	25	51.0	.13	31	57.1	.17	9	58.1	.47	2	78.6	.17	2	25.0
.47	5	60.4	.17	7	64.7	.17	3	62.5	.20	1	59.7	1.07	1	85.7	.47	2	37.5
.69	1	62.5	.47	3	70.6	.30	1	64.3	.47	4	66.1	1.67	1	92.9	.77	2	50.0
.77	2	66.7	.69	5	80.4	.47	3	69.6	.60	1	67.7	2.27	1	100	1.07	1	56.3
1.07	5	77.1	.77	3	86.3	.50	1	71.4	.66	1	69.4				1.26	1	62.5
1.20	1	79.2	1.37	1	88.2	.60	1	73.2	.69	3	74.2				1.37	1	68.8
1.26	3	85.4	1.67	1	90.2	.77	1	75.0	.77	2	77.4				1.97	1	75.0
1.43	1	87.5	1.97	1	92.2	.80	1	76.8	.93	1	79.0				2.10	1	81.3
1.67	1	89.6	2.10	1	94.1	.96	1	78.6	.96	1	80.6				2.37	1	87.5
2.10	1	91.7	2.27	1	96.1	1.07	2	82.1	1.07	1	82.3				3.47	2	100
2.27	1	93.8	2.30	1	98.0	1.26	1	83.9	1.67	2	85.5						
2.40	1	95.8	3.59	1	100	1.37	1	85.7	2.27	1	87.1						

Table 4.11 Absolute Difference Scores for Hostility (Anger) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

ADRS (Nurse-Rated)														
Caucasian					African American							Hispanic		
M			F		M			F				M		F
3.17	1	97.9			1.43	1	87.5	2.40	2	90.3				
4.67	1	100			1.67	1	89.3	2.57	1	91.9				
					1.83	1	91.1	3.47	1	93.5				
					1.97	1	92.9	3.53	1	95.2				
					2.27	2	96.4	3.77	2	98.4				
					4.07	1	98.2	5.24	1	100				
					4.10	1	100							
Range=4.54			3.53		4.00			5.11				2.14		3.34

PARANOID IDEATION

Absolute difference scores for *Paranoid Ideation* compared patient self-evaluations and *physician* evaluations (Positive Symptoms – Suspiciousness) across ethnicity and gender subgroups (See Table 4.12). With the exception of CM (0.13), all other ethnic and gender groups showed remarkable similarity in the smallest values (0.02 to 0.08). Hispanic males and females had the largest percentage of subjects (10% and 6.3%, respectively) in the minimum disagreement levels. Hispanic females had the largest maximum difference score (4.36) followed by AAF (4.15) while HM had the lowest score (1.91). A review of the range of difference scores revealed similarities across all groups with the exception of HMs who were dramatically less variable. Most notably, HF exhibited the greatest variance across agreement (4.28), while HM showed the lowest agreement (1.88). The median point for Paranoid Ideation for all ethnicity and gender combinations compared with physicians occurred with a wide variation in difference scores. Hispanic males were the lowest, with a median occurring at approximately 0.18, reflecting higher agreement; Hispanic females were the highest with a median of 0.86, followed by AAF (0.74). (Note: Table 4.12 spans three pages.)

Table 4.12 Absolute Difference Scores for Paranoid Ideation (Positive Symptoms – Suspiciousness) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

						BPRS-A (Physician-Rated)											
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.13	1	2.9	.03	1	2.1	.02	1	2.5	.03	1	1.7	.03	1	10.0	.08	1	6.3
.18	8	25.7	.13	4	10.6	.08	2	7.5	.07	1	3.3	.08	1	20.0	.18	2	18.8
.34	3	34.3	.18	2	14.9	.13	2	12.5	.08	1	5.0	.18	3	50.0	.39	1	25.0
.34	1	37.1	.18	13	42.6	.18	8	32.5	.18	14	28.3	.34	1	60.0	.60	1	31.3
.39	1	40.0	.29	1	44.7	.29	1	35.0	.29	1	30.0	.60	1	70.0	.81	1	37.5
.39	2	45.7	.34	2	48.9	.34	2	40.0	.34	2	33.3	1.02	1	80.0	.86	2	50.0
.50	1	48.6	.34	1	51.1	.34	1	42.5	.34	1	35.0	1.18	1	90.0	1.23	2	62.5
.54	1	51.4	.39	5	61.7	.39	1	45.0	.39	1	36.7	1.91	1	100.0	1.43	1	68.8
.60	3	60.0	.45	1	63.8	.39	2	50.0	.39	1	38.3				1.63	1	75.0
.60	1	62.9	.60	2	68.1	.60	2	55.0	.60	3	43.3				1.64	1	81.3
.65	1	65.7	.65	1	70.2	.60	2	60.0	.60	1	45.0				2.69	1	87.5
.76	2	71.4	.76	1	72.3	.70	1	62.5	.74	1	46.7				2.90	1	93.8
.81	1	74.3	.81	2	76.6	.86	1	65.0	.81	8	60.0				4.36	1	100

Table 4.12 Absolute Difference Scores for Paranoid Ideation (Positive Symptoms – Suspiciousness) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

						BPRS-A (Physician-Rated)											
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
.86	1	77.1	.86	2	80.9	.91	1	67.5	.86	2	63.3						
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
1.02	2	82.9	.97	1	83.0	.92	1	70.0	.91	1	65.0						
1.12	2	88.6	1.43	2	87.2	1.02	1	72.5	1.02	1	66.7						
1.43	1	91.4	1.63	1	89.4	1.12	2	77.5	1.12	2	70.0						
1.89	1	94.3	2.38	1	91.5	1.31	1	80.0	1.60	1	71.7						
3.73	1	97.1	2.41	1	93.6	1.38	1	82.5	1.64	1	73.3						
3.89	1	100.0	2.51	1	95.7	1.38	1	85.0	1.85	2	76.7						
			3.16	1	97.9	1.63	1	87.5	2.20	1	78.3						
			3.52	1	100.0	2.67	1	90.0	2.27	1	80.0						
						3.06	1	92.5	2.38	1	81.7						
						3.11	1	95.0	2.41	1	83.3						
						3.16	1	97.5	2.43	1	85.0						
						4.07	1	100	2.48	1	86.7						
									2.90	1	88.3						

69

Table 4.12 Absolute Difference Scores for Paranoid Ideation (Positive Symptoms – Suspiciousness) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
									3.11	3	93.3						
									3.19	1	95.0						
									3.32	1	96.7						
									3.52	1	98.3						
									4.15	1	100.0						
Range=3.76			3.49			4.05			4.12			1.88			4.28		

70

PSYCHOTICISM

Absolute difference scores for *Psychoticism* between patient self-evaluation and *physician* evaluations (Positive Symptoms – Hallucinatory Behavior) across ethnicity and gender subgroups indicated that both Hispanic males and females (10% and 13.3%, respectively) had the highest proportions at minimum difference scores (See Table 4.13). Hispanic females also had the highest minimum difference score across all groups (0.21 versus 0.05 for all other groups) reflecting a higher threshold of difference at the lowest level. An examination of maximum difference scores indicated high maximum difference scores across all groups except for HM (1.43). Hispanic males demonstrated the smallest variability of range scores (1.38) while AAM had the highest variability (4.41). The median point for Psychoticism for the majority of ethnicity and gender difference scores clustered in the 0.31 to 0.59 range, although HM displayed a substantially lower median at 0.21 (reflecting higher agreement) compared to the higher median of HF at 0.83 (reflecting poorer agreement). (Note: Table 4.13 spans three pages.)

Absolute difference scores for *Psychoticism* between self-evaluation and *nurse* evaluations (Psychoticism) across ethnicity and gender subgroups indicated similarly small minimum difference scores for CM, AAM, and AAF (See Table 4.14). Caucasian females and both HM and HF displayed larger minimum difference scores in the 0.15-0.16 range. In addition, percentages in minimal difference scores were highest for CF and both HF and HM. An examination of maximum disagreement revealed that AAF exhibited the largest maximum difference score (4.24), and HM had the lowest (2.24). A review of the range of difference scores revealed lowest variability in HM and CM and highest in AAF and AAM. The median point for four of the six ethnicity and gender groups occurred with a range of 0.34 to 0.49. Notably higher median scores were demonstrated by minority females (AAF = 0.74 and HF = 0.99), reflecting higher levels of disagreement at the median for these groups compared to the other groups. (Note: Table 4.14 spans three pages.)

Table 4.13 Absolute Difference Scores for Psychoticism (Positive Symptoms – Hallucinatory Behavior) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.05	1	2.9	.05	2	4.3	.05	3	7.5	.05	1	1.7	.05	1	10.0	.21	2	13.3
.21	7	23.5	.06	1	6.5	.06	1	10.0	.21	14	25.0	.07	1	20.0	.31	1	20.0
.31	3	32.4	.07	1	8.7	.07	1	12.5	.31	2	28.3	.21	3	50.0	.46	2	33.3
.44	1	35.3	.20	2	13.0	.19	1	15.0	.32	1	30.0	.31	1	60.0	.83	2	46.7
.45	1	38.2	.21	15	45.7	.21	8	35.0	.39	1	31.7	.45	1	70.0	.96	2	60.0
.46	4	50.0	.31	3	52.2	.31	2	40.0	.45	1	33.3	.46	1	80.0	1.11	1	66.7
.57	4	61.8	.32	1	54.3	.45	1	42.5	.46	4	40.0	.71	1	90.0	1.46	1	73.3
.59	1	64.7	.44	1	56.5	.46	2	47.5	.57	4	46.7	1.43	1	100.0	1.71	2	86.7
.70	1	67.6	.46	2	60.9	.57	2	52.5	.59	1	48.3				3.71	1	93.3
.83	2	73.5	.57	3	67.4	.59	2	57.5	.71	3	53.3				3.96	1	100.0
.85	1	76.5	.71	3	73.9	.70	1	60.0	.83	2	56.7						
.95	1	79.4	.83	3	80.4	.71	1	62.5	.84	1	58.3						

Table 4.13 Absolute Difference Scores for Psychoticism (Positive Symptoms – Hallucinatory Behavior) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A																	
(Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
1.09	1	82.4	.96	1	82.6	.83	1	65.0	.94	1	60.0						
1.21	1	85.3	1.18	1	84.8	.95	1	67.5	.96	2	63.3						
1.36	1	88.2	1.61	1	87.0	1.09	2	72.5	1.09	3	68.3						
1.46	1	91.2	1.66	1	89.1	1.17	1	75.0	1.17	1	70.0						
1.87	1	94.1	1.69	1	91.3	1.35	1	77.5	1.21	1	71.7						
2.43	1	97.1	1.93	1	93.5	1.42	1	80.0	1.46	2	75.0						
4.20	1	100.0	2.14	1	95.7	1.46	1	82.5	1.69	1	76.7						
			3.21	1	97.8	1.61	1	85.0	1.71	3	81.7						
			3.71	1	100.0	1.96	1	87.5	2.14	1	83.3						
						2.20	1	90.0	2.39	1	85.0						
						2.45	1	92.5	2.45	1	86.7						
						2.65	1	95.0	2.71	1	88.3						
						2.68	1	97.5	3.17	1	90.0						

Table 4.13 Absolute Difference Scores for Psychoticism (Positive Symptoms – Hallucinatory Behavior) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

BPRS-A (Physician-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
						4.46	1	100.0	3.21	1	91.7						
									3.71	1	93.3						
									3.96	2	96.7						
									4.21	2	100.0						
Range=4.15			3.66			4.41			4.16			1.38			3.75		

74

Table 4.14 Absolute Difference Scores for Psychoticism (Psychoticism) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

ADRS (Nurse-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
.06	1	2.1	.16	5	9.8	.00	1	1.8	.09	3	4.8	.16	1	6.7	.15	1	6.7
.09	1	4.3	.19	1	11.8	.04	1	3.6	.16	2	8.1	.24	5	40.0	.16	1	13.3
.15	1	6.4	.21	1	13.7	.06	3	9.1	.24	10	24.2	.49	2	53.3	.24	1	20.0
.16	5	17.0	.24	14	41.2	.16	4	16.4	.25	2	27.4	.56	2	66.7	.34	1	26.7
.21	1	19.1	.25	1	43.1	.19	1	18.2	.49	5	35.5	.74	2	80.0	.49	2	40.0
.24	1	40.4	.31	2	47.1	.21	1	20.0	.54	1	37.1	.99	1	86.7	.96	1	46.7
.34	1	42.6	.34	2	51.0	.24	11	40.0	.56	4	43.5	1.25	1	93.3	.99	1	53.3
.35	1	44.7	.49	3	56.9	.34	1	41.8	.60	1	45.2	2.24	1	100.0	1.00	1	60.0
.49	5	55.3	.56	3	62.7	.49	4	49.1	.71	1	46.8				1.49	1	66.7
.59	1	57.4	.60	1	64.7	.56	6	60.0	.74	3	51.6				1.50	1	73.3
.65	1	59.6	.74	1	66.7	.69	1	61.8	.96	2	54.8				1.74	1	80.0
.74	1	61.7	.96	7	80.4	.74	1	63.6	.99	1	56.5				1.75	1	86.7
.75	1	63.8	.99	1	82.4	.85	1	65.5	1.09	1	58.1				3.59	1	93.3
.99	3	70.2	1.19	1	84.3	.94	1	67.3	1.10	1	59.7				3.74	1	100.0

Table 4.14 Absolute Difference Scores for Psychoticism (Psychoticism) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

ADRS (Nurse-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
1.24	1	72.3	1.49	2	88.2	.99	1	69.1	1.15	1	61.3						
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
1.49	2	76.6	1.74	1	90.2	1.10	1	70.9	1.19	1	62.9						
1.65	1	78.7	1.90	1	92.2	1.15	1	72.7	1.24	2	66.1						
1.74	1	80.9	2.00	1	94.1	1.24	1	74.5	1.25	1	67.7						
1.99	1	83.0	3.24	1	96.1	1.35	4	81.8	1.25	2	71.0						
2.15	1	85.1	3.34	1	98.0	1.69	1	83.6	1.35	7	82.3						
2.44	1	87.2	3.74	1	100.0	1.90	1	85.5	1.44	1	83.9						
2.49	2	91.5				1.99	2	89.1	1.50	1	85.5						
2.50	1	93.6				2.34	1	90.9	1.74	1	87.1						
2.55	1	95.7				2.55	2	94.5	1.75	2	90.3						
2.74	1	97.9				2.99	1	96.4	1.84	1	91.9						
2.95	1	100.0				3.19	1	98.2	2.15	1	93.5						
1.65	1	78.7				3.99	1	100.0	2.74	1	95.2						
1.74	1	80.9							3.59	1	96.8						
1.99	1	83.0							4.24	2	100.0						

Table 4.14 Absolute Difference Scores for Psychoticism (Psychoticism) between Self-evaluations and Nurse Evaluations across
Ethnicity and Gender Subgroups

ADRS (Nurse-Rated)																	
Caucasian						African American						Hispanic					
M			F			M			F			M			F		
x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%	x_i	f	*C%
2.15	1	85.1															
2.44	1	87.2															
2.49	2	91.5															
2.50	1	93.6															
2.55	1	95.7															
2.74	1	97.9															
2.95	1	100.0															
Range=2.89			3.58			3.99			4.15			2.08			3.59		

SUMMARY: ABSOLUTE DIFFERENCE SCORES

A summary of the absolute difference scores reveals a substantial number of differences between ethnicity x gender groups. Absolute differences reflect the amount of disagreement, i.e., difference between self and clinician ratings (x_i) and proportion of the sample with that amount of disagreement (C%) regardless of whether the patient or clinician is rating higher or lower in comparison to each other. Quantifying the amount of absolute disagreement can identify the point at which the magnitude of differences in assessments becomes clinically relevant, reflecting a gap in evaluations between providers and the self-perceptions of patients. Minimum difference scores reflect greater agreement between provider and patient groups; greater extremes in maximum scores reflect greater disparities between provider and patient groups. Range of difference scores reveal differences in distribution indicating substantial variability in agreement congruence across groups. The median scores (i.e., the 50th percentile—reflecting the point where half of the sample has scores above and below that difference score) allows for a comparison of the distribution of differences between patient and provider. An abbreviated summary of relative difference findings in tabular form can be found in Appendix I.

A summary of absolute difference score patterns found (See Table 4.15):

- Minimum Difference Scores – Highest Scores: Hispanic males had the majority of highest scores (7 of 10) followed by CF and AAM. African American males had the majority of the lowest scores (5 of 10) followed by AAF (4 of 10)
- Median Scores – Hispanic females had a majority of the higher limit median scores (7 of 10), while Hispanic males had a majority of the lowest median scores (7 of 10).
- Maximum Difference Scores – African American females had 100 percent of the highest maximum scores (10 of 10), while Hispanic males had 100 percent of the lowest maximum difference scores (10 of 10).

Table 4.15 Absolute Difference Scores Summary

	PHY-Som	PHY-Dep	NUR-Dep	PHY-Anx	NUR-Anx	PHY-Hos	NUR-Hos	PHY-Para	PHY-Psy	NUR-Psy
Minimum Difference Scores (*C%)	HM	HM	HM	CF	HM	HM	HM	HM	HF	CF
	20.0%	30.0%	53.3%	18.8%	13.3%	44.4%	64.3%	10.0%	13.3	9.8
	CM	AAF	AAF	AAM	AAF/AAM	AAM	AAM	CF	AAF	AAM
	2.8%	1.6%	1.6%	2.4%	1.7%/1.8%	2.5%	1.8%	1.7%	1.7	1.8
Median Difference Scores (x_i)	HF	CF	CM/CF	HF	AAF	HF/CM	HF	HF	HF	HF
	0.59	0.62	0.44/0.44	0.60	0.85	0.64/0.62	0.77	0.86	0.84	0.98
	HM	AAM	HM	AAM/HM	HM	HM	HM/AAM/CF	HM	HM	CF
	0.30	0.25	0.06	0.17/0.18	0.20	0.12	0.11/0.13/0.13	0.18	0.21	0.34
Maximum Difference Scores (x_i)	AAF	AAF	AAF	AAF/HF	AAF	AAF	AAF	AAF	AAM	AAF
	5.41	4.40	4.58	4.31/4.31	4.37	5.21	5.24	4.15	4.46	4.24
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	1.63	1.49	1.71	2.45	2.51	0.81	2.27	1.91	1.43	2.24
Range Scores (x_i)	AAF	AAF	AAF	AAF	AAF	AAF	AAF	HF/AAF	AAM	AAF
	5.34	4.34	4.55	4.31	4.33	5.19	5.11	4.28/4.12	4.41	4.15
	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
	1.5	1.37	1.65	2.42	2.47	0.74	2.14	1.88	1.38	2.08

Ph: Physician, Ns: Nurse, Som: Somaticism, Dep: Depression, Anx: Anxiety, Hos: Hostility, Para: Paranoid Ideation, Psy: Psychoticism

- Range Scores – High limits: African American females had a majority of the higher limit scores (8 of 10). Lower limits: Hispanic males had 100 percent of the lower limits (10 of 10).

- Differences are seen between ethnicities, as well as between genders.

- A majority of differences are seen among the African American and Hispanic patients. These differences are outstanding as they appear in the extremes (minimal and maximum ranges). Minimum difference scores reflect greater agreement between provider and patient groups; greater extremes in maximum scores reflect greater disparities between provider and patient groups.

- Ratings for Caucasian patients are seen on occasion in the outer limits; however, are very infrequent.

- Some variance is seen between provider ratings (nurse versus physician); however, overall, the ratings are very similar. Psychoticism appears to be the major subscale where differences are seen between the providers.

Relative Differences Results

Relative differences reflect the amount and *direction* of disagreement (x_i) and proportion (C%) of the sample with that same amount/direction of disagreement between patient self-evaluations and clinical evaluations. Since lower scores reflect higher functioning, when patient self-evaluations were lower than clinical evaluations this resulted in an under-estimate disagreement (indicated by negative numbers). Conversely when patient self-evaluations were higher than clinical evaluations this resulted in an over-estimate disagreement (indicated by positive numbers). Such relative difference information thus indicates dimensions in which patients differed in a particular direction (under-estimating or over-estimating) compared to a particular provider group (nurses or physicians). For the purposes of analysis, a criterion of +/-1.0 representing one standard deviation was considered to be the 'range of agreement' for each interval. There was no intent to anchor this choice to clinical implications.

Tables 4.16 to 4.26 display the numeric relative differences between self-evaluations and providers (nurses and physicians) for dimensions available for analysis as noted in Table 4.2; unavailable comparisons are denoted by a dash. Each table is

followed by a figure (Figures 4.1 to 4.10) depicting the relative difference scores comparing provider and patient self-evaluations (ethnic x gender subgroups) for each available dimension.

SOMATICISM

      Somaticism (Distress – Somatic Concern) (See Table 4.16 & Figure 4.1): The majority of all ethnicity x gender groups fell within the agreement range (+/-1.0) with *physicians*. The group most in agreement with physicians was HM (90.5%) and the group least in agreement was AAF (67.21%). In the over-estimate disagreement range reflecting poorer evaluations by clinicians (i.e., higher evaluations by patients of themselves compared to physicians) (>1.0), physicians rated a greater proportion of AAF females worse than the AAF rated themselves (22.95%), followed by HF (18.75%) and AAM (12.5%). Physicians rated a larger percentage of CM (19.44%) and HM (10%) better (under-estimate disagreements; >-1.0) than the patients rated themselves. Ratings of CF were almost equally distributed (14.89% better than patient self ratings and 14.9% worse than patient ratings).

Table 4.16 Numeric Values: Relative Difference Scores for Somaticism (Distress – Somatic Concern) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups

	Over-Estimate Disagreement Range (>1.0)							Agreement Range (+/- 1 S.D.)		Under-Estimate Disagreement Range (>-1.0)					
	Total %	5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	**Total %**	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	**Total%**
CM	**5.56**				2.78	2.78	44.44	**75.0**	-30.56	-8.33	-11.11				**19.44**
CF	**14.9**				2.13	12.77	42.55	**70.21**	-27.66	-6.38	-6.38	-2.13			**14.89**
AAM	**12.5**			2.50		10.00	62.50	**82.5**	-20.00		-5.00				**5.0**
AAF	**22.95**	1.64	1.64	1.64	4.92	13.11	44.26	**67.21**	-22.95	-6.56	-3.28				**9.84**
HM	**0**						40	**90.0**	-50	-10					**10**
HF	**18.75**		6.25	6.25		6.25	50.00	**68.75**	-18.75	-6.25	-6.25				**12.5**

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.1 Relative Difference Scores for Somaticism (Distress – Somatic Concern) between Physician and Patient Self-
Evaluations across Ethnicity and Gender Subgroups
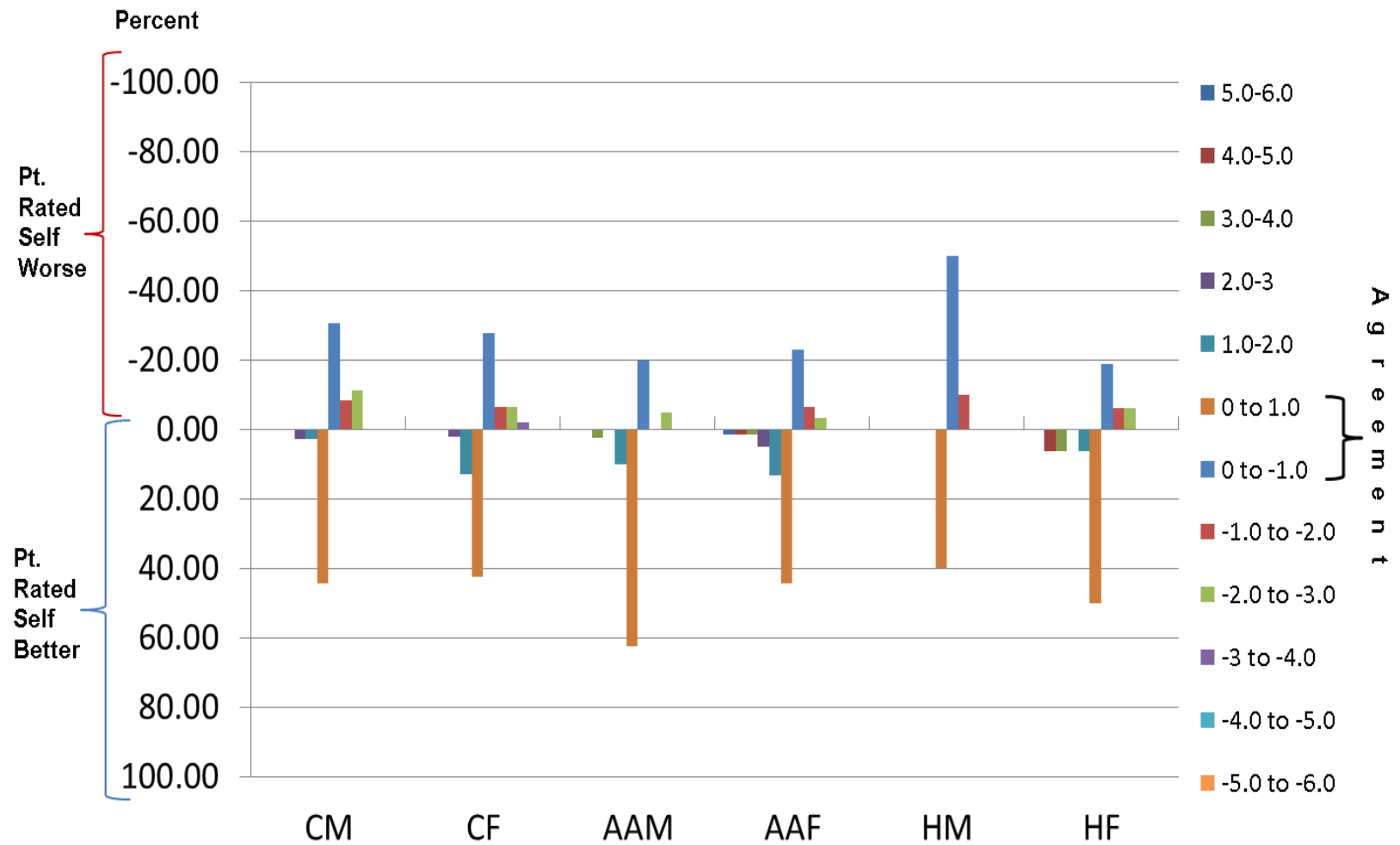
Depression (Distress – Depressed) (See Table 4.17 & Figure 4.2): The majority of *physician* evaluations were in agreement with patient self-evaluations for all ethnicity x gender groups. However, there were some differences in the pattern for depression with the minority groups. In the over-estimate disagreement range reflecting poorer clinician evaluations (>1.0), physicians rated a larger percentage of AAM and AAF worse than patient evaluations (20.69% and 19.68% respectively) as well as HF (17.69%); they rated a larger percentage of CM and CF (18.92% and 14.56%) and HM (20%) better (under-estimate disagreements) than the patients themselves.

Nurses (See Table 4.18 & Figure 4.3): The majority of ethnicity x gender groups fell within the agreement range for Depression. The preponderance of agreement was in the direction of slightly worse clinical evaluations than the patients rated themselves (0 to 1.0 range). In the disagreement range overall ($> \pm1.0$), nurse ratings were almost equally split between better and worse evaluations. Nurses were more likely to rate AAM and HF worse and AAF and HM better than the patient's self-evaluations.

Table 4.17 Numeric Values: Relative Difference Scores for Depression (Distress – Depressed) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups

	Over-Estimate Disagreement Range (>1.0)						Agreement Range (+/- 1 S.D.)			Under-Estimate Disagreement Range (>-1.0)					
	Total %	5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	Total %	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	Total %
CM	16.21			2.70		13.51	35.14	64.87	-29.73	-10.81	-8.11				18.92
CF	12.5				2.08	10.42	50.00	72.92	-22.92	-8.33	-4.17	-2.08			14.56
AAM	20.69			6.90		13.79	41.38	72.41	-31.03		-6.90				6.9
AAF	19.68			6.56	3.28	6.56	42.62	70.49	-27.87	-6.56	-3.28				9.84
HM	0						30.00	80.0	-50.00	-20.0					20.0
HF	17.64			5.88		5.88	70.59	76.47	-5.88			-5.88			5.88

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.2 Relative Difference Scores for Depression (Distress – Depressed) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups

Table 4.18 Numeric Values: Relative Difference Scores for Depression (Depression) between Nurse and Patient Self-Evaluations across Ethnicity and Gender Subgroups

	Over-Estimate Disagreement Range (>1.0)						**Agreement Range (+/- 1 S.D.)**			**Under-Estimate Disagreement Range (>-1.0)**					
	Total %	5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	**Total %**	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	**Total %**
CM	**14.28**			2.04	4.08	8.16	53.06	**73.47**	-20.41	-4.08	-8.16				**12.24**
CF	**7.69**			1.92	3.85	1.92	53.85	**84.62**	-30.77	-7.69					**7.69**
AAM	**16.08**			5.36	5.36	5.36	51.79	**73.22**	-21.43	-7.14	-1.79	-1.79			**10.72**
AAF	**13.12**		3.28	1.64	3.28	4.92	55.74	**65.88**	-9.84	-11.48	-9.84				**21.32**
HM	**0**						80.00	**80.0**		-20.0					**20.0**
HF	**25.0**			6.25		18.75	56.25	**62.5**	-6.25	-6.25	-6.25				**12.5**

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.3 Relative Difference Scores for Depression (Depression) between Nurse and Patient Self-Evaluations across Ethnicity and Gender Subgroups
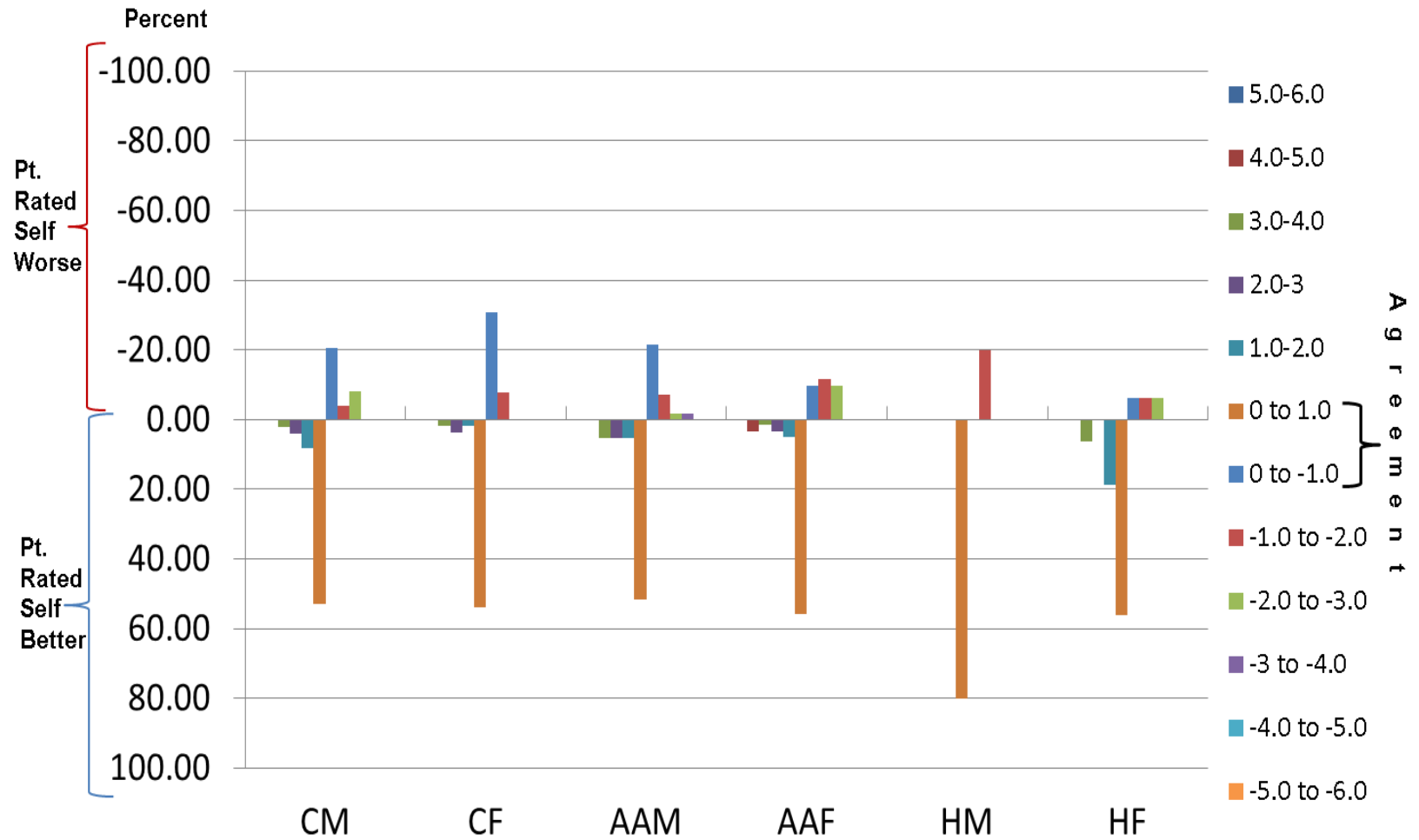
Anxiety (Distress – Anxiety) (See Table 4.19 & Figure 4.4): *Physicians* were in agreement with a larger percentage of AAM (82.93%) and CF (72.91%) than other groups with ranges between 60-64.71%. Physicians were in over-estimate disagreement with a larger percentage of AAF (21.32%) and HF (29.4%) than other groups. A greater proportion of females rated themselves better (HF – 29.4%, AAF – 21.32%, and CF – 14.58%). A larger proportion of CM rated themselves worse while more AAM rated themselves better and the proportions of HM was equal in both disagreement directions.

Range of agreement by *nurses* on *Anxiety* (Anxiety) ran between a high of 82.69% with CF and a low of 43.75% with HF (See Table 4.20 & Figure 4.5). Nurses rated a larger percentage of each ethnicity x gender group more negatively except for AAF and HF where nurses rated a larger percentage higher than patient self-ratings (28.81% and 25%, respectively).

Table 4.19 Numeric Values, Relative Difference Scores for Anxiety (Distress – Anxiety) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups

| | Over-Estimate Disagreement Range (>/≠ 1.0) | | | | | | Agreement Range (+/- 1 S.D.) | | | Under-estimate Disagreement Range (>/≠ -1.0) | | | | | |
	Total %	5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	Total %	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	Total %
CM	16.67			5.56		11.11	36.11	63.89	-27.78	-8.33	-11.11				19.44
CF	14.58				2.08	12.50	39.58	72.91	-33.33	-6.25	-4.17	-2.08			12.5
AAM	12.2		2.44	2.44	2.44	4.88	56.10	82.93	-26.83		-4.88				4.88
AAF	21.32		1.64	1.64	11.48	6.56	42.62	68.85	-26.23	-6.56	-3.28				9.84
HM	20.0				10.00	10.00	30.00	60.0	-30.00	-10	-10.00				20.0
HF	29.4		5.88	5.88	5.88	11.76	41.18	64.71	-23.53			-5.88			5.88

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.4 Relative Difference Scores for Anxiety (Distress – Anxiety) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups
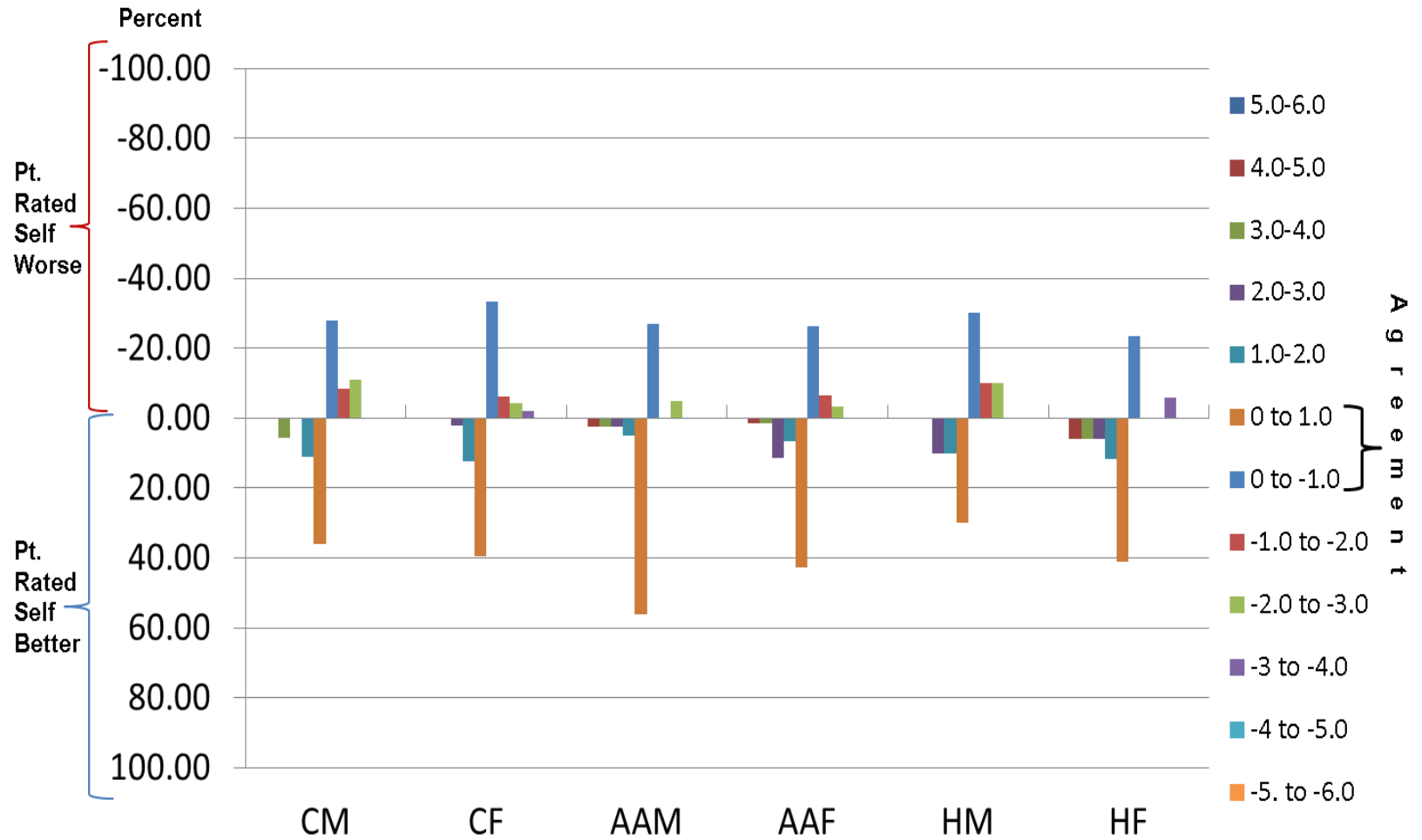
Table 4.20 Numeric Values, Relative Difference Scores for Anxiety (Anxiety) between Nurse and Patient Self-Evaluations across Ethnicity and Gender Subgroups

| | Total % | **Over-Estimate Disagreement Range (>/≠ 1.0)** | | | | | **Agreement Range (+/- 1 S.D.)** | | | **Under-Estimate Disagreement Range (>/≠ -1.0)** | | | | | Total % |
		5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	Total %	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	
CM	**22.92**			4.17	8.33	10.42	27.08	**62.5**	-35.42	-12.5		-2.08			**14.58**
CF	**11.54**			1.92		9.62	42.31	**82.69**	-40.38	-5.77					**5.77**
AAM	**21.42**			7.14	3.57	10.71	41.07	**66.07**	-25.00	-12.5					**12.5**
AAF	**18.63**		1.69	1.69	3.39	11.86	37.29	**52.54**	-15.25	-25.42		-3.39			**28.81**
HM	**6.7**				6.67		40.00	**86.67**	-46.67	-6.67					**6.7**
HF	**25.0**			6.25	6.25	12.50	31.25	**62.5**	-31.25	-12.5					**12.5**

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.5 Relative Difference Scores for Anxiety (Anxiety) between Nurse and Patient Self-Evaluations across Ethnicity and Gender Subgroups
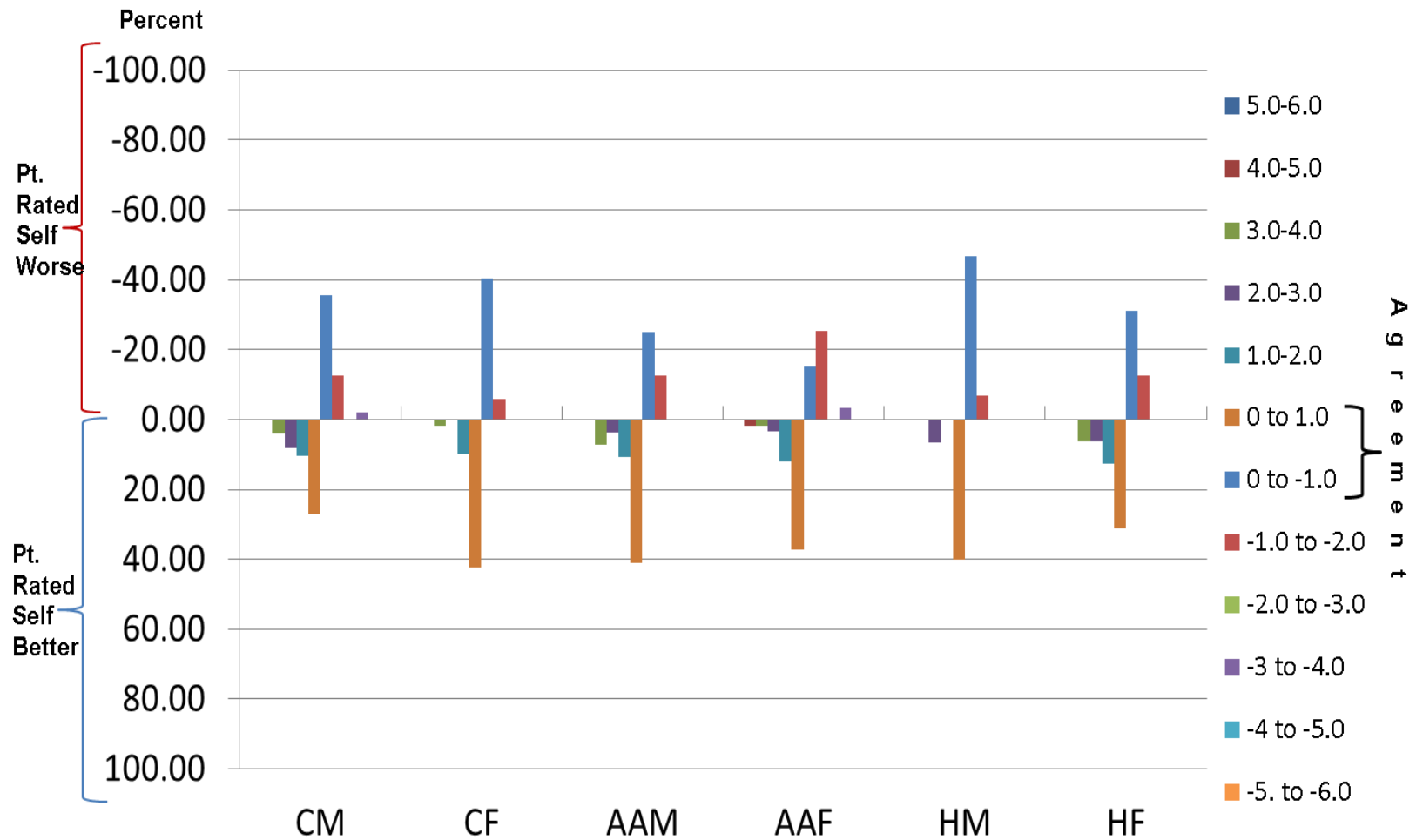
Hostility (Resistance - Hostility) (See Table 4.21 & Figure 4.6): Notably, *physicians* were in 100% agreement with HM self-evaluations (no ratings greater than +/- 1.0 SD). Physicians disagreed with a larger percentage of HF (29.4%), rating them more negatively (over-estimate disagreement), as they did AAF (21.32%) and CF (14.58%). The physicians rated a larger percentage of CM and AAM more positively (under-estimate disagreement) than patient self-evaluations than they rated CM and AAM negatively.

Nurses (See Table 4.22 & Figure 4.7): Nurse evaluations of *Hostility* (Anger) agreed with the majority of patients in 5 out of 6 ethnicity x gender groups. The exception was HF, where only half were in agreement with the nurses. Moreover, the majority of disagreement reflected more divergent nurse evaluations compared to patient self-evaluations across all groups.

Table 4.21 Numeric Values, Relative Difference Scores for Hostility (Resistance - Hostility) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups

	Over-Estimate Disagreement Range (>/≠ 1.0)						Agreement Range (+/- 1 S.D.)			Under-Estimate Disagreement Range (>/≠ -1.0)					
	Total	5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	**Total**	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	**Total**
CM	**5.56**		2.78			2.78	47.22	**86.11**	-38.89	-5.56	-2.78				**8.34**
CF	**8.33**			2.08	2.08	4.17	60.42	**85.42**	-25.00	-4.17	-2.08				**6.25**
AAM	**12.5**				5.00	7.50	62.50	**72.15**	-10.00	-7.5	-7.50				**15.0**
AAF	**21.32**	1.64	1.64	4.92	4.92	8.20	52.46	**72.13**	-19.67	-3.28	-1.64			-1.64	**6.56**
HM	**0**						77.78	**100.0**	-22.22						**0**
HF	**29.4**			11.76	5.88	11.76	52.94	**70.59**	-17.65						**0**

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.6 Relative Difference Scores for Hostility (Resistance - Hostility) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups
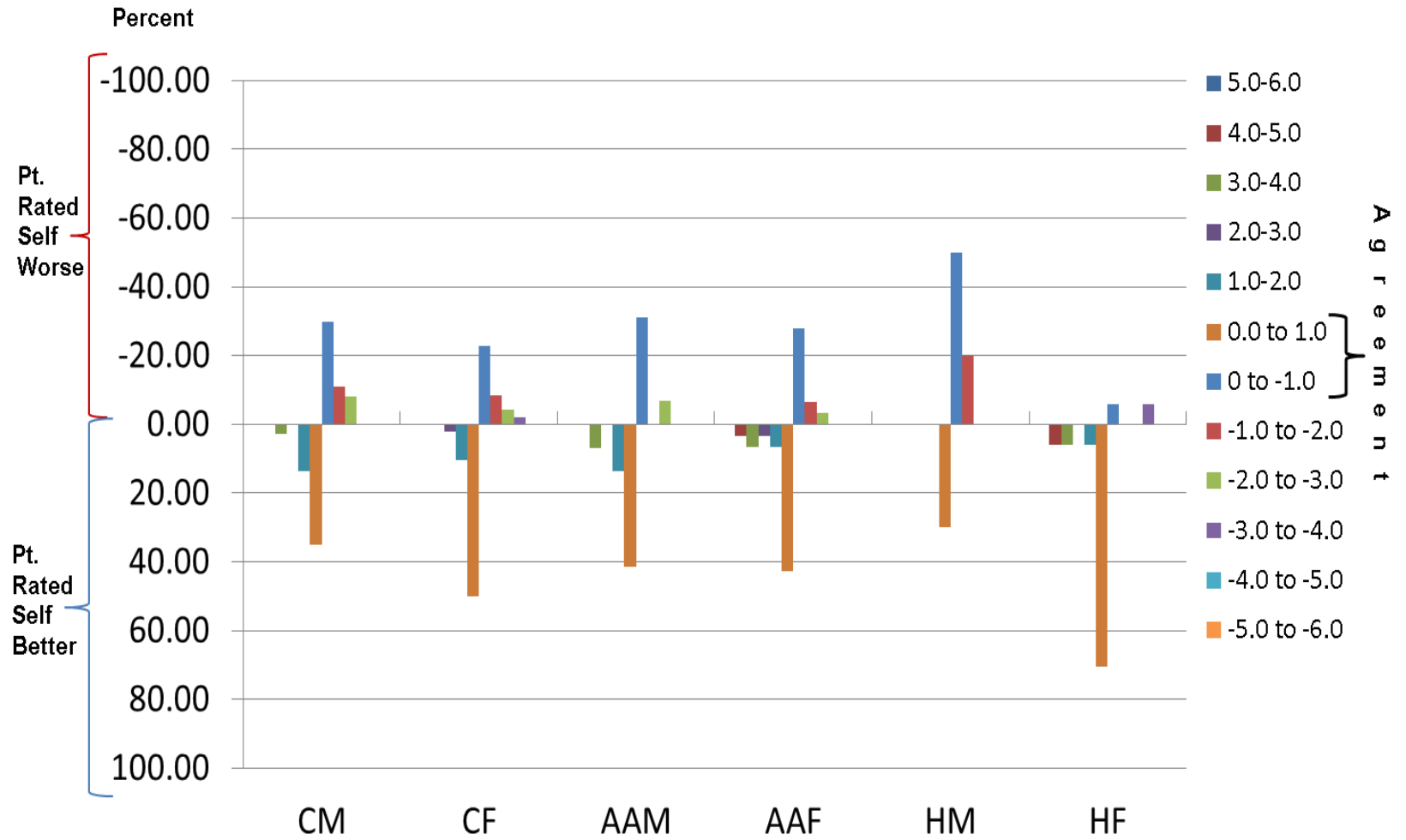
Table 4.22 Numeric Values, Relative Difference Scores for Hostility (Anger) between Nurse and Patient Self-Evaluations across Ethnicity and Gender Subgroups

| | Over-Estimate Disagreement Range (>/≠ 1.0) | | | | | | Agreement Range (+/- 1 S.D.) | | | Under-Estimate Disagreement Range (>/≠ -1.0) | | | | | |
	Total %	5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	Total %	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	Total %
CM	**20.82**		2.08	2.08	2.08	14.58	29.17	**66.67**	-37.50	-8.33	-4.17				**12.5**
CF	**11.76**			1.96	3.92	5.88	25.49	**86.27**	-60.78		-1.96				**1.96**
AAM	**16.07**		1.79		3.57	10.71	17.86	**78.57**	-60.71	-3.57			-1.79		**5.36**
AAF	**12.91**			4.84	3.23	4.84	27.42	**80.65**	-53.23		-3.23	-1.61		-1.61	**6.45**
HM	**21.43**				7.14	14.29	14.29	**78.58**	-64.29						**0**
HF	**31.25**			12.50		18.75	37.50	**50.0**	-12.50	-6.25	-12.50				**18.75**

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.7 Relative Difference Scores for Hostility (Anger) between Nurse and Patient Self-Evaluations across Ethnicity and Gender Subgroups
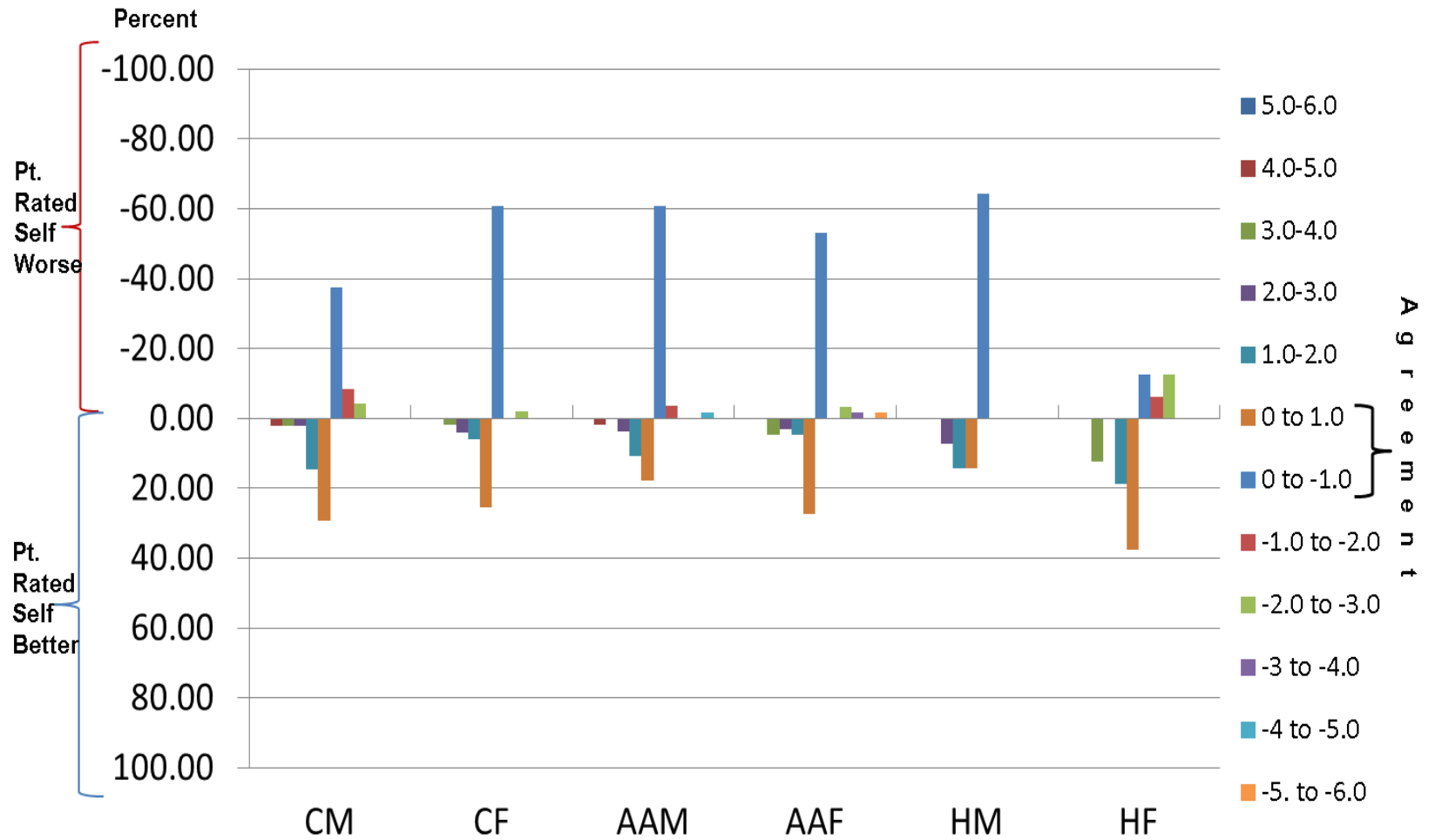
Physician evaluations of *Paranoid Ideation* (Positive Symptoms – Suspiciousness) were in agreement with all groups except for HF where only 50% were in agreement (See Table 4.23 & Figure 4.8). While the highest proportion of over-estimate disagreement, as well as the most extreme (4.0-5.0), was seen between physicians with HF compared to all other groups (43.75%), a persistent pattern of proportionally greater over-estimate evaluations was evidenced for HM (30%), AAF (26.66%), and CF (10.65%) as well. Only CM (11.43%) and AAM (17.5%) had proportionally more positive evaluations by physicians in the under-estimate disagreement range; however, the number of more positive ratings for CM was nearly equal to those of more negative ratings (11.42%).

Table 4.23 Numeric Values, Relative Difference Scores for Paranoid Ideation (Positive Symptoms – Suspiciousness) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups

	Over-Estimate Disagreement Range (>/≠ 1.0)						**Agreement Range (+/- 1 S.D.)**		**Under-Estimate Disagreement Range (>/≠ -1.0)**					
	Total	5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	**Total**	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	**Total**
CM	**11.42**			5.71		5.71	48.57	**77.14**	-28.57	-11.43					**11.43**
CF	**10.65**			4.26	2.13	4.26	59.57	**82.97**	-23.40	-2.13	-4.26				**6.39**
AAM	**12.5**			7.50		5.00	42.50	**70.0**	-27.50	-12.5	-2.50		-2.50		**17.5**
AAF	**26.66**		1.67	8.33	8.33	8.33	45.00	**65.0**	-20.00	-3.33	-3.33	-1.67			**8.33**
HM	**30.0**					30.00	50.00	**70.0**	-20.00						**0**
HF	**43.75**		6.25		12.50	25.00	37.50	**50.0**	-12.50	-6.25					**6.25**

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.8 Relative Difference Scores for Paranoid Ideation (Positive Symptoms – Suspiciousness) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups
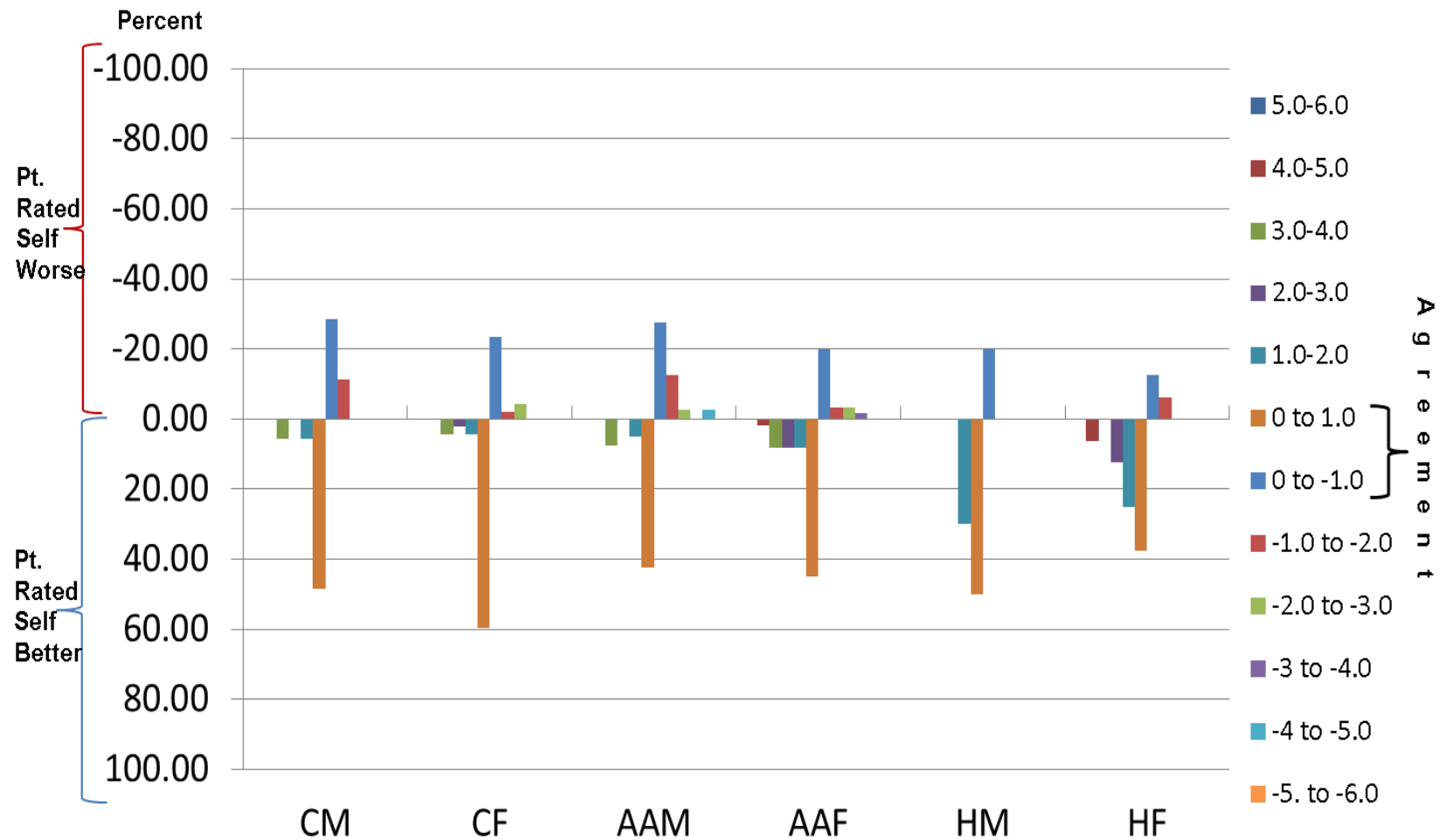
PSYCHOTICISM

A high degree of consensus in ratings was shown between *physicians* and HM (90%) on *Psychoticism* (Positive Symptoms – Hallucinatory Behavior) (See Table 4.24 & Figure 4.9). There were lower levels of consensus between physicians and all other ethnicity x gender groups, ranging from 60.0 to 82.6%. In the under-estimate disagreement range, the only group with a larger percentage more positively by physicians compared to patient self-evaluations was AAM (17.5%), while all disagreement for HM fell in the over-estimate range (i.e., patients rating themselves better than clinicians). All other groups display larger proportions in the over-estimate disagreement range. Hispanic females appeared to have the greatest range of over-estimate disagreement range (33.33%), followed by AAF (26.66%). Hispanic males had the smallest proportion of over-estimate disagreement (10.0%), followed closely by CF (10.87)

Both HF and AAF evidenced the lowest degree of agreement across *nurse* evaluations on *Psychoticism* (Psychoticism) (53.33% and 56.45% respectively), reflecting a larger degree of disagreement between the nurse evaluator and the patient (see Table 4.25 & Figure 4.10). Nurses were more negative (over-estimate disagreement) in their evaluations of HF (26.66%), CM (23.41%), and CF (15.68%) and equally split between over-estimate and under-estimate disagreements for AAF and HM.

Table 4.24 Numeric Values, Relative Difference Scores for Psychoticism (Positive Symptoms – Hallucinatory Behavior) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups

	Over-Estimate Disagreement Range (>/≠ 1.0)							Agreement Range (+/- 1 S.D.)			Under-Estimate Disagreement Range (>/≠ -1.0)					
	Total %	5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	Total %	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	Total %
CM	11.76		2.94		2.94	5.88	44.12	79.41	-35.29	-8.82					8.82
CF	10.87			4.35		6.52	52.17	82.6	-30.43	-4.35	-2.17				6.52
AAM	15.0				7.50	7.50	37.50	67.5	-30.00	-12.5	-2.50		-2.50		17.5
AAF	26.66		3.33	6.67	3.33	13.33	41.67	63.34	-21.67	-5	-3.33	-1.67			10.0
HM	10.0					10.00	60.00	90.0	-30.00						0
HF	33.33			13.33		20.00	40.00	60.0	-20.00	-6.67					6.67

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.9 Relative Difference Scores for Psychoticism (Positive Symptoms – Hallucinatory Behavior) between Physician and Patient Self-Evaluations across Ethnicity and Gender Subgroups
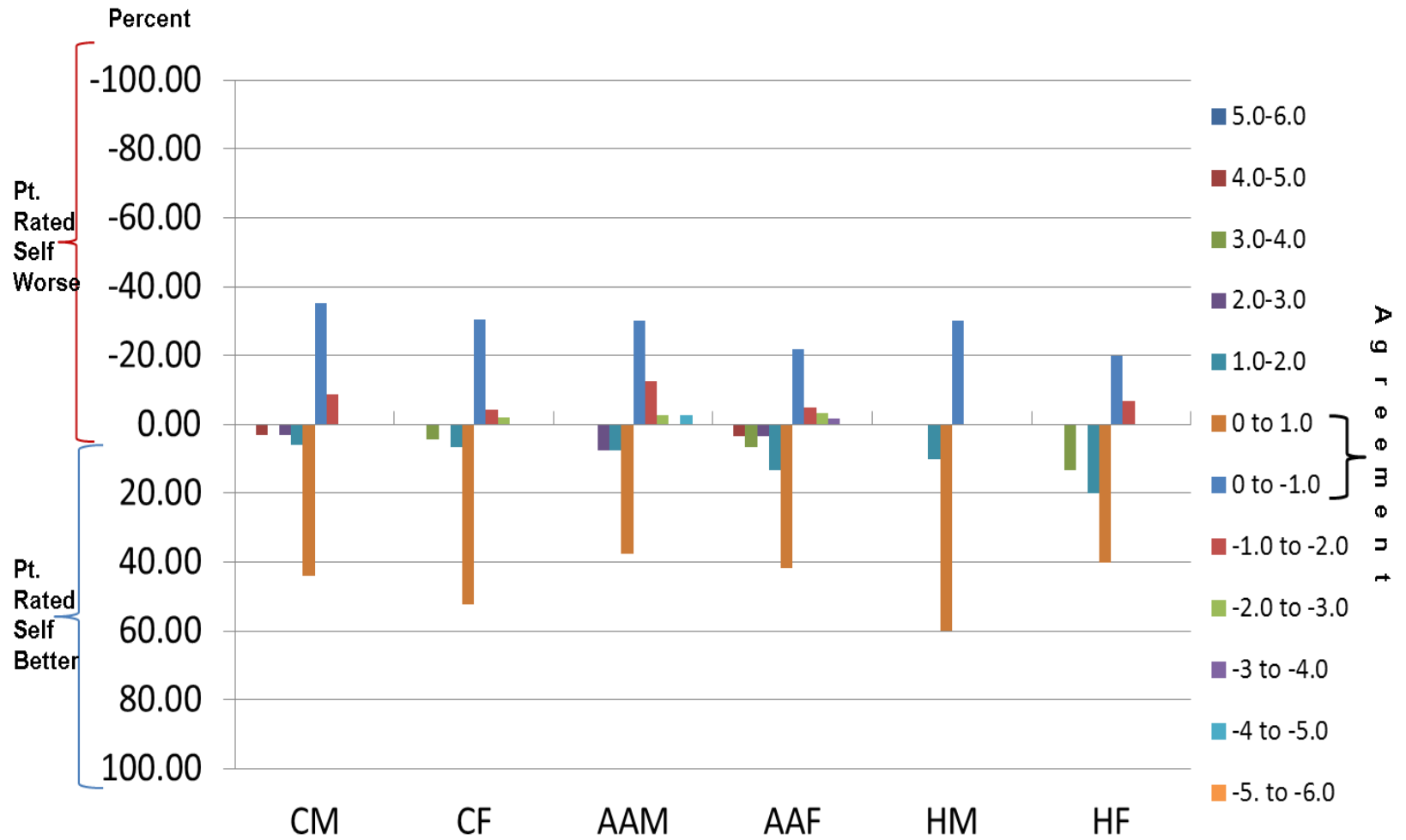
Table 4.25 Numeric Values, Relative Difference Scores for Psychoticism (Psychoticism) between Nurse and Patient Self-Evaluations across Ethnicity and Gender Subgroups

	Over-Estimate Disagreement Range (>/≠ 1.0)							Agreement Range (+/- 1 S.D.)			Under-Estimate Disagreement Range (>/≠ -1.0)					
	Total %	5.0 to 6.0	4.0 to 5.0	3.0 to 4.0	2.0 to 3.0	1.0 to 2.0	0.0 to 1.0	Total %	0 to -1.0	-1.0 to -2.0	-2.0 to -3.0	-3.0 to -4.0	-4.0 to -5.0	-5.0 to -6.0	Total %
CM	23.41				10.64	12.77	51.06	70.21	-19.15		-6.38				6.38
CF	15.68			5.88	1.96	7.84	45.10	82.35	-37.25	-1.96					1.96
AAM	18.19			3.64	3.64	10.91	41.82	69.09	-27.27	-9.09	-3.64				12.73
AAF	20.97		3.23	1.61	1.61	14.52	38.71	56.45	-17.74	-20.97	-1.61				22.58
HM	6.67				6.67		66.67	86.67	-20.00	-6.67					6.67
HF	26.66			13.33		13.33	40.00	53.33	-13.33	-20					20.0

Note: Values represent percent of sample with scores in a particular score range.

Figure 4.10 Relative Difference Scores for Psychoticism (Psychoticism) between Nurse and Patient Self-Evaluations across Ethnicity and Gender Subgroups
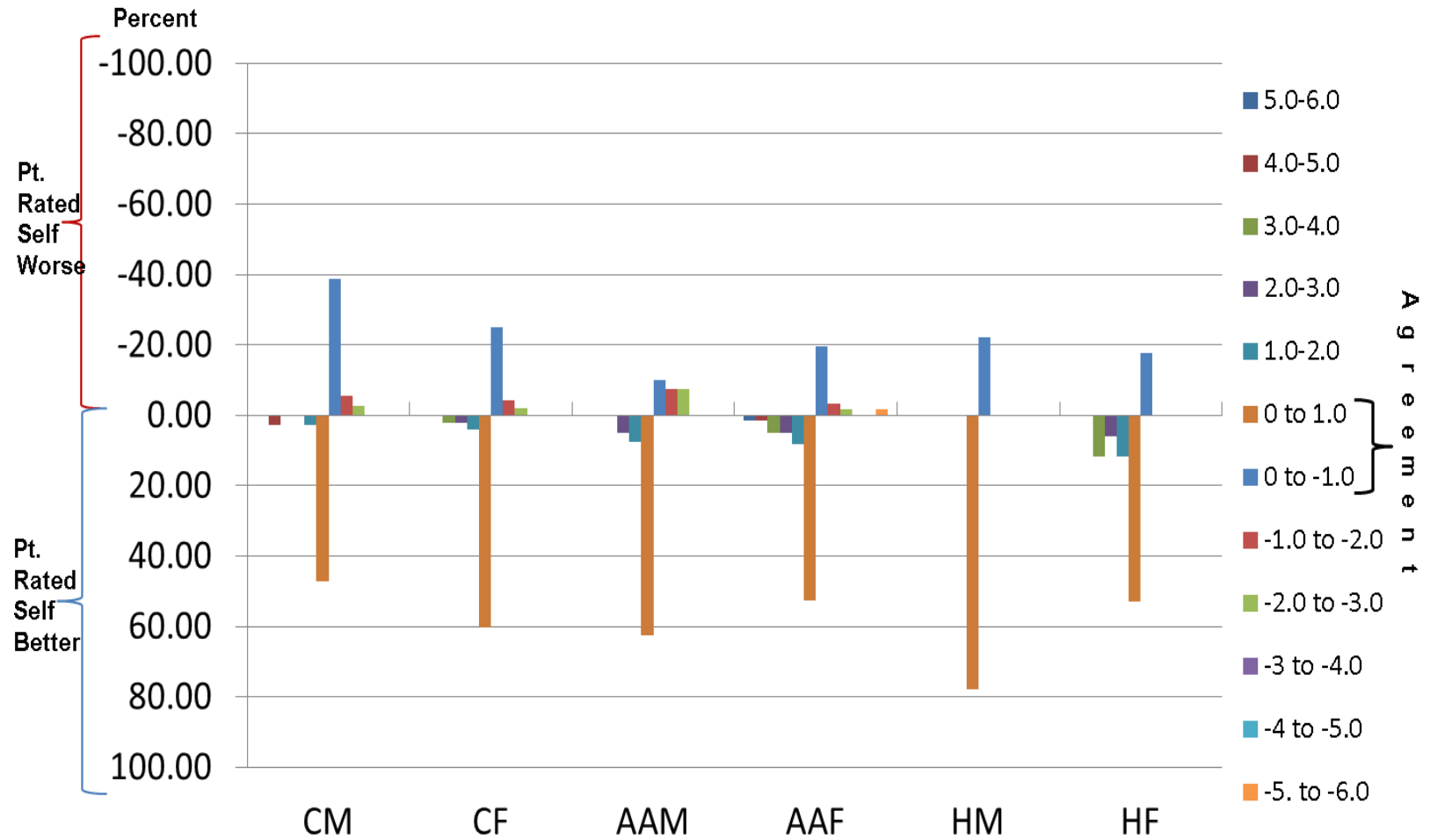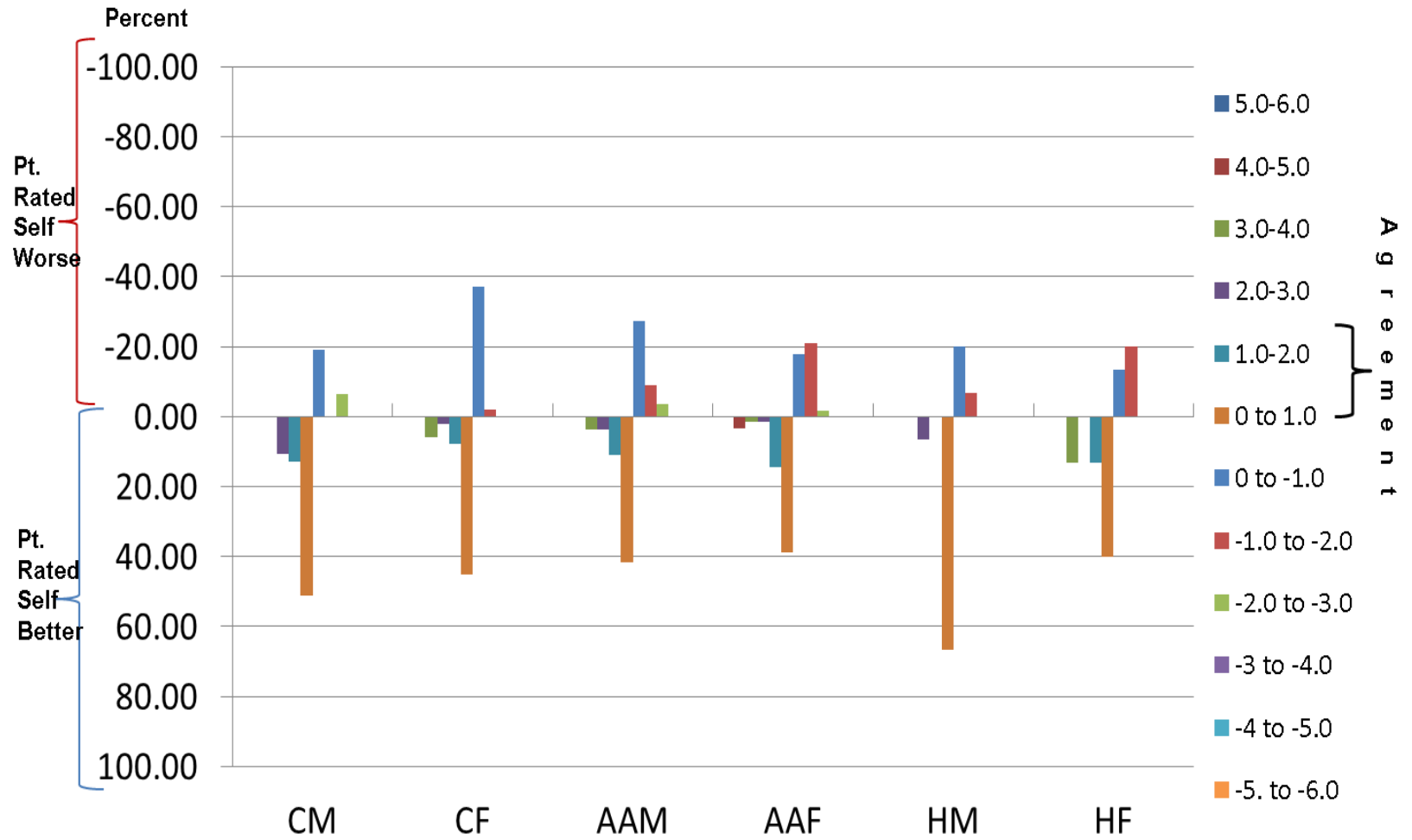
SUMMARY: RELATIVE DIFFERENCE SCORES

Physician raters appeared to demonstrate greater disagreement with females and minorities. There was a similar, but not quite so dramatic, pattern for nurses, although there were more scales for physicians (6) than nurses (4), which could have affected that perception. Figure 4.11 summarizes the preponderance of relative difference outcomes of providers compared to patient evaluations by symptomatic dimensions (Somaticism, Depression, Anxiety, Hostility, Paranoid Ideation, and Psychoticism). Those classified as clinically 'better' evaluations reflect under-estimate disagreements; those classified as 'worse' evaluations reflect over-estimate disagreements.

The findings suggest:

- AAF – Physicians were more likely to rate patients worse than patients rated themselves, while nurses were more likely to rate patients as better than patients rated themselves.

- AAM – Physicians and nurses were more likely to rate patients worse than the patients rated themselves (70%), although physicians, but not nurses, rated the patients as better than the patients rated themselves (30%).

- CF – Physicians and nurses rated the patients as worse than the patients rated themselves, although 30% of the physician ratings were better than the patients rated themselves.

- CM – Ratings by providers compared to patient ratings were equally distributed as worse and better, although physicians rated patients better than did nurses.

- HF – Both provider groups rated the patients the worst of all the groups (90%) than the patients rated themselves.

- HM – Both provider groups rated the patients worse than the patients rated themselves 30% of the time, better 40% of the time, and equally 30% of the time. Overall, physicians rated patients as better more frequently.

- Females were rated worse a majority of the time compared to males by both nurses and physicians.

Figure 4.11 Relative Difference Summary

	Ph-Som	Ph-Dep	Ns-Dep	Ph-Anx	Ns-Anx	Ph-Hos	Ns-Hos	Ph-Para	Ph-Psy	Ns-Psy
AAF	-	-	+	-	+	-	-	-	-	+
AAM	-	-	-	-	-	+	-	+	+	-
CF	-	+	=	-	-	-	-	-	-	-
CM	+	+	-	+	-	+	-	+	-	-
HF	-	-	-	+	-	-	-	-	-	-
HM	+	+	+	+	=	=	-	-	-	=

Ph: Physician, Ns: Nurse, Som: Somaticism, Dep: Depression, Anx: Anxiety, Hos: Hostility, Para: Paranoid Ideation, Psy: Psychoticism, +: Better, -: Worse, and =: Equal.

Where there are disagreements between provider and patient ratings, both providers seemed more likely to rate patients negatively compared to patient evaluations. Such disagreement may reflect overly optimistic evaluations by patients.

SA2RQ2: Is there a difference between ethnic x gender groups and self-report scales?

Heterogeneity was of concern due to the small sample size within the ethnic x gender subgroups that had complete data for the self-report scales (BSI). Levene's test was used to assess the equality of variance in the samples for each subscale. Significant Levene's results ($p > 0.05$) indicate the need for nonparametric approaches appropriate to the circumstance (See Table 4.26). A two-way analysis of covariance (ANCOVA) across ethnicity (3) x gender (2) co-varying on age assessed differences on self-reported scales.

FINDINGS

Minor main effect differences were found between ethnic x gender groups, and interaction effects for ethnic x gender subgroup differences on various subscales. None of the differences were significant (See Table 4.26).

Table 4.26 Ethnic by Gender Group and the Respective Elements of the Brief Symptom
Inventory (BSI)

Dependent Variable	Levene's P	Variable	Mean Square	F	Sig.
Admit BSI Somatic	.142	Admit Age	77.958	1.250	.264
		Gender	112.876	1.810	.180
		Race	34.880	.559	.572
		Gender*Race	75.967	1.218	.297
Admit BSI Obsessive Compulsive	.619	Admit Age	48.260	.926	.337
		Gender	12.661	.243	.622
		Race	9.078	.174	.840
		Gender*Race	41.362	.794	.453
Admit BSI Interpersonal Sensitivity	.178	Admit Age	22.046	.899	.344
		Gender	86.845	3.540	.061
		Race	1.387	.057	.945
		Gender*Race	9.054	.369	.692
Admit BSI Depression	.537	Admit Age	59.314	1.054	.305
		Gender	62.549	1.112	.292
		Race	7.727	.137	.872
		Gender*Race	8.090	.144	.866
Admit BSI Anxiety	.728	Admit Age	52.739	.990	.321
		Gender	71.043	1.333	.249
		Race	5.497	.103	.902
		Gender*Race	58.740	1.102	.333
Admit BSI Hostility	.256	Admit Age	7.194	.210	.647
		Gender	22.489	.657	.418
		Race	3.480	.102	.903
		Gender*Race	17.443	.509	.601
Admit BSI Phobic Anxiety	.927	Admit Age	55.557	1.524	.218
		Gender	4.031	.111	.740
		Race	4.713	.129	.879
		Gender*Race	23.407	.642	.527
Admit BSI Paranoid Ideation	.377	Admit Age	16.904	.483	.488
		Gender	58.779	1.679	.196
		Race	24.598	.703	.496
		Gender*Race	54.778	1.565	.211
Admit BSI Psychoticism	.693	Admit Age	15.331	.449	.503
		Gender	14.916	.437	.509
		Race	7.943	.233	.793
		Gender*Race	12.529	.367	.693

SA2RQ3: Are there differences between ethnic x gender groups and clinician reported scales?

Heterogeneity was of concern due to the small sample size within the ethnic x gender subgroups that had complete data for the clinical scales (BPRS-A and ADRS). Levene's test was used to assess the equality of variance in the samples for each subscale. Significant Levene's results (p>0.05) indicate the need for nonparametric approaches appropriate to the circumstance.

Clinical subscales with a significant Levene's are displayed separately (see Appendix J). Kruskal Wallis ANOVA (KW-H), the nonparametric equivalent to standard analysis of variance, was used for those subscales with significant heterogeneity issues. KW-H cannot utilize more than one independent variable or covariate. Thus, a combined ethnic x gender variable was created forming six groups (i.e., Caucasian females, Caucasian males, African American females, African American males, Hispanic females, Hispanic males). Age was not controlled for. KW-H does not provide for internally-generated post hoc analyses, therefore separate Mann Whitney U (MW-U) analyses, the nonparametric equivalent to a t-test, were used to test each pairwise comparison for any KW-H analyses indicating significant group differences. Standard analyses of covariance (ANCOVA) controlling for age utilizing Scheffé and Tukey post hoc tests were performed for those clinical scales that did not demonstrate significant heterogeneity; results are reported as mean values (see Table 4.16).

FINDINGS

There were significant differences between physician ratings and patient self-ratings on five of the subscales of clinician-rated scales (ADRS and BPRS-A). Significant effects were found for ethnic groups, gender groups, ethnic x gender interactions, and (nonparametric) ethnic x gender subgroups (see Table 4.27) Significant differences on Conceptual Disorganization was found between AAM and CF, AAF, and CM with higher mean ranks for AAM across all comparisons. For the subscale of Guilt Feelings, HF displayed consistently higher mean rank scores than AAF, CM, and AAM while CF were significantly higher than AAF and AAM. Thus, Caucasian and Hispanic

females were characterized by higher guilt feelings. Significant differences on the Grandiosity subscale was found between AAF and CM, AAF and HM with higher mean ranks for AAF across all comparisons. For the Depression Mood subscale, AAM displayed significantly lower scores than all other groups. HF were significantly higher than AAF and HM. African American males appear to demonstrate a notable pattern of low depression evaluation compared to all ethnic and gender groups. No significant differences were found among ethnicities or gender for the Motor Retardation subscale. For the Anger subscale, African American males consistently demonstrated higher mean rank scores than AAF or HF. Overall, AAM and HF displayed consistently higher mean rank scores across all comparisons, followed by AAF (see Table 4.28).

SA3RQ1: Is there a difference across ethnic x gender groups and legal status?

Table 4.28 reveals that more patients in the sample were admitted involuntarily (by court order) for psychiatric treatment than were admitted voluntarily. Minority patients (AA and H), regardless of gender, were more likely to be admitted involuntarily than were Caucasians, male or female. African American females, followed closely by AAM, had higher rates of involuntary admissions; HM, followed by HF had the lowest rates of involuntary admissions. Caucasians, regardless of gender, were more likely to be admitted voluntarily, followed by HM and HF, AAM and, lastly, by AAF.

Table 4.27 Summary of Differences Among Race/Ethnic Groups on Clinical Evaluations

Dimension	Ethnicity/Gender								Higher Mean Rank
Conceptual Disorganization	AAM	CF	AAM	AAF	AAM	CM	-	-	AAM
Mean	249.72	207.03	281.46	244.25	242.83	194.18	-	-	
Guilt Feeling	HF	AAF	HF	AAM	-	-	-	-	HF
Mean	181.91	158.77	217.86	188.89	-	-	-	-	
Grandiosity	AAF	CF	AAF	HM	-	-	-	-	AAF
Mean	207.70	177.21	172.40	142.86	-	-	-	-	
Depression Mood	CF	AAM	HF	AAF	AAF	AAM	HF	AAM	HF
Mean	267.56	214.43	187.16	157.85	284.08	249.87	242.56	181.86	
Motor Retardation	-	-	-	-	-	-	-	-	-
Mean	-	-	-	-	-	-	-	-	
Anger	AAM	HF	-	-	-	-	-	-	AAM
Mean	211.45	170.06	-	-	-	-	-	-	

Table 4.28 Differences Among Race/Ethnic Groups on Clinical Evaluations

Kruskal Wallis ANOVA on Dependent Variables with Significant Heterogeneity and Post Hoc MWU

Dependent Variable	Initial Analysis		KW Wallis	Significant Pairwise comparisons		
	Levene's P	Variable	P		M_r*	P*
BPRS 4 - Conceptual Disorganization	.036	RaceGender	.001	CF (172)	207.03	.001
				AAM (295)	249.72	
				AAF (234)	244.25	.005
				AAM (295)	281.46	
				CM (156)	194.18	.000
				AAM (295)	242.83	
				CM (156)	117.45	.030
				HM (93)	137.67	
BPRS 5 – Guilt Feeling	.005	RaceGender	.020	CF (172)	213.47	.051
				AAF (234)	196.18	
				CF (172)	247.82	.022
				AAM (295)	225.94	
				AAF (234)	158.77	.008
				HF (96)	181.91	
				HF (96)	136.95	.020

				CM (156)	120.07	
				HF (96)	217.86	.003
				AAM (295)	188.89	
				CF (172)	189.56	.023
				AAF (234)	213.75	
BPRS 8 - Grandiosity	.002	RaceGender	.021	AAF (234)	207.70	.004
				CM (156)	177.21	
				AAF (234)	172.40	.005
				HM (93)	142.86	
				CF (172)	267.56	.000
				AAM (295)	214.43	
				AAF (234)	157.85	.008
				HF (98)	187.16	
BPRS 9 – Depression Mood	.001	RaceGender	.000	AAF (234)	284.08	.006
				AAM (295)	249.87	
				HF (98)	242.56	.000
				AAM (295)	181.86	
				HF (98)	104.79	.021

				HM (93)	86.74	
				CM (156)	255.06	.000
				AAM (295)	210.63	
				AAM (295)	187.72	.021
				HM (93)	216.00	
BPRS 13 – Motor Retardation	.017	RaceGender	.366	-	-	-
ADRS Anger	.047	RaceGender	.047	AAF (231)	254.82	.031
				AAM (311)	283.89	
				HF (92)	170.06	.002
				AAM (311)	211.45	

* P values from Mann-Whitney U pairwise comparisons to determine post hoc differences indicated by KW-H results. Mean Ranks reported are from Kruskal Wallis nonparametric ANOVA analyses allowing for comparisons across all six categories.

SA3RQ2: Is there a difference across ethnic x gender groups and length of stay?

A two-way analysis of variance co-varying for age was conducted across ethnic x gender group on length of stay. ANCOVA results demonstrated that there were no significant differences between ethnic, gender, or ethnic x gender groups. When comparing minimum versus maximum length of stay, African American females had the greatest length of stay, followed by CM, of the ethnic x gender groups (See Table 4.29; Figure 4.12). Among ethic x gender groups with the shortest length of stay, CF had the shortest length of stay, followed by AAF. Overall, HM had the lowest total length of stay of all the groups, while AAM had the highest overall total, followed by AAF.

Table 4.29 Ethnic x Gender Groups and Length of Stay

| Ethnicity x Gender | Length of Stay | | | | Total |
| | Least | | Most | | |
	N	# of Days	N	# of Days	
AAF	1	3	1	70	246
AAM	8	4	1	37	320
CF	1	2	2	44	162
CM	8	4	1	49	171
HF	2	4	1	41	99
HM	5	4	1	38	97
Total					1115

Figure 4.12 Length of Stay Across Ethnicity x Gender
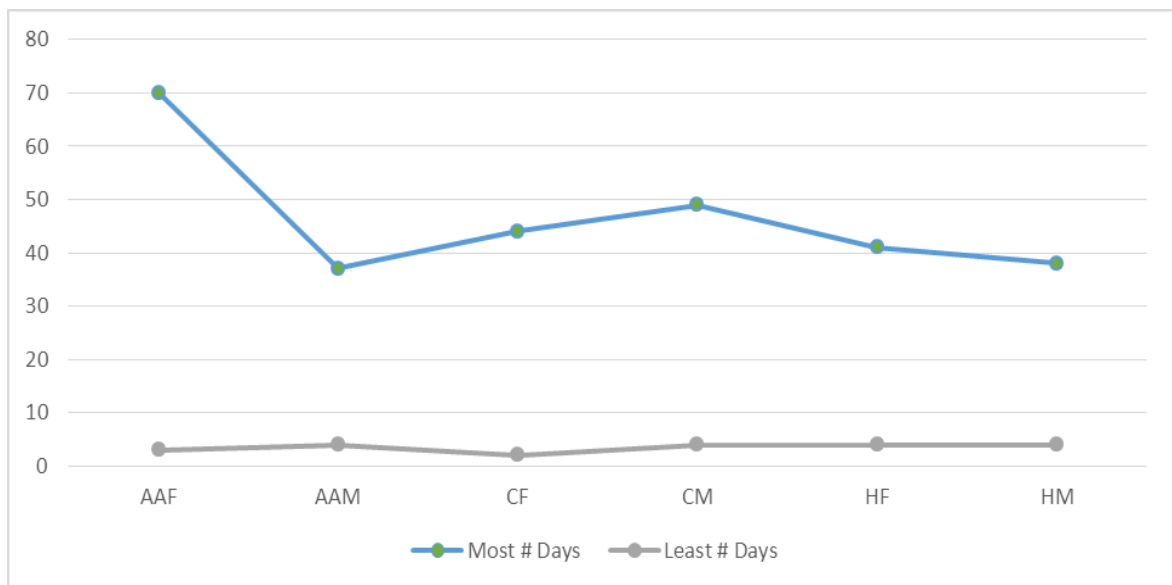
SUMMARY OF STUDY FINDINGS

Differences were found among ethnic groups, gender groups and the respective variables. The findings will be discussed in Chapter Five, which also includes the summary, implications, and recommendations for further research.

CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

Chapter Five is organized into three sections. The first section presents a summary of the study. The second section includes a discussion and interpretation of the findings data collection, data analysis, and generalizability of the results. The third section presents the conclusion with the recommendations for future research and the implications for the profession of nursing, education, practice, and policy.

INTRODUCTION

The interest in race and psychiatric diagnosis has evolved from a rudimentary approach of comparing the number of patients from one race with a particular psychiatric diagnosis to that of another race and different diagnosis, to the more sophisticated approach of comparing the psychopathology of one group to the psychopathology of another group (Adebimpe et al., 1982; Fabrega et al., 1968; Fisher, 1969; Gullatee, 1969; Lu, 1995; Neighbors et al., 1989, 1999; Simon et al., 1973). Studies have focused primarily on African American and Caucasian patients, and the psychiatric diagnoses have been limited to that of schizophrenia and depression. Findings have noted that African Americans receive a diagnosis of schizophrenia more frequently than their Caucasian counterparts, while Caucasians are more frequently diagnosed with depression (Brekke & Barrio, 1997; Hilty et al., 1999; Lu, 1995; Murkherjee et al., 1983; Strakowski et al., 1996; Thakker & Ward, 1998).

Ethnicity and length of psychiatric hospital stay also have been previously studied. In response to previous research, a study by Bolden and Wicks (2005) compared African Americans to other populations using a nationwide sample (N = 4,474,732). The findings revealed that the African American study participants were admitted more often to emergency psychiatric services, African Americans had the longest average length of stay of the sample, with African American males (AAM) having a longer length of stay than African American females (AAF), and were generally younger. Psychosis, substance dependence, and depressive neurosis were prevailing psychiatric diagnoses for African American study participants. Bolden and Wicks (2005) noted that the trend of diagnosis

was consistent with findings from research that African Americans are more likely to be diagnosed with schizophrenia and less likely to be diagnosed with mood disorders.

Previous studies (Breslau et al., 2005; Minsky et al., 2003; Vega et al., 1998) have expanded the exploration of race and psychiatric diagnosis to include the Hispanic population in addition to the African American and Caucasian populations. Minsky et al. (2003) found that the self-reported psychotic symptoms for Latinos were at a significantly higher level than those of other groups. Also, Latinos were diagnosed more frequently with major depression with increased levels of psychotic and depressive symptoms than the other groups; African Americans were found to have non-significant levels of psychotic symptoms and were more likely to be diagnosed as having schizophrenia. Breslau et al. (2005) noted that Hispanics with mood disorders were more likely to be persistently ill, as were Non-Hispanic African Americans diagnosed with mood and anxiety disorders.

The present study examined whether differences existed among a group of tri-ethnic (African American, Caucasian, and Hispanic) patients admitted to an acute care inpatient psychiatric setting with respect to selected psychiatric diagnoses (schizophrenia, bipolar disorder, and major depressive disorder), length of psychiatric hospital stay, and legal admission status (voluntary or court ordered). The study utilized archived data of a convenience sample of patients admitted to an acute-care, university-affiliated, in-patient psychiatric mental health facility between January 1, 2004 and December 31, 2007. The descriptive quantitative study explored: 1) the differences between ethnicity and gender on discharge diagnosis; 2) the differences between ethnicity, gender, and clinical characteristics; and 3) the differences between ethnicity, gender, and hospital variables such as legal status or hospital length of stay. The findings of the study may contribute to enhanced knowledge of how gender and ethnicity influence the presentation and interpretation of symptoms leading to a psychiatric diagnosis in African-American, Caucasian, and Hispanic patients.

STATEMENT OF THE PROBLEM

The study was designed to address three primary questions: 1) Is there a difference between each ethnicity x gender group on discharge diagnosis?; 2) Is there a

difference between the patient self-ratings and clinician ratings within each ethnic x gender group with the greatest differences occurring in African American and Hispanic groups?; 3) Are there differences between each ethnicity x gender group and hospital related variables of length of stay and legal status?

REVIEW OF THE METHODOLOGY

The terms, "race" and "ethnicity" were used interchangeably in the study and were defined as African American, Caucasian, and Hispanic. Other ethnic populations were insignificant to be used in the study. Psychiatric diagnosis was defined as the psychiatric diagnosis at time of discharge and included three primary psychiatric diagnoses: schizophrenia, bipolar disorder, and major depressive disorder. Hospital variables examined by the study included patients' admission status (voluntary or involuntary/court ordered) and length of stay (LOS) in the psychiatric hospital, which was the time of admission until the time of discharge, measured in days. Gender was either female or male.

Data analysis employed Chi-square test of independence for categorical variables to determine independence, a two-way ANCOVA across ethnicity (3) by gender (2) on length of stay was performed co-varying on age, and a descriptive analysis to allow examination of patterns of agreement/disagreement between patients and providers. Heterogeneity was of concern due to the small sample size within the ethnic x gender subgroups who had complete data for the self-report scales Brief Symptom Inventory (BSI), as well as for the clinician-reported scales, the nurse-rated Affective Disorder Rating Scale (ADRS) and the physician-rated Anchored Brief Psychiatric Rating Scale (BPRS-A). Inferential (Levene's) and non-parametric (Mann-Whitney U) approaches were used to address the issue.

The three rating instruments that comprised substantial portion of the study data were the patient self-report (BSI), and two clinician-rated instruments, the ADRS, which was completed by nurses, and the BPRS-A, completed by physicians. The instruments did not contain the same scales or subscales, which posed a problem for comparison and analysis, enhancing the risk of a Type I error. A number of approaches were taken to address this issue. First, comparable elements from the respective scales (BSI, BPRS-A,

and ADRS) were identified to allow exploration of the differences between patient self-evaluations and provider evaluations across ethnicity and gender. Several elements across the three scales could not be compared across at least one, and sometimes both, provider types (nurse and physician) (see Table 4.4).

A descriptive analysis design was performed to characterize the patterns of agreement/disagreement between patient and provider evaluations. First, comparable elements among the patient scales compared to clinician scales were identified (see Table 4.4). Then patient ratings on subscales of the BSI, nurse ratings on subscales of the ADRS, and physician ratings on the BPRS-A were transformed to z scores. Transformation to z scores allowed calculations of two sets of difference scores, absolute and relative difference scores, between self-evaluations by the patient and each provider group (patient versus physicians and patient versus nurses). Relative difference scores indicated both the degree of difference between patient and provider as well as direction, i.e., whether the patient's evaluation was lower or higher than that of the provider. Absolute difference scores ignore direction and provide summative information for degree of difference only. Relative and absolute difference scores were computed within ethnicity x gender subgroups. A comparison of the distributions of the difference scores across providers and ethnicity x gender groups provided insight into the extent of agreement by patients and the clinicians.

Absolute differences reflect the frequency (f) and proportion (C%) of agreement between patient self-evaluations and clinician evaluations. Quantifying the amount of disagreement can identify the point at which differences in assessments become clinically relevant, in turn reflecting a gap in evaluations between providers and the self-perceptions of patients. Relative differences reflect the frequency (f) and proportion (C%) of agreement between patient self-evaluations and clinical evaluations for those in which self-evaluations were lower than clinical evaluations (under-estimate disagreements, indicated by negative numbers) and those in which self-evaluations were higher (over-estimate disagreements, indicated by positive numbers). Such information indicates dimensions in which patients may consistently differ in a particular direction (under-estimating or over-estimating) compared to a particular provider group (nurses or doctors).

Comparisons of patient providers for both relative and absolute differences should be made by examination of similar difference scores, e.g., comparison of the cumulative percentage of each provider whose difference scores are no more than 1.0. Because there is no established clinical criterion to determine the point at which a difference is unacceptable or even meaningful, these analyses are purely descriptive and are intended to characterize the *patterns* noted. Further research is necessary to identify the point at which critical degrees of disagreement have implications for practice.

INTERPRETATION OF THE FINDINGS

The findings of this study provide evidence of substantial differences in relation to ethnicity and gender as they relate to the psychiatric diagnoses. The following discussion provides an interpretation of the study findings for each specific aim and associated research questions.

Specific Aim 1

To explore the differences between ethnicity and gender on discharge diagnosis.

AIM 1, RESEARCH QUESTION 1

This aim explored whether there were differences across ethnic categories (African American, Caucasian, and Hispanic) x gender groups (male and female) on discharge diagnoses (schizophrenia, bipolar disorder, and major depressive disorder). The findings revealed differences in gender and ethnic representations in discharge diagnoses across the categories of schizophrenia (most prevalent in African American males), bipolar disorder (most prevalent in African American and Caucasian females) and major depressive disorder (most prevalent in African American, Caucasian and Hispanic females). African American males and females comprised the greatest number of patients with a discharge diagnosis of schizophrenia, followed by Caucasian males and females, with Hispanic males and females exhibiting the lowest percentages. African American females and Caucasians (male and female) were most frequently diagnosed with bipolar disorder, and Hispanic males were the least likely to be diagnosed with bipolar disorder. Overall, females (African American, Caucasian, and Hispanic) had the highest proportion

of discharge diagnosis for major depressive disorder, with African American females demonstrating the highest percentage of all the groups. Hispanic males yielded the lowest percentage for major depressive disorder.

Specific Aim 2

To explore the differences between ethnicity x gender groups and clinical characteristics.

AIM 2, RESEARCH QUESTION 1

This question explored whether there were differences between the patient self-ratings and clinician ratings within each ethnic x gender group, with the greatest differences occurring in African American and Hispanic (minority) groups.

Two types of difference scores were calculated to compare patient self ratings according to race and gender groups, to clinician (nurse and physician) ratings: absolute differences and relative differences. Absolute differences reflect the amount of disagreement, i.e., difference between self and clinician ratings (x_i) and proportion of the sample with that amount of disagreement (C%) regardless of whether the patient or clinician is rating higher or lower in comparison to the other. Quantifying the amount of absolute disagreement can identify the point at which the magnitude of differences among assessments becomes clinically relevant, reflecting a gap in evaluations between providers and the self-perceptions of patients.

Relative differences reflect the amount and *direction* of disagreement (x_i) and proportion (C%) of the sample with that same amount/direction of disagreement between patient self-evaluations and clinical evaluations. The evaluations in which self-evaluations were lower than clinical evaluations were indicated by negative numbers and reflect under-estimation disagreements and the evaluations in which self-evaluations were higher were indicated by positive numbers reflecting over-estimation disagreements. Thus, the smaller the amount of absolute or relative difference scores, the smaller the difference between the evaluators (patient self-evaluation compared to provider evaluations).

Absolute and relative differences also included gender groups where differences were found in absolute and relative difference scores by gender. The relative difference scores indicated that females (AA, C, H) were more likely to be rated worse by the providers than the patients rated themselves. The absolute difference scores tended to demonstrate the majority of the highest and lower limit scores were for African American and Hispanic males and females, while their Caucasian counterparts tended to remain primarily in the agreement range.

AIM 2, RESEARCH QUESTION 2

This question explored whether there were differences across ethnic categories (African American, Caucasian, and Hispanic) x gender groups (male and female) and patient self-report scales (Brief Symptom Inventory). The findings revealed that after addressing the issue of heterogeneity due to small sample size of some groups, there were minimal differences for ethnic, gender, and ethnic x gender groups and patient self-report scales.

AIM 2, RESEARCH QUESTION 3

This question explored whether there are differences between ethnic x gender groups and clinician-reported scales (ADRS and BPRS-A). The findings revealed that there were significant differences between physician ratings and patient self ratings on Conceptual Disorganization, Guilt Feelings, Grandiosity, Depression Mood, and Anger subscales of clinician-rated scales (ADRS and BPRS-A). No significant differences were found among ethnicities or gender for the Motor Retardation subscale. Overall, AAM and HF displayed consistently higher mean rank scores across all comparisons. African American males appear to demonstrate the most frequent differences of all ethnic and gender groups (see Table 4.27).

Specific Aim 3

To explore the differences between ethnicity x gender groups and hospital related variables (Length of Stay and Legal Status).

AIM 3, RESEARCH QUESTION 1

This question explored whether there was a difference across ethnicity x gender groups and legal status. The findings revealed group differences across ethnicities x gender and legal status. Minority males and females (African American and Hispanic) comprised the majority of patients admitted on involuntary legal status. Caucasian females had higher rates of involuntary status than Caucasian males; Hispanic females and HM had the lowest rates of involuntary admissions.

AIM 3, RESEARCH QUESTION 2

This question explored whether there was a difference across ethnic x gender groups and length of stay. ANCOVA results revealed that there were no significant differences across ethnic, gender, or ethnic x gender groups. However, descriptive findings revealed that there are differences across ethnicities x gender groups and length of stay. African American females stayed the greatest length of time, followed by CM, while CF stayed the least length of time of any of the groups.

STUDY SIGNIFICANCE

This study explored whether there were differences among ethnic groups, gender groups, and ethnic x gender groups in relation to psychiatric diagnosis, legal status, and length of psychiatric hospital stay. The findings revealed differences in psychiatric diagnoses according to ethnicity and gender. African American males were highly likely to be diagnosed with schizophrenia, followed by African American females. Hispanic males were least likely to be diagnosed with any of the three diagnoses (schizophrenia, bipolar disorder, and major depressive disorder). Females of all three ethnic groups were more often diagnosed with major depressive disorders. African American females,

followed by Caucasian females and Caucasian males, more often were diagnosed with bipolar disorder.

Differences among the study variables have importance because they indicate dissimilarities among the ethnic groups, gender groups, ethnic x gender groups, and how those individuals are perceived by clinicians. Moreover, differences among the respective groups, however small, may have a substantial clinical impact because they can affect the treatment approach selected for a given patient, including therapies and medications.

DISCUSSION OF THE RESULTS

The overall findings of this study indicate that there are differences among the study participants by ethnicity, gender, and by age. In addition, the findings suggest that there also are differences between the study participants' self-evaluations and the clinician-evaluations of the patient. Physicians appear to show a bias against females and minorities, rating them in a more negative manner. There also is a similar, but less dramatic, pattern of negative assessment by nurses. The instruments used do not have exact scales and subscales, and the instrument used by physicians (BPRS-A) has more scales than the instrument used by nurses (ADRS), which may inflate the evaluations by physicians. Of importance is that both providers appear to be in a majority agreement with patients for most scales. Where there were disagreements, both providers seem more likely to have a greater percentage in the more negative evaluations than in the more positive evaluations, but that may reflect overly optimistic evaluations by patients rather than negative bias by the provider.

The ethnicity and gender of the physicians and nurses in this study were not known. Previous research (Kales et al., 2000) suggested that the ethnicity or gender of the clinician evaluator may have an influence on the recognition and understanding of presenting symptomology by the psychiatric patient. Therefore, the misdiagnosis or inappropriate diagnosis of a patient and gender bias should be taken into consideration in any further research in this area.

Findings in previous research on race/ethnicity in relation to psychiatric diagnosis have demonstrated that there are differences with African Americans in comparison to other races/ethnicities, including Caucasians and Hispanics. African Americans appear to

126

be diagnosed more often with a psychiatric diagnosis of schizophrenia. The findings of the present study appear to concur with previous studies; however, it should be noted that African Americans comprised the largest number of study participants. African Americans had the longest length of psychiatric stay and comprised the largest number of involuntary or court ordered admissions to the psychiatric facility. In contrast, there were fewer Hispanic males in the study sample. Moreover, findings related to Hispanic males did not reveal as much information, leading to the question of whether Hispanic males were as forthcoming in their responses on their self-evaluation. Minorities overall appear to be different on a number of levels in comparison to their Caucasian counterparts in this study. As a result, further research is warranted and attention should be paid to additional factors, such as clinician race/ethnicity and gender.

The *Diagnostic and Statistical Manual* (*DSM*) remains the primary psychiatric diagnostic tool. The patients in the study were diagnosed via psychiatrist use of the *DSM-IV-TR*. The *DSM-IV-TR* and all earlier editions of the *DSM* have been criticized strongly for being inadequately culturally sensitive. Enhancements made to the recently released *DSM-V* purport to be much improved; however, critics continue to cite the need for additional cultural enhancements. The impact on changes made to the *DSM-V* and culture are yet to be determined with future studies of this nature.

STRENGTHS OF THE STUDY

There are a number of strengths in this study. The study used archived data to further the exploration of the impact of ethnicity and gender on the psychiatric diagnostic process. The availability of the archived data provided a significant amount of data for the study. Archived data from three major ethnicity categories—African American, Caucasian, and Hispanic—were available for use in the study. A limited number of other ethnicities were available but the low numbers of patients from other ethnicities did not allow for their inclusion in the study.

Gender was also considered to bea strength in this study, as the study included males and females. A majority of previous studies were only inclusive of male participants.

The study design was a significant strength, as was the statistical approach. The use of a quantitative research methodology allowed for comparison between independent and dependent variables, and identified differences among groups and subgroups, scales and subscales, and groups, subgroups, scales, and subscales. The innovative statistical approach provided a higher level of review, and led to more definitive and revealing findings and the ability to discern differences among several groups and subgroups.

LIMITATIONS OF THE STUDY

One study limitation was that data were taken from an existing archived database, and can thus be considered a convenience sample of inpatients in a psychiatric mental health facility. In addition, participants provided answers by self-report; as a result, inaccurate answers to instrument questions as well as inaccurate demographic information were possible. Study participants self-identified their race/ethnicity as African-American, Caucasian, or Hispanic. Study participants lived in Houston, Texas and surrounding suburbs (Harris County), and therefore cannot be generalized. Although the overall sample size was 1,115 participants, the groups were not equally distributed by gender or ethnicity. In addition, the study population sample was limited to African-American, Caucasian, and Hispanic populations. The ethnicity/race and gender of the clinicians (nurses and physicians) were unknown; therefore, potential bias by the clinician was undetermined. Design of the instrument subscales may not have taken into consideration ethnic and cultural differences or influences.

While differences in race/ethnicity/race and gender were identified in this study, the clinical significance of those differences was not established. The level of significance, if any, is unknown, although the fact that differences were identified should promote interest in further research from a clinical perspective.

IMPLICATIONS OF THE STUDY

Health care providers, including those in the mental health areas, continue to emphasize the importance of cultural awareness. Nonetheless, some individuals remain unsophisticated in their own understandings of other cultures or the application of being more culturally sensitive. This concern is applicable to all clinicians, no matter the

clinical focus because comorbidity with psychiatric mental health disorders coupled with more traditional medical related disorders is readily recognized.

Ethnicity and gender differences may not be adequately or sufficiently captured by psychiatric diagnostic processes. However, these differences in ethnicity and gender may influence the expression, interpretation, and diagnosis of psychiatric symptomatology.

The primary diagnostic tool used in this study, the *DSM-IV-TR*, may have been inadequate in capturing the meaning of ethnicity or gender when guiding the psychiatric diagnostic processes. The recently released *DSM-V* has been noted to be somewhat more culturally sensitive; however, there continues to be criticism that the changes from the *DSM-IV-TR* are insufficient and more attention must be paid to enhancing the level of cultural relevance and sensitivity.

The need for cultural sensitivity is taught in undergraduate and graduate nursing programs; however, follow-up questions remain unanswered: 1) what are the best ways to change curricula to be not only more culturally sensitive, but more culturally aware, and 2) what are the best ways to teach these concepts? The need to be more culturally sensitive and culturally aware applies to other clinicians including physicians, therapists and counselors who are addressing the psychiatric mental health and medical needs of the population. However, are respective curricula adjusted to adequately address the needs of the patients served?

Organizations with oversight and influence in policy-making decisions for psychiatric and mental health patients should be informed on potential cultural biases. Research has demonstrated the potential for misdiagnosis of patients based upon ethnic and cultural misunderstandings and misgivings.

The impact of study findings with respect to ethnicity/race and gender in psychiatric mental health patients could have far-reaching diagnostic and treatment implications. For example, ethnopharmacological studies have indicated that differences exist between ethnicities and response to prescribed medications. The use of medications as a treatment modality in psychiatry is of great importance. Having an understanding of how different cultures perceive illness and wellness, and the ability to provide patients with adequate information to allow for informed decision-making is of great importance.

Further research identified by this study regarding differences may assist in this endeavor.

SUGGESTIONS FOR FUTURE RESEARCH

Perhaps the strongest suggestion for future research is the continued utilization of the absolute and relative difference approach to future studies of this nature. The patterns derived from the absolute and relative difference approaches should continue to be developed and tested. Patterns presented by the absolute and relative difference approach could indicate areas for future research and lead clinicians to the development of more effective interventions. This statistical approach is still relatively new and additional studies are needed to determine the extent in which the approach can be used.

The researcher plans to enhance the current research to include the gender and ethnicity of the clinicians to determine what role, if any, the respective variables have on assignment of patients' psychiatric diagnoses. Establishing clinical significance was not a goal of this study, although the effect of ethnic and gender differences is an area that deserves investigation. Future research is warranted to determine the clinical impact of ethnicity and gender of the psychiatric patient and the mental health clinician/provider.

CONCLUSION

This study was designed to explore and describe relationships between race and ethnicity and the symptom identification and diagnosis in an inpatient psychiatric setting. The review of literature and discussion of the findings support the need for future exploration into the science and meaning of psychiatric symptom identification and diagnosis with regard to race/ethnicity and gender.

This chapter presented the summary of the study and discussion of the study findings. Methodological issues related to data collection procedures, data collection instruments, data analysis techniques, and generalizability of the findings were discussed. Conclusions were presented and recommendations for future research were suggested, as well as implication for nursing research, education and practice.

This study may serve as insight for other nurses, healthcare providers, and researchers into an enhanced understanding of the relationships between race and

ethnicity and the symptom identification and diagnosis in a psychiatric mental health setting. Enhanced understandings can improve communication and rapport between caregivers and patients, in turn mitigating ethnic and race differences in care giving, especially with regard to presentation of symptoms.

Appendix A: Anchored Brief Psychiatric Rating Scale (BPRS-A)

**HARRIS COUNTY PSYCHIATRIC
CENTER Houston, Texas**

**ANCHORED BRIEF PSYCHIATRIC
RATING SCALE (BPRS-A)**

ADMISSION RATING

Stamp Here and on the back

Date of Admission Rating: __/__/___

DIRECTIONS: The BPRS-A will be completed on admission (rate the previous week). Place one check mark to indicate the most descriptive BRPS-A level (1 through 7) for each dimension.

1. SOMATIC CONCERN: Degree of concern over present bodily health. Rate the degree to which physical health is perceived as a problem by the patient, whether the complaints have a realistic basis or not. Do not rate mere reporting of somatic symptoms. Rate only concern for (or worrying about) physical problems (real or imagined). [Rating based primarily on verbal report.]

1_____Not Reported
2_____Very Mild: Occasionally is somewhat concerned about body, symptoms, or physical illness.
3_____Mild: Occasionally is moderately concerned about body, or often is somewhat concerned.
4_____Moderate: Occasionally is very concerned, or often is moderately concerned.
5_____Moderately Severe: Often is very concerned.
6_____Severe: Is very concerned most of the time.
7_____Very Severe: Is very concerned nearly all of the time.

2. ANXIETY: Worry, fear, or overconcern for present or future. Rate solely on the basis of verbal report of patient's own subjective experiences. Do not infer anxiety from physical signs or from neurotic defense mechanisms. Do not rate if restricted to somatic concern. [Rating based primarily on verbal report.]

1_____Not Reported.
2_____Very Mild: Occasionally feels somewhat anxious.
3_____Mild: Occasionally feels moderately anxious, or often feels somewhat anxious.
4_____Moderate: Occasionally feels very anxious, or often feels moderately anxious.
5_____Moderately Severe: Often feels very anxious.
6_____Severe: Feels very anxious most of the time.
7_____Very Severe: Feels very anxious nearly all of the time.

3. EMOTIONAL WITHDRAWAL: Deficiency in relating to the interviewer and to the interview situation. Overt manifestations of this deficiency include poor/absence of eye contact, failure to orient oneself physically toward the interviewer, and a general lack of involvement or engagement in the interview. Distinguish from BLUNTED AFFECT, in which deficits in facial expression, body gesture, and voice pattern are scored. [Rating based primarily on observation.]

1_____Not Observed.
2_____Very Mild: e.g., Occasionally exhibits poor eye contact.
3_____Mild: e.g., As above, but more frequent.

4_____Moderate: e.g., Exhibits little eye contact, but still seems engaged in the interview and is appropriately responsive to all questions.
5_____Moderately Severe: e.g., Stares at floor or orients self away from interviewer, but still seems moderately engaged.
6_____Severe: e.g., As above, but more persistent or pervasive.
7_____Very Severe: e.g., Appears "spacey" or "out of it" (total absence of emotional elatedness), and is disproportionately uninvolved or   unengaged in the interview. (Do not score if explained by disorientation.)

4. CONCEPTUAL DISORGANIZATION: Degree of speech incomprehensibility. Include any type of formal thought disorder (e.g., loose associations, incoherence, flight of ideas, neologisms). DO NOT include mere circumstantiality or pressured speech, even if marked. DO NOT rate on the patient's subjective impressions (e.g., "My thoughts are racing. I can't hold a thought." "My thinking gets all mixed up"). Rate ONLY on the basis of observations made during the interview.

1_____Not Observed.
2_____Very Mild: e.g., Somewhat vague, but of doubtful clinical significance.
3_____Mild: Frequently vague, but the interview is able to progress smoothly; occasional loosening of associations.
4_____Moderate: e.g., Occasional irrelevant statements, infrequent use of neologisms, or moderate loosening of associations.
5_____Moderately Severe: As above, but more frequent.
6_____Severe: Formal thought disorder is present for most of the interview, and the interview is severely strained.
7_____Very Severe: Very little coherent information can be obtained.

5. GUILT FEELINGS: Overconcern or remorse for past behavior. Rate on the basis of the patient's subjective experiences of guilt as evidenced by verbal report. Do not infer guilt feelings from depression, anxiety, or neurotic defenses. [Rating based primarily on verbal report.]

1_____Not Reported.
2_____Very Mild: Occasionally feels somewhat guilty.
3_____Mild: Occasionally feels moderately guilty, or often feels somewhat guilty.
4_____Moderate: Occasionally feels very guilty, or often feels moderately guilty.
5_____Moderately Severe: Often feels very guilty.
6_____Severe: Feels very guilty most of the time, or encapsulated delusion of guilt.
7_____Very Severe: Agonizing constant feelings of guilt, or pervasive delusions(s) of guilt.

6. TENSION: Rate motor restlessness (agitation) observed during the interview. DO NOT rate on the basis of subjective experiences reported by the patient. Disregard suspected pathogenesis (e.g., tardive dyskinesia).

1_____Not Observed.
2_____Very Mild: Occasionally fidgets.
3_____Mild: e.g., Frequently fidgets.
4_____Moderate: e.g., Frequently fidgets. Wrings hands and pulls clothing.
5_____Moderately Severe: e.g., Constantly fidgets. Wrings hands and pulls clothing.
6_____Severe: e.g., Cannot remain seated (i.e., must pace).
7_____Very Severe: e.g., Paces in a frantic manner.

7. MANNERISMS AND POSTURING: Unusual and unnatural motor behavior. Rate only abnormality of movements. Do not rate simple heightened motor activity here. Consider frequency, duration, and degree of bizarreness. Disregard suspected pathogenesis. [Rating based on observation.]

1_____Not Observed.
2_____Very Mild: Odd behavior but of doubtful clinical significance, e.g., occasional unprompted smiling, infrequent lip movements.
3_____Mild: Strange behavior but not obviously bizarre, e.g., infrequent head-tilting (from side to side) in a rhythmic fashion, intermittent   abnormal finger movements.
4_____Moderate: e.g., Assumes unnatural position for a brief period of time, infrequent tongue protrusions, rocking, facial grimacing.
5_____Moderately Severe: e.g., Assumes and maintains unnatural position throughout interview, unusual movements in several body   areas.

6_____**Severe:** As above, but more frequent, intense, or pervasive.

7_____**Very Severe**: e.g. , Bizarre posturing throughout most of the interview, continuous abnormal movements in several body areas.

8. GRANDIOSITY: Inflated self-esteem (self-confidence), or inflated appraisal of one's talents, powers, abilities, accomplishments, knowledge, importance, or identity. Do not score mere grandiose quality of claims (e.g., "I'm the worst sinner in the world," "The entire country is trying to kill me") unless the guilt/persecution is related to some special exaggerated attributes of the individual. Also, <u>the patient</u> must claim exaggerated attributes: e.g., If patient denies talents, powers, etc., even if he/she state that others indicate that he/she has these attributes, this should not be reported. [Rating based primarily on verbal report.]

1_____**Not Reported.**

2_____**Very Mild**: e.g., Is more confident than most people, but of only possible clinical significance.

3_____**Mild:** e.g., Definitely inflated self-esteem or exaggerates talents somewhat out of proportion to the circumstances.

4_____**Moderate:** e.g., Inflated self-esteem clearly out of proportion to the circumstances, or suspected grandiose delusion(s).

5_____**Moderately Severe:** e.g., A single (definite) encapsulated grandiose delusion, or multiple (definite) fragmentary grandiose delusions.

6_____**Severe:** e.g., A single (definite) grandiose delusion/delusional system, or multiple (definite) grandiose delusions that the patient seems   preoccupied with.

7_____**Very Severe**: e.g., As above, but nearly all conversation directed towards the patient's grandiose delusion(s).

9. DEPRESSION MOOD: Subjective report of feeling depressed, blue, "down in the dumps." etc. Rate only degree of reported depression. Do not rate on the basis of inferences concerning depression based upon general retardation and somatic complaints. [Rating based primarily on verbal report.]

1_____**Not Reported**.

2_____**Very Mild**: Occasionally feels somewhat depressed.

3_____**Mild**: Occasionally feels moderately depressed, or often feels somewhat depressed.

4_____**Moderate**: Occasionally feels very depressed, or often feels moderately depressed.

5_____**Moderately Severe**: Often feels very depressed.

6_____**Severe:** Feels very depressed most of the time.

7_____**Very Severe**: Feels very depressed nearly all of the time.

10. HOSTILITY: Animosity, contempt, belligerence, disdain for other people outside the interview situation. Rate solely on the basis of the verbal report of feelings and actions of the patient toward others. Do not infer hostility from neurotic defenses, anxiety or somatic complaints.

1_____**Not Reported.**

2_____**Very Mild**: Occasionally feels somewhat angry.

3_____**Mild**: Often feels somewhat angry, or occasionally feels moderately angry.

4_____**Moderate:** Occasionally feels very angry, or often feels moderately angry.

5_____**Moderately Severe**: Often feels very angry.

6_____**Severe:** Has acted on his anger by becoming verbally or physically abusive on one or two occasions.

7_____**Very Severe**: Has acted on his/her anger on several occasions.

11. SUSPICIOUSNESS: Belief (delusional or otherwise) that others have now, or have had in the past, malicious or discriminatory intent toward the patient. On the basis of verbal report, rate only those suspicions which are currently held whether they concern past or present circumstance.

1_____**Not Reported**.

2_____**Very Mild:** Rare instance of distrustfulness which may or may not be warranted by the situation.

3_____**Mild**: Occasional instances of suspiciousness that are definitely not warranted by the situation.

4_____**Moderate:** More frequent suspiciousness, or transient ideas of reference.

5_____**Moderately Severe**: Pervasive suspiciousness, frequent ideas of reference, or an encapsulated delusion.

6_____**Severe**: Definite delusion(s) of reference or persecution that is (are) not wholly pervasive (e.g., an encapsulated delusion).

7_____**Very Severe**: As above, but more widespread, frequent, or intense.

12. HALLUCINATORY BEHAVIOR: Perceptions (in any sense modality) in the absence of an identifiable external stimulus. Rate only those experiences that have occurred during this rating period. DO NOT rate "voices in my head." or "visions in my mind" unless the patient can differentiate between these experiences and his or her thoughts. [Rating based primarily on verbal report.]

1_____Not Reported.
2_____Very Mild: Suspected hallucinations only.
3_____Mild: Definite hallucinations, but insignificant, infrequent, or transient (e.g., occasional formless visual hallucinations, a voice calling   the patient's name).
4_____Moderate: As above, but more frequent or extensive (e.g., frequently sees the devil's face, two voices carry on lengthy   conversations).
5_____Moderately Severe: Hallucinations are experienced nearly every day, or are a source of extreme distress.
6_____Severe: As above and has had a moderate impact on the patient's behavior (e.g., concentration difficulties leading to impaired work   functioning).
7_____Very Severe: As above, and has had a severe impact (e.g., attempts suicide in response to command hallucinations).

13. MOTOR RETARDATION: Reduction in energy level evidenced in slowed movements. Rate on the basis of observed behavior of the patient only. Do not rate on the basis of the patient's subjective impression of his or her own energy level.
1_____Not Observed.
2_____Very Mild and of doubtful clinical significance.
3_____Mild: e.g., Conversation is somewhat retarded, movements somewhat slowed.
4_____Moderate: e.g., Conversation is notably retarded but not strained.
5_____Moderately Severe: e.g., Conversation is strained, moves very slowly.
6_____Severe: e.g., Conversation is difficult to maintain, hardly moves at all.
7_____Very Severe: e.g., Conversation is almost impossible, does not move at all throughout the interview.

14. UNCOOPERATIVENESS: Evidence of resistance, unfriendliness, resentment, and lack of readiness to cooperate with the interviewer. Rate only on the basis of the patient's attitude and responses to the interviewer and the interview situation. Do not rate on the basis of reported resentment or uncooperativeness outside the interview situation.

1_____Not Observed.
2_____Very Mild: e.g., Does not seem motivated.
3_____Mild: e.g., Seems evasive in certain areas.
4_____Moderate: e.g., Monosyllabic, fails to elaborate spontaneously, somewhat unfriendly.
5_____Moderately Severe: e.g., Expresses resentment and is unfriendly throughout the interview.
6_____Severe: e.g., Refuses to answer a number of questions.
7_____Very Severe: e.g., Refuses to answer most questions.

15. UNUSUAL THOUGHT CONTENT: Severity of delusions of any type-consider conviction, and effect on actions. Assume full conviction if patient has acted on his or her beliefs. [Rating based primarily on verbal report.]

1_____Not Reported.
2_____Very Mild: Delusion(s) suspected or likely.
3_____Mild: At times, patient questions his or her belief(s) (partial delusion).
4_____Moderate: Full delusional conviction, but delusion(s) has little or no influence on behavior.
5_____Moderately Severe: Full delusional conviction, but delusion(s) has only occasional impact on behavior.
6_____Severe: Delusion(s) has significant effect, e.g., neglects responsibilities because of preoccupation with belief that he/she is God.
7_____Very Severe: e.g., Delusion(s) has major impact, e.g. stops eating because believes food is poisoned.

16. BLUNTED AFFECT: Diminished affective responsivity, as characterized by deficits in facial expression, body gesture, and voice pattern. Distinguish from EMOTIONAL WITHDRAWAL, in which the focus is on interpersonal impairment rather than affect. Consider degree and consistency of impairment. [Rating based on observations made during interview.]

1_____Not Observed.

2_____**Very Mild:** e.g., Occasionally seems indifferent to material that is usually accompanied by some show of emotion.

3_____**Mild**: e.g., Somewhat diminished facial expression, or somewhat monotonous voice or somewhat restricted gestures.

4_____**Moderate:** e.g., As above, but more intense, prolonged, or frequent.

5_____**Moderately Severe**: e.g., Flattening of affect, including at least two of the three features: severe lack of facial expression,   monotonous voice, or restricted body gestures.

6_____**Severe:** e.g., Profound flattening of affect.

7_____**Very Severe**: e.g., Totally monotonous voice, and total lack of expressive gestures throughout the evaluation.

17. EXCITEMENT: Heightened emotional tone, including irritability and expansiveness (hypomanic affect). Do not infer affect from statements of grandiose delusions. [Rating based on observations made during interview.]

1_____**Not Observed**.

2_____**Very Mild** and of doubtful clinical significance.

3_____**Mild**: e.g., Irritable or expansive at times.

4_____**Moderate:** e.g., Frequently irritable or expansive.

5_____**Moderately Severe**: e.g., Constantly irritable or expansive, or at times enraged or euphoric.

6_____**Severe:** e.g., Enraged or euphoric throughout most of the interview.

7_____**Very Severe**: e.g., As above, but to such a degree that the interview must be terminated prematurely.

18. DISORIENTATION: Confusion or lack of proper association for person, place or time. [Rate based on observations made during interview.]

1_____**Not Observed.**

2_____**Very Mild**: e.g., Seems somewhat confused.

3_____**Mild:** e.g., Indicates 1996 when in fact it is 1997.

4_____**Moderate**: e.g., Indicates 1991.

5_____**Moderately Severe**: e.g., Is unsure where he/she is.

6_____**Severe:** e.g., Has no idea where he/she is.

7_____**Very Severe**: e.g., Does not know who he/she is.

_____

Printed Name

_____

Signature

Global Assessment of Functioning (GAF) Scale

Consider psychological, social, and occupational functioning on a hypothetical continuum of mental health-illness. Do not include impairment in the functioning due to physical (or environmental) limitations.

Code	(Note: Use intermediate codes when appropriate, e.g., 45, 68, 72)
100 | 91	**Superior functioning in a wide range of activities, life's problems never seem to get out of hand, is sought out by others because of his or her many positive qualities.** **No symptoms.**
90 | 81	**Absent or minimal symptoms** (e.g., mild anxiety before an exam), **good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns** (e.g., an occasional argument with family members).
80 | 71	**If symptoms are present, they are transient and expectable reactions to psychosocial stressors** (e.g., difficulty concentrating after family argument); **no more than slight impairment in social, occupational, or school functioning** (e.g., temporarily falling behind in schoolwork).
70 | 61	**Some mild symptoms** (e.g., depressed mood and mild insomnia) **OR some difficulty in social, occupational, or school functioning** (e.g., occasional truancy, or theft within the household), **but generally functioning pretty well, has some meaningful interpersonal relationships.**
60 | 51	**Moderate symptoms** (e.g., flat affect and circumstantial speech, occasional panic attacks) **OR moderate difficulty in social, occupational, or school functioning** (e.g., few friends, conflicts with peers or co-workers).
50 | 41	**Serious symptoms** (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) **OR any serious impairment in social, occupational, or school functioning** (e.g., no friends, unable to keep a job).
40 | 31	**Some impairment in reality testing or communication** (e.g., speech is at times illogical, obscure, or irrelevant) **OR major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood** (e.g., depressed man avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home, and is failing at school).
30 | 21	**Behavior is considerably influenced by delusions or hallucinations OR serious impairment in communication or judgment** (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) **OR inability to function in almost all areas** (e.g., stays in bed all day; no job, home, or friends).
20 | 11	**Some danger of hurting self or others** (e.g., suicide attempts without clear expectations of death; frequently violent; manic excitement) **OR occasionally fails to maintain minimal personal hygiene** (e.g., smears feces) **OR gross impairment in communication** (e.g., largely incoherent or mute).
10 | 1	**Persistent danger of severely hurting self or others** (e.g., recurrent violence) **OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.**
0	Inadequate information.

The rating of overall psychological functioning on a scale of 0-100 was operationalized by Luborsky in the Health-Sickness Rating Scale (Luborsky L: "Clinicians' Judgments of Mental Health". *Archives of General Psychiatry* 7:407-417, 1962). Spitzer and colleagues developed a revision of the Health-Sickness Rating Scale called the Global Assessment Scale (GAS) (Endicott J, Sptizer RL, Fleiss JL, Cohen J: The Global Assessment Scale: A Procedure for Measuring Overall Severity of Psychiatric Disturbance". *Archives of General Psychiatry* 33:766-771, 1976. A modified version of the GAS was included in DSM-III-R as the Global Assessment of Functioning (GAF) Scale.

Appendix B: Affective Disorders Rating Scale (ADRS)

AFFECTIVE DISORDERS RATING SCALE (ADRS)	
ADMISSION DATE: _____ RATER:_____	Stamp Here

Instructions :   Please circle the number that best describes the patient's behavior over the past 24 hours. Consider both frequency and intensity in arriving at an overall judgment

THE PATIENT	None	Very minimal	Minimal	Moderate	Marked	Very marked		THE PATIENT	None	Very Minimal	Minimal	Moderately	Marked	Very marked	
1. Is retarded in speech and/or movement	1	2	3	4	5	6	_____ (121)	18. Verbalizes suicidal thoughts	1	2	3	4	5	6	_____ (138)
2. Is seclusive, withdrawn	1	2	3	4	5	6	_____ (122)	19. Is delusional	1	2	3	4	5	6	_____ (139)
3. Is drowsy	1	2	3	4	5	6	_____ (123)	20. Acts or speaks of helplessness or hopelessness	1	2	3	4	5	6	_____ (140)
4. Is restless, moving from one place to another	1	2	3	4	5	6	_____ (124)	21. Is self-critical	1	2	3	4	5	6	_____ (141)
5. Seeks out others	1	2	3	4	5	6	_____ (125)	22. Is argumentative	1	2	3	4	5	6	_____ (142)
6. Is agitated, e.g., pacing, hand wringing	1	2	3	4	5	6	_____ (126)	23. Is on verge of tears, crying	1	2	3	4	5	6	_____ (143)
7. Is physically threatening and/or combative	1	2	3	4	5	6	_____ (127)	24. Appears sad	1	2	3	4	5	6	_____ (144)
8. Is self-preoccupied	1	2	3	4	5	6	_____	25. Is anxious	1	2	3	4	5	6	_____

9. Has crazy, bizarre manner	1	2	3	4	5	6	(128) _____	26. Is preoccupied with guilt or remorse	1	2	3	4	5	6	(145) _____
10. Is distractible	1	2	3	4	5	6	(129) _____	27. Is euphoric and elated	1	2	3	4	5	6	(146) _____
11. Is talking	1	2	3	4	5	6	(130) _____	28. Has an angry appearance, manner	1	2	3	4	5	6	(147) _____
12. Jumps rapidly from subject to subject	1	2	3	4	5	6	(131) _____	29. Is apathetic	1	2	3	4	5	6	(148) _____
13. Makes unrealistic plans	1	2	3	4	5	6	(132) _____	30. Has poor judgement	1	2	3	4	5	6	(149) _____
14. Is suspicious	1	2	3	4	5	6	(133) _____	31. Is unable to perform every day routine tasks	1	2	3	4	5	6	(150) _____
15. Has bodily concerns, complaints	1	2	3	4	5	6	(134) _____	32. Has trouble remembering	1	2	3	4	5	6	(151) _____
16. Has grandiose ideas	1	2	3	4	5	6	(135) _____	33. Is confused	1	2	3	4	5	6	(152) _____
17. Is sexually preoccupied	1	2	3	4	5	6	(136) _____ (137)	34. Acts impulsively	1	2	3	4	5	6	(153) _____ (154)

GLOBAL ITEMS: RATE 1-15 (1-5 Absent to Mild: 6-10 Moderate; 11-15 Severe)   (See procedural manual for item definition and rating key).

A. MANIA _____   B. DEPRESSION_____   C. PSYCHOSIS _____   ANXIETY _____
             (155-156)   (157-158)   (159-160)   (161-162)
E. ANGER _____   F. SOCIAL WITHDRAWAL _____
             (163-164)   (165-166)
G. IF PATIENT IS A WOMAN, IS SHE CURRENTLY MENSTRUATING: _____ (No –1; Yes –2; N/A, Don't know –3)
                                                          (167)

CONSIDERING YOUR TOTAL CLINICAL EXPERIENCE, HOW MENTALLY ILL IS THIS PATIENT AT THIS TIME:		Check one	
	1. Normal, not ill at all		
	2. Borderline mentally ill		
	3. Mildly ill		
	4. Moderately ill		
	5. Markedly ill		
	6. Severely ill		
	7. Among the most extremely ill patients		

Appendix C Brief Symptom Inventory (BSI)

Not at all	A little bit	Moderately	Quite a bit	Extremely	**In the <u>past two days</u>, how much were you distressed by: (Please circle the rating that fits you best)**	-stamp-
BSI						
0	1	2	3	4	1. Nervousness or shakiness inside	
0	1	2	3	4	2. Faintness or dizziness	
0	1	2	3	4	3. The idea that someone else can control your thoughts	
0	1	2	3	4	4. Feeling others are to blame for most of your troubles	
0	1	2	3	4	5. Trouble remembering things	
0	1	2	3	4	6. Feeling easily annoyed or irritated	
0	1	2	3	4	7. Pains in heart or chest	
0	1	2	3	4	8. Feeling afraid in open spaces or on the streets	
0	1	2	3	4	9. Thoughts of ending your life	
0	1	2	3	4	10. Feeling that most people cannot be trusted	
0	1	2	3	4	11. Poor appetite	
0	1	2	3	4	12. Suddenly scared for no reason	
0	1	2	3	4	13. Temper outbursts that you could not control	
0	1	2	3	4	14. Feeling lonely even when you are with people	
0	1	2	3	4	15. Feeling blocked in getting things done	
0	1	2	3	4	16. Feeling lonely	
0	1	2	3	4	17. Feeling blue	
0	1	2	3	4	18. Feeling no interest in things	
0	1	2	3	4	19. Feeling fearful	
0	1	2	3	4	20. Your feelings being easily hurt	
0	1	2	3	4	21. Feeling that people are unfriendly or dislike you	
0	1	2	3	4	22. Feeling inferior to others	
0	1	2	3	4	23. Nausea or upset stomach	
0	1	2	3	4	24. Feeling that you are watched or talked about by others	
0	1	2	3	4	25. Trouble falling asleep	
0	1	2	3	4	26. Having to check and double-check what you do	
0	1	2	3	4	27. Difficulty making decisions	
0	1	2	3	4	28. Feeling afraid to travel on buses, subways, or trains	
0	1	2	3	4	29. Trouble getting your breath	
0	1	2	3	4	30. Hot or cold spells	
0	1	2	3	4	31. Having to avoid certain things, places, or activities because they frighte you	
0	1	2	3	4	32. Your mind going blank	
0	1	2	3	4	33. Numbing or tingling in parts of your body	
0	1	2	3	4	34. The idea that you should be punished for your sins	
0	1	2	3	4	35. Feeling hopeless about the future	
0	1	2	3	4	36. Trouble concentrating	
0	1	2	3	4	37. Feeling weak in parts of your body	
0	1	2	3	4	38. Feeling tense or keyed up	
0	1	2	3	4	39. Thoughts of death or dying	

					In the <u>past two days</u>, how much were you distressed by: (Please circle the rating that fits you best)	-stamp-
Not at all	A little bit	Moderately	Quite a bit	Extremely		
0	1	2	3	4	40. Having thoughts to beat, injure, or harm someone	
0	1	2	3	4	41. Having urges to break or smash things	
0	1	2	3	4	42. Feeling very self-conscious with others	
0	1	2	3	4	43. Feeling uneasy in crowds, such as shopping or at a movie	
0	1	2	3	4	44. Never feeling close to another person	
0	1	2	3	4	45. Spells of terror or panic	
0	1	2	3	4	46. Getting into frequent arguments	
0	1	2	3	4	47. Feeling nervous when you are left alone	
0	1	2	3	4	48. Others not giving you proper credit for your achievements	
0	1	2	3	4	49. Feeling so restless you couldn't sit still	
0	1	2	3	4	50. Feelings of worthlessness	
0	1	2	3	4	51. Feeling that people will take advantage of you if you let them	
0	1	2	3	4	52. Feelings of guilt	
0	1	2	3	4	53. The idea that something is wrong with your mind	

(Total score/# of responses)=GSI _____

Appendix D: UTHCPC IRB Approval Letter

THE UNIVERSITY *of* TEXAS

HEALTH SCIENCE CENTER AT HOUSTON

Harris County Psychiatric Center
Patricia Averill, Ph.D.
Professor
Director, Research and Program Evaluation

June 24, 2009

Mr. Thom Mendez
Director of Nursing
UT-Harris County Psychiatric Center

Subject: Approval of Research Protocol

This letter is to confirm that your proposed research protocol entitled "Tri-Ethnic Differences: An Examination of Associated Symptoms Within an Inpatient Setting" was approved by a convened meeting of the Harris County Psychiatric Center Research Committee on April 27, 2009. This approval is subject to approval by the Committee for the Protection of Human Subjects at UT-Houston and the approval of the Institutional Review Board at UTMB-Galveston.

Patricia M. Averill, Ph.D.
Co-Chair
UTHCPC Research Committee

Appendix E: UTMB IRB Approval Letter

ᚵ∢UTMB®
The University of Texas Medical Branch
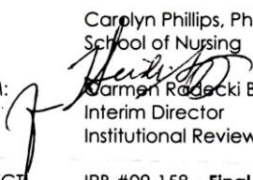
OFFICE OF RESEARCH SUBJECT PROTECTIONS
Institutional Review Board

July 14, 2009

MEMORANDUM

TO: Carolyn Phillips, PhD, RN/Thomas Mendez, MSN, RN, CNS
            School of Nursing   1029

FROM: Carmen Radecki Breitkopf, PhD
            Interim Director
            Institutional Review Board   0158

SUBJECT: IRB #09-158 – **Final Approval of Expedited Protocol.**
            Tri-Ethnic Differences: An Examination of Associated Symptoms witin an Inpatient
            Setting

Having met the stipulations set forth by the Institutional Review Board by an expedited review process on **June 14, 2009,** your research protocol is now approved. I am therefore, pleased to inform you that you may proceed with this project immediately.

This project will require annual review and be due May 31, 2010. Research that has not received approval for continuation by this date may not continue past midnight of the expiration date.

Comments: The UTMB IRB has approved your request to collect and use protected health information (PHI), for research purposes, i.e., review of already existing paper and electronic medical records.   In addition, the UTMB IRB waives the requirement to obtain subject authorization for use and disclosure of PHI and waives the requirement to obtain prior consent of the individuals affected.   The review was completed **in accordance with expedited review procedures as described in 45 CFR 46.110(b).** The IRB further determined that: 1) The use or disclosure of PHI involves no more than minimal risk to the subjects; 2) the alteration or waiver will not adversely affect the rights and welfare of the subjects; 3) the research could not practicably be conducted without the alteration or waiver; 4) the research could not practicably be conducted without access to the or the use of the PHI; 5) the privacy risks to individuals whose protected health information is to be used or disclosed are reasonable in relation to anticipated benefits, if any, to individuals and the importance of the knowledge that may reasonably be expected to result from the research; 6) there is an adequate plan to protect the identifiers from improper use and disclosure; 7) there is an adequate plan to destroy the identifiers at the earliest opportunity consistent with the conduct of the research, unless there is a health or research justification for retaining the identifiers or such retention is otherwise required by law; and 8) there are adequate written assurances that the PHI will not be reused or disclosed to any other person or entity, except as required by law, for authorized oversight of the research project, or for other research for which the use or disclosure would be permitted by IRB policy.

CRB/hs

xc: Lucy Moreno, Health Information Services   0782

ROOM 4.500, REBECCA SEALY HOSPITAL · 301 UNIVERSITY BOULEVARD · GALVESTON, TEXAS 77555-0158
(409) 266-9475 · FAX (409) 266-9499

Appendix F: UTHCPC Letter of Support

THE UNIVERSITY of TEXAS

HEALTH SCIENCE CENTER AT HOUSTON

Harris County Psychiatric Center
Patricia Averill, Ph.D.
Professor
Director, Research and Program Evaluation

April 2, 2009

Mr. Thomas B. Mendez
University of Texas Harris County Psychiatric Center
2800 South MacGregor Way
Houston, TX 77021

Letter of Agreement

Dear Mr. Mendez,

This letter is to confirm that we are in support of your utilizing UTHCPC patient data in order to conduct your dissertation research, entitled "Tri-ethnic differences: An examination of associated symptoms in an in-patient setting."

We hereby agree to provide you with a de-identified dataset with the agreed-upon variables, subject to your receiving approval from the Institutional Review Boards at UTMB and UTH as well as approval from the Research Committee at UTHCPC.

I look forward to working with you on this very interesting study.

Sincerely,

Patricia M. Averill, Ph.D.
Work: 713-741-3951
Pager: 713-905-0341
Fax: 713-741-6907
Patricia.averill@uth.tmc.edu

UT-Houston Harris County Psychiatric Center
2800 South MacGregor Way • Houston, Texas 77021 • (713) 741-3951 • FAX (713) 741-6907
E-mail: paverill@mind.hcpc.uth.tmc.edu
Located in the W. Leland Anderson Campus of the Texas Medical Center

144

Appendix G: UTHCPC Exempt Status Letter

THE UNIVERSITY *of* TEXAS
HEALTH SCIENCE CENTER AT HOUSTON

The Committee for the Protection of Human Subjects   6410 Fannin, Suite 1100
Office of Research Support Committees   Houston, TX 77030

Mr. Thomas Mendez
UT-H - MS - Nursing Administration

June 23, 2009

HSC-HCPC-09-0226 - *Tri-Ethnic Differences: An Examination of Associated Symptoms within an Inpatient Setting*

The above named project is determined to qualify for exempt status according to 45 CFR 46.101(b)

CATEGORY #4 : *Research, involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified directly or through identifiers linked to the subjects.*

CHANGES: Should you choose to make any changes to the protocol that would involve the inclusion of human subjects or identified data from humans, please submit the change via iRIS to the Committee for the Protection of Human Subjects for review.

Should you have any questions, please contact the Office of Research Support Committees at 713-500-7943.

Thank you for submitting your protocol for review.

Cynthia Edmonds
IRB Manager

Appendix H: Relative Difference Scores Table

	Male						Female				
	Range	x_i	f	*C%	total	%	**Range**	x_i	f	*C%	total	%

Relative Difference Scores for Somaticism between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

Caucasian

	Male					Female				
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-2.0 to -3.0	-2.63	1	2.8			*-3.0 to -4.0*	-3.3	1	2.1	1	-2.13
	-2.43	2	8.3	4	-11.11		-2.95	1	4.3		
	-2.3	1	11			*-2.0 to -3.0*	-2.27	1	6.4	3	-6.38
-1.0 to -2.0	-1.92	1	14				-2.1	1	8.5		
	-1.5	1	17	3	-8.33	*-1.0 to -2.0*	-1.92	2	13	3	-6.38
	-1.4	1	19				-1.6	1	15		
0 to -1.0	-0.84	3	28				-0.96	2	19		
	-0.6	1	31	11	-30.56		-0.8	4	28		
	-0.5	3	39				-0.6	1	30		
	-0.1	4	50			*0 to -1.0*	-0.5	1	32	13	-27.66
0 to 1.0	0.11	1	53				-0.3	2	36		
	0.15	1	56				-0.3	1	38		
	0.23	7	75				-0.1	2	43		
	0.27	1	78				0.19	1	45		
	0.43	1	81	16	44.44	*0 to 1.0*	0.23	12	70	20	42.55
	0.51	1	83				0.43	5	81		
	0.83	2	89				0.63	2	85		
	0.87	1	92				1.22	3	92		
	0.95	1	94			*1.0 to 2.0*	1.62	2	96	6	12.77
1.0 to 2.0	1.36	1	97	1	2.78		1.71	1	98		
2.0 to 3.0	2.02	1	100	1	2.78	*2.0 to 3.0*	2.26	1	100	1	2.13
Total		36		36	100			47		47	100

Relative Difference Scores for Somaticism between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
African American											
Male						**Female**					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-2.0 to -3.0	-2.27	1	2.5	2	-5.00	*-2.0 to -3.0*	-2.43	1	1.6	2	-3.28
	-2.2	1	5				-2.3	1	3.3		
0 to -1.0	-0.84	2	10	8	-20.00	*-1.0 to -2.0*	-1.56	1	4.9	4	-6.56
	-0.3	1	13				-1.2	2	8.2		
	-0.3	1	15				-1.2	1	9.8		
	-0.1	4	25			*0 to -1.0*	-0.84	1	12	14	-22.95
0 to 1.0	0.23	13	58	25	62.50		-0.8	1	13		
	0.43	2	63				-0.7	1	15		
	0.48	1	65				-0.5	2	18		
	0.51	1	68				-0.2	1	20		
	0.63	5	80				-0.1	5	28		
	0.67	2	85				-0.1	3	33		
	0.75	1	88			*0 to 1.0*	0.07	2	36	27	44.26
1.0 to 2.0	1.02	1	90	4	10.00		0.11	2	39		
	1.22	1	93				0.23	14	62		
	1.27	1	95				0.27	1	64		
	1.66	1	98				0.43	2	67		
3.0 to 4.0	3.62	1	100	1	2.50		0.47	1	69		
							0.63	2	72		
							0.87	3	77		
						1.0 to 2.0	1.02	1	79	8	13.11
							1.11	2	82		
							1.22	2	85		
							1.27	1	87		
							1.39	1	89		
							1.51	1	90		
						2.0 to 3.0	2.02	1	92	3	4.92
							2.06	1	93		
							2.42	1	95		
						3.0 to 4.0	3.06	1	97	1	1.64
						4.0 to 5.0	4.41	1	98	1	1.64
						5.0 to 6.0	5.41	1	100	1	1.64
Total		**40**		**40**	**100**			**61**		**61**	**100**

Relative Difference Scores for Somaticism between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
Hispanic											
Male						Female					
Range	xi	f	*C%	total	%	Range	xi	f	*C%	total	%
-1.0 to -2.0	-1.63	1	10	1	-10.00	-2.0 to -3.0	-2.95	1	6.3	1	-6.25
0 to -1.0	-0.6	1	20	5	-50.00	-1.0 to -2.0	-1.08	1	12.5	1	-6.25
	-0.49	2	40			0 to -1.0	-0.65	1	18.8	3	-18.75
	-0.13	2	60				-0.13	2	31.3		
0 to 1.0	0.23	2	80	4	40.00	0 to 1.0	0.43	3	50	8	50.00
	0.83	1	90				0.55	1	56.3		
	0.87	1	100				0.59	1	62.5		
							0.63	3	81.3		
						1.0 to 2.0	1.82	1	87.5	1	6.25
						3.0 to 4.0	3.22	1	93.8	1	6.25
						4.0 to 5.0	4.81	1	100	1	6.25
Total		10		10	100			16		16	100

Relative Difference Scores for Depression between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
Caucasian											
Male						Female					
Range	x_i	f	*C%	total	%	Range	x_i	f	*C%	total	%
-2.0 to -3.0	-2.62	2	5.4	3	-8.11	-3.0 to -4.0	-3.31	1	2.1	1	-2.08
	-2.05	1	8.1			-2.0 to -3.0	-2.95	1	4.2	2	-4.17
-1.0 to -2.0	-1.9	2	13.5	4	-10.81		-2.26	1	6.3		
	-1.88	1	16.2			-1.0 to -2.0	-1.9	1	8.3	4	-8.33
	-1.55	1	18.9				-1.55	2	12.5		
0 to -1.0	-0.83	1	21.6	11	-29.73		-1.53	1	14.6		
	-0.79	1	24.3			0 to -1.0	-0.98	1	16.7	11	-22.92
	-0.47	4	35.1				-0.83	5	27.1		
	-0.45	2	40.5				-0.81	1	29.2		
	-0.12	3	48.6				-0.47	1	31.3		
0 to 1.0	0.07	1	51.4	13	35.14		-0.27	1	33.3		
	0.09	1	54.1				-0.12	1	35.4		
	0.24	7	73				-0.1	1	37.5		
	0.26	1	75.7			0 to 1.0	0.07	1	39.6	24	50.00
	0.45	1	78.4				0.24	12	64.6		
	0.49	1	81.1				0.28	1	66.7		
	0.96	1	83.8				0.32	1	68.8		
1.0 o 2.0	1.18	3	91.9	5	13.51		0.43	3	75		
	1.43	1	94.6				0.62	3	81.3		
	1.62	1	97.3				0.81	1	83.3		
3.0 to 4.0	3.06	1	100	1	2.70		0.99	2	87.5		
						1.0 to 2.0	1.18	1	89.6	5	10.42
							1.37	1	91.7		
							1.5	1	93.8		
							1.6	1	95.8		
							1.95	1	97.9		
						2.0 to 3.0	2.88	1	100	1	2.08
Total		37		37	100			48		48	100

Relative Difference Scores for Depression between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

African American

Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-2.0 to -3.0	-2.79	1	2.4	2	-6.90	*-2.0 to -3.0*	-2.43	1	1.6	2	-3.28
	-2.26	1	4.9				-2.26	1	3.3		
0 to -1.0	-0.83	2	9.8	9	-31.03	*-1.0 to -2.0*	-1.55	2	6.6	4	-6.56
	-0.77	1	12.2				-1.19	2	9.8		
	-0.64	1	14.6			*0 to -1.0*	-0.83	1	11.5	17	-27.87
	-0.47	1	17.1				-0.73	1	13.1		
	-0.29	1	19.5				-0.47	5	21.3		
	-0.12	3	26.8				-0.45	1	23		
0 to 1.0	0.24	5	68.3	12	41.38		-0.29	1	24.6		
	0.26	2	73.2				-0.12	6	34.4		
	0.43	3	80.5				-0.1	1	36.1		
	0.62	1	82.9				-0.06	1	37.7		
	0.82	1	85.4			*0 to 1.0*	0.07	3	42.6	26	42.62
1.0 to 2.0	1.01	1	87.8	4	13.79		0.24	14	65.6		
	1.18	1	90.2				0.43	2	68.9		
	1.43	1	92.7				0.45	1	70.5		
	1.95	1	95.1				0.62	1	72.1		
3.0 to 4.0	3.63	1	97.6	2	6.90		0.64	2	75.4		
	3.82	1	100				0.81	2	78.7		
							0.99	1	80.3		
						1.0 to 2.0	1.18	1	82	4	6.56
							1.22	1	83.6		
							1.6	1	85.2		
							1.93	1	86.9		
						2.0 to 3.0	2.73	1	88.5	2	3.28
							2.95	1	90.2		
						3.0 to 4.0	3.06	1	91.8	4	6.56
							3.08	2	95.1		
							3.63	1	96.7		
						4.0 to 5.0	4.38	1	98.4	2	3.28
							4.4	1	100		
Total		29		29	100			61		61	100

150

Relative Difference Scores for Depression between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
Hispanic											
Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-1.0 to -2.0	-1.49	1	10	2	-20.00	-3.0 to -4.0	-3.33	1	5.9	1	-5.88
	-1.19	1	20			0 to -1.0	-0.83	1	11.8	1	-5.88
0 to -1.0	-0.47	1	30	5	-50.00	0 to 1.0	0.07	2	23.5	12	70.59
	-0.29	1	40				0.11	1	29.4		
	-0.12	3	70				0.24	2	41.2		
0 to 1.0	0.24	1	80	3	30.00		0.32	1	47.1		
	0.43	2	100				0.43	3	64.7		
							0.62	1	70.6		
							0.94	1	76.5		
							0.99	1	82.4		
						1.0 to 2.0	1.18	1	88.2	1	5.88
						3.0 to 4.0	3.82	1	94.1	1	5.88
						4.0 to 5.0	4	1	100	1	5.88
Total		10		10	100			17		17	100

Relative Difference Scores for Depression between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
Caucasian											
Male						Female					
Range	x_i	f	*C%	total	%	Range	x_i	f	*C%	total	%
-2.0 to -3.0	-2.27	1	2			-1.0 to -2.0	-1.88	1	1.9		
	-2.26	2	6.1	4	-8.16		-1.68	1	3.8	4	-7.69
	-2.07	1	8.2				-1.3	1	5.8		
-1.0 to -2.0	-1.9	1	10.2				-1.1	1	7.7		
	-1.74	1	12.2	2	-4.08	0 to -1.0	-0.92	1	9.6		
0 to -1.0	-0.94	2	16.3				-0.91	1	11.5		
	-0.58	1	18.4	10	-20.41		-0.74	1	13.5	16	-30.77
	-0.52	7	32.7				-0.55	1	15.4		
0 to 1.0	0.05	2	36.7				-0.53	1	17.3		
	0.06	12	61.2				-0.52	7	30.8		
	0.19	1	63.3				-0.34	1	32.7		
	0.25	1	65.3	26	53.06		-0.33	1	34.6		
	0.42	2	69.4				-0.19	1	36.5		
	0.44	6	81.6				-0.14	1	38.5		
	0.57	1	83.7			0 to 1.0	0.06	16	69.2		
	0.63	1	85.7				0.25	2	73.1		
1.0 to 2.0	1.01	3	91.8				0.39	1	75	28	53.85
	1.95	1	93.9	4	8.16		0.44	3	80.8		
2.0 to 3.0	2.48	1	95.9				0.63	4	88.5		
	2.89	1	98	2	4.08		0.82	2	92.3		
3.0 to 4.0	3.26	1	100	1	2.04	1.0 to 2.0	1.01	1	94.2	1	1.92
						2.0 to 3.0	2.26	1	96.2		
							2.7	1	98.1	2	3.85
						3.0 to 4.0	3.83	1	100	1	1.92
Total		49		49	100			52		52	100

Relative Difference Scores for Depression between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
African American											
Male						Female					
Range	x_i	f	*C%	total	%	Range	x_i	f	*C%	total	%
-3.0 to -4.0	-3.06	1	1.8	1	-1.79	-2.0 to -3.0	-2.84	2	3.3	6	-9.84
-2.0 to -3.0	-2.26	1	3.6	1	-1.79		-2.26	3	8.2		
-1.0 to -2.0	-1.3	1	5.4	4	-7.14		-2.07	1	9.8	7	-11.48
	-1.13	1	7.1			-1.0 to -2.0	-1.68	2	13.1		
	-1.1	2	10.7				-1.5	1	14.8		
0 to -1.0	-0.91	2	14.3	12	-21.43		-1.1	4	21.3		
	-0.72	1	16.1			0 to -1.0	-0.91	2	24.6	6	-9.84
	-0.53	1	17.9				-0.56	1	26.2		
	-0.52	5	26.8				-0.52	2	29.5		
	-0.37	1	28.6				-0.33	1	31.1		
	-0.33	1	30.4			0 to 1.0	0.03	1	32.8	34	55.74
	-0.14	1	32.1				0.06	18	62.3		
0 to 1.0	0.03	1	33.9	29	51.79		0.24	1	63.9		
	0.06	20	69.6				0.25	6	73.8		
	0.25	6	80.4				0.36	1	75.4		
	0.44	1	82.1				0.42	1	77		
	0.63	1	83.9				0.44	3	82		
1.0 to 2.0	1.01	1	85.7	3	5.36		0.63	2	85.2		
	1.38	1	87.5				0.82	1	86.9		
	1.76	1	89.3			1.0 to 2.0	1.18	1	88.5	3	4.92
2.0 to 3.0	2.09	1	91.1	3	5.36		1.57	2	91.8		
	2.32	1	92.9			2.0 to 3.0	2.13	1	93.4	2	3.28
	2.87	1	94.6				2.87	1	95.1		
3.0 to 4.0	3.45	2	98.2	3	5.36	3.0 to 4.0	3.26	1	96.7	1	1.64
	3.64	1	100			4.0 to 5.0	4.2	1	98.4	2	3.28
							4.58	1	100		
Total		56		56	100			61		61	100

Relative Difference Scores for Depression between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
Hispanic											
Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-1.0 to -2.0	-1.71	1	6.7	3	-20.00	-2.0 to -3.0	-2.65	1	6.3	1	-6.25
	-1.68	1	13.3			-1.0 to -2.0	-1.32	1	12.5	1	-6.25
	-1.1	1	20			0 to -1.0	-0.52	1	18.8	1	-6.25
0 to 1.0	0.06	8	73.3	12	80.00	0 to 1.0	0.06	2	31.3	9	56.25
	0.25	3	93.3				0.24	1	37.5		
	0.63	1	100				0.25	4	62.5		
							0.36	1	68.8		
							0.44	1	75		
						1.0 to 2.0	1.01	1	81.3	3	18.75
							1.51	1	87.5		
							1.57	1	93.8		
						3.0 to 4.0	3.64	1	100	1	6.25
Total		15		15	100			16		16	100

Relative Difference Scores for Anxiety between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

Caucasian

Male						Female					
Range	x_i	f	*C%	total	%	Range	x_i	f	*C%	total	%
-2.0 to -3.0	-2.68	1	2.8	4	-11.11	-3.0 to -4.0	-3.55	1	2.1	1	-2.08
	-2.47	2	8.3			-2.0 to -3.0	-2.98	1	4.2	2	-4.17
	-2.32	1	11.1				-2.32	1	6.3		
-1.0 to -2.0	-1.97	2	16.7	3	-8.33	-1.0 to -2.0	-1.97	2	10.4	3	-6.25
	-1.61	1	19.4				-1.61	1	12.5		
0 to -1.0	-0.89	1	22.2	10	-27.78	0 to -1.0	-0.99	1	14.6	16	-33.33
	-0.54	2	27.8				-0.89	2	18.8		
	-0.48	1	30.6				-0.84	1	20.8		
	-0.33	1	33.3				-0.78	1	22.9		
	-0.27	1	36.1				-0.69	2	27.1		
	-0.18	3	44.4				-0.54	1	29.2		
	-0.12	1	47.2				-0.48	1	31.3		
0 to 1.0	0.03	2	52.8	13	36.11		-0.46	1	33.3		
	0.18	4	63.9				-0.33	2	37.5		
	0.25	1	66.7				-0.27	1	39.6		
	0.38	2	72.2				-0.22	1	41.7		
	0.44	1	75				-0.18	2	45.8		
	0.5	1	77.8			0 to 1.0	0.18	9	64.6	19	39.58
	0.59	1	80.6				0.38	5	75		
	0.97	1	83.3				0.59	3	81.3		
1.0 to 2.0	1.21	1	86.1	4	11.11		0.8	2	85.4		
	1.25	1	88.9			1.0 to 2.0	1	3	91.7	6	12.50
	1.42	1	91.7				1.21	1	93.8		
	1.83	1	94.4				1.32	1	95.8		
3.0 to 4.0	3.24	1	97.2	2	5.56		1.62	1	97.9		
	3.48	1	100			2.0 to 3.0	2.51	1	100	1	2.08
Total		36		36	100			48		48	100

Relative Difference Scores for Anxiety between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
African American											
Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-2.0 to -3.0	-2.83	1	2.4	2	-4.88	*-2.0 to -3.0*	-2.47	1	1.6	2	-3.28
	-2.32	1	4.9				-2.32	1	3.3		
0 to -1.0	-0.89	1	7.3	11	-26.83	*-1.0 to -2.0*	-1.61	2	6.6	4	-6.56
	-0.69	1	9.8				-1.25	2	9.8		
	-0.54	1	12.2			*0 to -1.0*	-0.89	1	11.5	16	-26.23
	-0.48	1	14.6				-0.63	1	13.1		
	-0.18	5	26.8				-0.54	2	16.4		
	-0.12	1	29.3				-0.48	1	18		
	-0.11	1	31.7				-0.41	1	19.7		
0 to 1.0	0.03	1	34.1	23	56.10		-0.33	2	23		
	0.18	13	65.9				-0.18	6	32.8		
	0.38	4	75.6				-0.12	2	36.1		
	0.59	3	82.9			*0 to 1.0*	0.18	14	59	26	42.62
	0.8	1	85.4				0.23	1	60.7		
	0.85	1	87.8				0.38	3	65.6		
1.0 to 2.0	1	1	90.2	2	4.88		0.44	3	70.5		
	1.47	1	92.7				0.59	2	73.8		
2.0 to 3.0	2	1	95.1	1	2.44		0.65	1	75.4		
3.0 to 4.0	3.48	1	97.6	1	2.44		0.7	1	77		
4.0 to 5.0	4.1	1	100	1	2.44		0.85	1	78.7		
						1.0 to 2.0	1	1	80.3	4	6.56
							1.06	1	82		
							1.32	1	83.6		
							1.53	1	85.2		
						2.0 to 3.0	2.04	1	86.9	7	11.48
							2.09	1	88.5		
							2.24	1	90.2		
							2.36	1	91.8		
							2.47	1	93.4		
							2.86	1	95.1		
							2.92	1	96.7		
						3.0 to 4.0	3.9	1	98.4	1	1.64
						4.0 to 5.0	4.31	1	100	1	1.64
Total		41		41	100			61		61	100

Relative Difference Scores for Anxiety between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups										
Hispanic										
Male						Female				
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-2.0 to -3.0	-2.06	1	10	1	-10.00	*-3.0 to -4.0*	-3.4	1	5.9	1	-5.88
-1.0 to -2.0	-1.05	1	20	1	-10.00	*0 to -1.0*	-0.89	1	11.8	4	-23.53
0 to -1.0	-0.33	1	30	3	-30.00		-0.26	1	17.6		
	-0.18	2	50				-0.18	2	29.4		
0 to 1.0	0.03	1	60	3	30.00	*0 to 1.0*	0.14	1	35.3	7	41.18
	0.08	1	70				0.18	4	58.8		
	0.18	1	80				0.61	1	64.7		
1.0 to 2.0	1	1	90	1	10.00		0.8	1	70.6		
2.0 to 3.0	2.45	1	100	1	10.00	*1.0 to 2.0*	1	1	76.5	2	11.76
							1.42	1	82.4		
						2.0 to 3.0	2.86	1	88.2	1	5.88
						3.0 to 4.0	3.48	1	94.1	1	5.88
						4.0 to 5.0	4.31	1	100	1	5.88
Total		10		10	100			17		17	100

Relative Difference Scores for Anxiety between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
Caucasian											
Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-3.0 to -4.0	-3.13	1	2.1	1	-2.08	**-1.0 to -2.0**	-1.75	1	1.9	3	-5.77
-1.0 to -2.0	-1.69	2	6.3	6	-12.50		-1.21	1	3.8		
	-1.48	1	8.3				-1	1	5.8		
	-1.34	1	10.4			**0 to -1.0**	-0.73	3	11.5	21	-40.38
	-1.21	1	12.5				-0.59	1	13.5		
	-1	1	14.6				-0.52	3	19.2		
0 to -1.0	-0.79	1	16.7	17	-35.42		-0.31	2	23.1		
	-0.73	5	27.1				-0.25	7	36.5		
	-0.25	5	37.5				-0.11	2	40.4		
	-0.17	1	39.6				-0.04	3	46.2		
	-0.11	1	41.7			**0 to 1.0**	0.03	1	48.1	22	42.31
	-0.04	3	47.9				0.1	3	53.8		
	-0.03	1	50				0.17	1	55.8		
0 to 1.0	0.17	1	52.1	13	27.08		0.17	1	57.7		
	0.17	1	54.2				0.23	10	76.9		
	0.23	2	58.3				0.24	1	78.8		
	0.37	1	60.4				0.37	1	80.8		
	0.44	1	62.5				0.44	3	86.5		
	0.51	1	64.6				0.65	1	88.5		
	0.65	4	72.9			**1.0 to 2.0**	1.06	1	90.4	5	9.62
	0.79	1	75				1.27	1	92.3		
	0.85	1	77.1				1.41	1	94.2		
1.0 to 2.0	1.27	1	79.2	5	10.42		1.47	1	96.2		
	1.41	1	81.3				1.96	1	98.1		
	1.47	2	85.4			**3.0 to 4.0**	3.33	1	100	1	1.92
	1.97	1	87.5								
2.0 to 3.0	2.17	1	89.6	4	8.33						
	2.3	2	93.8								
	2.92	1	95.8								
3.0 o 4.0	3.06	1	97.9	2	4.17						
	3.68	1	100								
Total		**48**		**48**	**100**			**52**		**52**	**100**

Relative Difference Scores for Anxiety between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
African American											
Male						Female					
Range	x_i	f	*C%	total	%	Range	x_i	f	*C%	total	%
-1.0 to -2.0	-1.96	1	1.8	7	-12.50	-3.0 to -4.0	-3.67	1	1.7	2	-3.39
	-1.69	4	8.9				-3.4	1	3.4		
	-1.48	1	10.7			-1.0 to -2.0	-1.96	1	5.1	15	-25.42
	-1	1	12.5				-1.69	4	11.9		
0 to -1.0	-0.73	3	17.9	14	-25.00		-1.48	1	13.6		
	-0.52	3	23.2				-1.27	2	16.9		
	-0.31	2	26.8				-1.21	6	27.1		
	-0.25	6	37.5				-1.07	1	28.8		
0 to 1.0	0.1	1	39.3	23	41.07	0 to -1.0	-0.73	2	32.2	9	-15.25
	0.23	13	62.5				-0.59	1	33.9		
	0.44	3	67.9				-0.25	4	40.7		
	0.65	5	76.8				-0.11	1	42.4		
	0.85	1	78.6				-0.04	1	44.1		
1.0 to 2.0	1.27	1	80.4	6	10.71	0 to 1.0	0.17	1	45.8	22	37.29
	1.61	2	83.9				0.23	11	64.4		
	1.83	1	85.7				0.31	1	66.1		
	1.89	2	89.3				0.37	1	67.8		
2.0 to 3.0	2.09	1	91.1	2	3.57		0.38	1	69.5		
	2.17	1	92.9				0.44	2	72.9		
3.0 to 4.0	3.2	1	94.6	4	7.14		0.59	1	74.6		
	3.47	1	96.4				0.79	1	76.3		
	3.54	1	98.2				0.85	2	79.7		
	3.89	1	100				0.99	1	81.4		
						1.0 to 2.0	1.06	1	83.1	7	11.86
							1.2	1	84.7		
							1.47	2	88.1		
							1.61	1	89.8		
							1.82	1	91.5		
							1.89	1	93.2		
						2.0 to 3.0	2.09	1	94.9	2	3.39
							2.99	1	96.6		
						3.0 to 4.0	3.33	1	98.3	1	1.69
						4.0 to 5.0	4.37	1	100	1	1.69
Total		56		56	100			59		59	100

Relative Difference Scores for Anxiety between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
Hispanic											
Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-1.0 to -2.0	-1.69	1	6.7	1	-6.67	-1.0 to -2.0	-1.21	2	12.5	2	-12.50
0 to -1.0	-0.86	1	13.3	7	-46.67	0 to -1.0	-0.93	1	18.8	5	-31.25
	-0.52	1	20				-0.65	1	25		
	-0.25	1	26.7				-0.25	3	43.8		
	-0.11	2	40			0 to 1.0	0.23	2	56.3	5	31.25
	-0.04	2	53.3				0.38	1	62.5		
0 to 1.0	0.23	5	86.7	6	40.00		0.44	1	68.8		
	1.06	1	93.3				0.85	1	75		
2.0 to 3.0	2.51	1	100	1	6.67	1.0 to 2.0	1.13	1	81.3	2	12.50
							1.62	1	87.5		
						2.0 to 3.0	2.92	1	93.8	1	6.25
						3.0 to 4.0	3.41	1	100	1	6.25
Total		15		15	100			16		16	100

Relative Difference Scores for Hostility (Resistance) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
Caucasian											
Male						Female					
Range	xi	f	*C%	total	%	Range	xi	f	*C%	total	%
-2.0 to -3.0	-2.04	1	2.8	1	-2.78	-2.0 to -3.0	-2.39	1	2.1	1	-2.08
-1.0 to -2.0	-1.69	1	5.6	2	-5.56	-1.0 to -2.0	-1.34	2	6.3	2	-4.17
	-1.34	1	8.3			0 to -1.0	-0.74	1	8.3	12	-25.00
0 to -1.0	-0.98	5	22.2	14	-38.89		-0.63	1	10.4		
	-0.63	3	30.6				-0.39	2	14.6		
	-0.39	1	33.3				-0.33	1	16.7		
	-0.33	2	38.9				-0.28	7	31.3		
	-0.28	3	47.2			0 to 1.0	0.02	3	37.5	29	60.42
0 to 1.0	0.02	1	50	17	47.22		0.07	17	72.9		
	0.07	5	63.9				0.32	2	77.1		
	0.27	1	66.7				0.37	5	87.5		
	0.37	2	72.2				0.67	2	91.7		
	0.57	1	75			1.0 to 2.0	1.27	1	93.8	2	4.17
	0.67	3	83.3				1.87	1	95.8		
	0.87	1	86.1			2.0 to 3.0	2.17	1	97.9	1	2.08
	0.92	1	88.9			3.0 to 4.0	3.07	1	100	1	2.08
	0.97	2	94.4								
1.0 to 2.0	1.27	1	97.2	1	2.78						
4.0 to 5.0	4.87	1	100	1	2.78						
Total		36		36	100			48		48	100

Relative Difference Scores for Hostility (Resistance) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
African American											
Male						**Female**					
Range	*xi*	*f*	**C%*	total	%	*Range*	*xi*	*f*	**C%*	total	%
-2.0 to-3.0	-2.75	1	2.5	3	-7.50	*-5.0 to -6.0*	-5.21	1	1.6	1	-1.64
	-2.39	1	5			*-2.0 to -3.0*	-2.75	1	3.3	1	-1.64
	-2.04	1	7.5			*-1.0 to -2.0*	-1.69	1	4.9	2	-3.28
-1.0 to -2.0	-1.34	3	15	3	-7.50		-1.04	1	6.6		
0 to -1.0	-0.98	1	17.5	4	-10.00	*0 to -1.0*	-0.98	4	13.1	12	-19.67
	-0.28	2	22.5				-0.63	2	16.4		
	-0.03	1	25				-0.33	1	18		
0 to 1.0	0.07	17	67.5	25	62.50		-0.28	5	26.2		
	0.27	1	70			*0 to 1.0*	0.02	3	31.1	32	52.46
	0.37	1	72.5				0.07	17	59		
	0.51	1	75				0.37	5	67.2		
	0.67	5	87.5				0.46	1	68.9		
1.0 to 2.0	1.06	1	90	3	7.50		0.62	1	70.5		
	1.27	1	92.5				0.67	5	78.7		
	1.57	1	95			*1.0 to 2.0*	1.17	1	80.3	5	8.20
2.0 to 3.0	2.47	1	97.5	2	5.00		1.27	3	85.2		
	2.77	1	100				1.87	1	86.9		
						2.0 to 3.0	2.47	1	88.5	3	4.92
							2.56	1	90.2		
							2.77	1	91.8		
						3.0 to 4.0	3.07	1	93.4	3	4.92
							3.67	1	95.1		
							3.97	1	96.7		
						4.0 to 5.0	4.27	1	98.4	1	1.64
						5.0 to 6.0	5.16	1	100	1	1.64
Total		**40**		**40**	**100**			**61**		**61**	**100**

162

Relative Difference Scores for Hostility (Resistance) between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
Hispanic											
Male						Female					
Range	xi	F	*C%	total	%	Range	xi	f	*C%	total	%
0 to -1.0	-0.28	1	11.1	2	-22.22	0 to -1.0	-0.63	1	5.9	3	-17.65
	-0.14	1	22.2				-0.44	1	11.8		
0 to 1.0	0.07	4	66.7	7	77.78		-0.03	1	17.6		
	0.67	2	88.9			0 to 1.0	0.07	2	29.4	9	52.94
	0.81	1	100				0.37	3	47.1		
							0.67	2	58.8		
							0.97	2	70.6		
						1.0 to 2.0	1.27	1	76.5	2	11.76
							1.57	1	82.4		
						2.0 to 3.0	2.17	1	88.2	1	5.88
						3.0 to 4.0	3.67	2	100	2	11.76
Total		9		9	100			17		17	100

Relative Difference Scores for Hostility (Anger) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
Caucasian											
Male						Female					
Range	x_i	f	*C%	total	%	Range	x_i	f	*C%	total	%
-2.0 to -3.0	-2.4	1	2.1	2	-4.17	-2.0 to -3.0	-2.1	1	2	1	-1.96
-2.0 to -3.0	-2.1	1	4.2	2	-4.17	0 to -1.0	-0.69	5	11.8	31	-60.78
-1.0 to -2.0	-1.26	3	10.4	4	-8.33	0 to -1.0	-0.13	25	60.8	31	-60.78
-1.0 to -2.0	-1.2	1	12.5	4	-8.33	0 to -1.0	-0.06	1	62.7	31	-60.78
0 to -1.0	-0.69	1	14.6	18	-37.50	0 to 1.0	0.17	7	76.5	13	25.49
0 to -1.0	-0.13	17	50	18	-37.50	0 to 1.0	0.47	3	82.4	13	25.49
0 to 1.0	0.17	7	64.6	14	29.17	0 to 1.0	0.77	3	88.2	13	25.49
0 to 1.0	0.47	5	75	14	29.17	1.0 to 2.0	1.37	1	90.2	3	5.88
0 to 1.0	0.77	2	79.2	14	29.17	1.0 to 2.0	1.67	1	92.2	3	5.88
1.0 to 2.0	1.07	5	89.6	7	14.58	1.0 to 2.0	1.97	1	94.1	3	5.88
1.0 to 2.0	1.43	1	91.7	7	14.58	2.0 to 3.0	2.27	1	96.1	2	3.92
1.0 to 2.0	1.67	1	93.8	7	14.58	2.0 to 3.0	2.3	1	98	2	3.92
2.0 to 3.0	2.27	1	95.8	1	2.08	3.0 to 4.0	3.59	1	100	1	1.96
3.0 to 4.0	3.17	1	97.9	1	2.08						
4.0 to 5.0	4.67	1	100	1	2.08						
Total		48		48	100			51		51	100

Relative Difference Scores for Hostility (Anger) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
African American											
Male						**Female**					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-4.0 to -5.0	-4.1	1	1.8	1	-1.79	*-5.0 to -6.0*	-5.24	1	1.6	1	-1.61
-1.0 to -2.0	-1.83	1	3.6	2	-3.57	*-3.0 to -4.0*	-3.53	1	3.2	1	-1.61
	-1.26	1	5.4			*-2.0 to -3.0*	-2.4	2	6.5	2	-3.23
0 to -1.0	-0.96	1	7.1	34	-60.71	*0 to -1.0*	-0.96	1	8.1	33	-53.23
	-0.6	1	8.9				-0.93	1	9.7		
	-0.13	31	64.3				-0.69	3	14.5		
	-0.1	1	66.1				-0.66	1	16.1		
0 to 1.0	0.17	3	71.4	10	17.86		-0.13	27	59.7		
	0.3	1	73.2			*0 to 1.0*	0.17	9	74.2	17	27.42
	0.47	3	78.6				0.2	1	75.8		
	0.5	1	80.4				0.47	4	82.3		
	0.77	1	82.1				0.6	1	83.9		
	0.8	1	83.9				0.77	2	87.1		
1.0 to 2.0	1.07	2	87.5	6	10.71	*1.0 to 2.0*	1.07	1	88.7	3	4.84
	1.37	1	89.3				1.67	2	91.9		
	1.43	1	91.1			*2.0 to 3.0*	2.27	1	93.5	2	3.23
	1.67	1	92.9				2.57	1	95.2		
	1.97	1	94.6			*3.0 to 4.0*	3.47	1	96.8	3	4.84
2.0 to 3.0	2.27	2	98.2	2	3.57		3.77	2	100		
4.0 to 5.0	4.07	1	100	1	1.79						
Total		**56**		**56**	**100**			**62**		**62**	**100**

Relative Difference Scores for Hostility (Anger) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
Hispanic											
Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
0 to -1.0	-0.13	9	64.3	9	-64.29	*-2.0 to -3.0*	-2.37	1	6.3	2	-12.50
0 to 1.0	0.47	2	78.6	2	14.29		-2.1	1	12.5		
1.0 to 2.0	1.07	1	85.7	2	14.29	*-1.0 to -2.0*	-1.26	1	18.8	1	-6.25
	1.67	1	92.9			*0 to -1.0*	-0.13	2	31.3	2	-12.50
2.0 to 3.0	2.27	1	100	1	7.14	*0 to 1.0*	0.17	2	43.8	6	37.50
							0.47	2	56.3		
							0.77	2	68.8		
						1.0 to 2.0	1.07	1	75	3	18.75
							1.37	1	81.3		
							1.97	1	87.5		
						3.0 to 4.0	3.47	2	100	2	12.50
Total		14		14	100			16		16	100

Relative Difference Scores for Paranoid Ideation between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
Caucasian											
Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-1.0 to -2.0	-1.89	1	2.9	4	-11.43	-2.0 to -3.0	-2.51	1	2.1	2	-4.26
	-1.43	1	5.7				-2.41	1	4.3		
	-1.12	2	11.4			-1.0 to -2.0	-1.63	1	6.4	1	-2.13
0 to -1.0	-0.86	1	14.3	10	-28.57	0 to -1.0	-0.86	2	10.6	11	-23.40
	-0.65	1	17.1				-0.65	1	12.8		
	-0.6	3	25.7				-0.6	2	17		
	-0.54	1	28.6				-0.34	2	21.3		
	-0.39	1	31.4				-0.18	2	25.5		
	-0.34	3	40				-0.13	2	29.8		
0 to 1.0	0.13	1	42.9	17	48.57	0 to 1.0	0.03	1	31.9	28	59.57
	0.18	8	65.7				0.13	2	36.2		
	0.34	1	68.6				0.18	13	63.8		
	0.39	2	74.3				0.29	1	66		
	0.5	1	77.1				0.34	1	68.1		
	0.6	1	80				0.39	5	78.7		
	0.76	2	85.7				0.45	1	80.9		
	0.81	1	88.6				0.76	1	83		
1.0 to 2.0	1.02	2	94.3	2	5.71		0.81	2	87.2		
3.0 to 4.0	3.73	1	97.1	2	5.71		0.97	1	89.4		
	3.89	1	100			1.0 to 2.0	1.43	2	93.6	2	4.26
						2.0 to 3.0	2.38	1	95.7	1	2.13
						3.0 to 4.0	3.16	1	97.9	2	4.26
							3.52	1	100		
Total		35		35	100			47		47	100

Relative Difference Scores for Paranoid Ideation between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

African American

Male

Range	x_i	f	*C%	total	%
-4.0 to -5.0	-4.07	1	2.5	1	-2.50
-2.0 to -3.0	-2.67	1	5	1	-2.50
-1.0 to -2.0	-1.63	1	7.5	5	-12.50
	-1.38	1	10		
	-1.31	1	12.5		
	-1.12	2	17.5		
0 to -1.0	-0.91	1	20	11	-27.50
	-0.86	1	22.5		
	-0.7	1	25		
	-0.6	2	30		
	-0.39	1	32.5		
	-0.34	2	37.5		
	-0.08	2	42.5		
	-0.02	1	45		
0 to 1.0	0.13	2	50	17	42.50
	0.18	8	70		
	0.29	1	72.5		
	0.34	1	75		
	0.39	2	80		
	0.6	2	85		
	0.92	1	87.5		
1.0 to 2.0	1.02	1	90	2	5.00
	1.38	1	92.5		
3.0 to 4.0	3.06	1	95	3	7.50
	3.11	1	97.5		
	3.16	1	100		
Total		**40**		**40**	**100**

Female

Range	x_i	f	*C%	total	%
-3.0 to -4.0	-3.19	1	1.7	1	-1.67
-2.0 to -3.0	-2.41	1	3.3	2	-3.33
	-2.2	1	5		
-1.0 to -2.0	-1.12	2	8.3	2	-3.33
0 to -1.0	-0.91	1	10	12	-20.00
	-0.86	2	13.3		
	-0.74	1	15		
	-0.6	3	20		
	-0.39	1	21.7		
	-0.34	2	25		
	-0.08	1	26.7		
	-0.07	1	28.3		
0 to 1.0	0.03	1	30	27	45.00
	0.18	14	53.3		
	0.29	1	55		
	0.34	1	56.7		
	0.39	1	58.3		
	0.6	1	60		
	0.81	8	73.3		
1.0 to 2.0	1.02	1	75	5	8.33
	1.6	1	76.7		
	1.64	1	78.3		
	1.85	2	81.7		
2.0 to 3.0	2.27	1	83.3	5	8.33
	2.38	1	85		
	2.43	1	86.7		
	2.48	1	88.3		
	2.9	1	90		
3.0 to 4.0	3.11	3	95	5	8.33
	3.32	1	96.7		
	3.52	1	98.3		
4.0 to 5.0	4.15	1	100	1	1.67
Total		**60**		**60**	**100**

Relative Difference Scores for Paranoid Ideation between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
Hispanic											
Male						Female					
Range	x_i	f	*C%	total	%	Range	x_i	f	*C%	total	%
0 to -1.0	-0.34	1	10	2	-20.00	-1.0 to -2.0	-1.63	1	6.3	1	-6.25
	-0.08	1	20			0 to -1.0	-0.86	2	18.8	2	-12.50
0 to 1.0	0.03	1	30	5	50.00	0 to 1.0	0.08	1	25	6	-37.50
	0.18	3	60				0.18	2	37.5		
	0.6	1	70				0.39	1	43.8		
1.0 to 2.0	1.02	1	80	3	30.00		0.6	1	50		
	1.18	1	90				0.81	1	56.3		
	1.91	1	100			1.0 o 2.0	1.23	2	68.8	4	25.00
							1.43	1	75		
							1.64	1	81.3		
						2.0 to 3.0	2.69	1	87.5	2	12.50
							2.9	1	93.8		
						4.0 to 5.0	4.36	1	100	1	6.25
Total		10		10	100			16		16	100

Relative Difference Scores for Psychoticism between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
Caucasian											
Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-1.0 to -2.0	-1.87	1	2.9	3	-8.82	-2.0 to -3.0	-2.14	1	2.2	1	-2.17
	-1.36	1	5.9			-1.0 to -2.0	-1.66	1	4.3	2	-4.35
	-1.09	1	8.8				-1.61	1	6.5		
0 to -1.0	-0.85	1	11.8	12	-35.29	0 to -1.0	-0.83	3	13	14	-30.43
	-0.83	2	17.6				-0.57	3	19.6		
	-0.59	1	20.6				-0.32	1	21.7		
	-0.57	4	32.4				-0.31	3	28.3		
	-0.31	3	41.2				-0.07	1	30.4		
	-0.05	1	44.1				-0.06	1	32.6		
0 to 1.0	0.21	7	64.7	15	44.12		-0.05	2	37		
	0.44	1	67.6			0 to 1.0	0.2	2	41.3	24	52.17
	0.45	1	70.6				0.21	15	73.9		
	0.46	4	82.4				0.44	1	76.1		
	0.7	1	85.3				0.46	2	80.4		
	0.95	1	88.2				0.71	3	87		
1.0 to 2.0	1.21	1	91.2	2	5.88		0.96	1	89.1		
	1.46	1	94.1			1.0 to 2.0	1.18	1	91.3	3	6.52
2.0 to 3.0	2.43	1	97.1	1	2.94		1.69	1	93.5		
4.0 to 5.0	4.2	1	100	1	2.94		1.93	1	95.7		
						3.0 to 4.0	3.21	1	97.8	2	4.35
							3.71	1	100		
Total		34		34	100			46		46	100

Relative Difference Scores for Psychoticism between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups

African American

Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-4.0 to -5.0	-4.46	1	2.5	1	-2.50	-3.0 to -4.0	-3.17	1	1.7	1	-1.67
-2.0 to -3.0	-2.65	1	5	1	-2.50	-2.0 to -3.0	-2.39	1	3.3	2	-3.33
-1.0 to -2.0	-1.61	1	7.5	5	-12.50		-2.14	1	5		
	-1.42	1	10			-1.0 to -2.0	-1.09	3	10	3	-5.00
	-1.35	1	12.5				-0.84	1	11.7	13	-21.67
	-1.09	2	17.5				-0.83	2	15		
0 to -1.0	-0.83	1	20	12	-30.00		-0.59	1	16.7		
	-0.59	2	25			0 to -1.0	-0.57	4	23.3		
	-0.57	2	30				-0.39	1	25		
	-0.31	2	35				-0.32	1	26.7		
	-0.07	1	37.5				-0.31	2	30		
	-0.06	1	40				-0.05	1	31.7		
	-0.05	3	47.5				0.21	14	55	25	41.67
0 to 1.0	0.19	1	50	15	37.50		0.45	1	56.7		
	0.21	8	70			0 to 1.0	0.46	4	63.3		
	0.45	1	72.5				0.71	3	68.3		
	0.46	2	77.5				0.94	1	70		
	0.7	1	80				0.96	2	73.3		
	0.71	1	82.5				1.17	1	75	8	13.33
	0.95	1	85				1.21	1	76.7		
1.0 to 2.0	1.17	1	87.5	3	7.50	1.0 to 2.0	1.46	2	80		
	1.46	1	90				1.69	1	81.7		
	1.96	1	92.5				1.71	3	86.7		
2.0 to 3.0	2.2	1	95	3	7.50	2.0 to 3.0	2.45	1	88.3	2	3.33
	2.45	1	97.5				2.71	1	90		
	2.68	1	100				3.21	1	91.7	4	6.67
						3.0 to 4.0	3.71	1	93.3		
							3.96	2	96.7		
						4.0 to 5.0	4.21	2	100	2	3.33
Total		**40**		**40**	**100**			**60**		**60**	**100**

Relative Difference Scores for Psychoticism between Self-evaluations and Physician Evaluations across Ethnicity and Gender Subgroups											
Hispanic											
Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
0 to -1.0	-0.31	1	10	3	-30.00	*-1.0 to -2.0*	-1.11	1	6.7	1	-6.67
	-0.07	1	20			*0 to -1.0*	-0.83	2	20	3	-20.00
	-0.05	1	30				-0.31	1	26.7		
0 to 1.0	0.21	3	60	6	60.00	0 to 1.0	0.21	2	40	6	40.00
	0.45	1	70				0.46	2	53.3		
	0.46	1	80				0.96	2	66.7		
	0.71	1	90			1.0 to 2.0	1.46	1	73.3	3	20.00
1.0 to 2.0	1.43	1	100	1	10.00		1.71	2	86.7		
						3.0 to 4.0	3.71	1	93.3	2	13.33
							3.96	1	100		
Total		10		10	100			15		15	100

Relative Difference Scores for Psychoticism between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups

Caucasian

Male						Female					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	%
-2.0 to -3.0	-2.95	1	2.1	3	-6.38	-1.0 to -2.0	-1.9	1	2	1	-1.96
	-2.55	1	4.3			0 to -1.0	-0.96	7	15.7	19	-37.25
	-2.15	1	6.4				-0.6	1	17.6		
0 to -1.0	-0.75	1	8.5	9	-19.15		-0.56	3	23.5		
	-0.35	1	10.6				-0.31	2	27.5		
	-0.21	1	12.8				-0.21	1	29.4		
	-0.16	5	23.4				-0.16	5	39.2		
	-0.06	1	25.5			0 to 1.0	0.19	1	41.2	23	45.10
0 to 1.0	0.09	1	27.7	24	51.06		0.24	14	68.6		
	0.15	1	29.8				0.25	1	70.6		
	0.24	10	51.1				0.34	2	74.5		
	0.34	1	53.2				0.49	3	80.4		
	0.49	5	63.8				0.74	1	82.4		
	0.59	1	66				0.99	1	84.3		
	0.65	1	68.1			1.0 to 2.0	1.19	1	86.3	4	7.84
	0.74	1	70.2				1.49	2	90.2		
	0.99	3	76.6				1.74	1	92.2		
1.0 to 2.0	1.24	1	78.7	6	12.77	2.0 to 3.0	2	1	94.1	1	1.96
	1.49	2	83			3.0 to 4.0	3.24	1	96.1	3	5.88
	1.65	1	85.1				3.34	1	98		
	1.74	1	87.2				3.74	1	100		
	1.99	1	89.4								
2.0 to 3.0	2.44	1	91.5	5	10.64						
	2.49	2	95.7								
	2.5	1	97.9								
	2.74	1	100								
Total		47		47	100			51		51	100

Relative Difference Scores for Psychoticism (Psychoticism) between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups											
African American											
Male						**Female**					
Range	x_i	f	*C%	total	%	*Range*	x_i	f	*C%	total	**%**
-2.0 to -3.0	-2.55	2	3.6	2	-3.64	*-2.0 to -3.0*	-2.15	1	1.6	1	-1.61
-1.0 to -2.0	-1.35	4	10.9	5	-9.09	*-1.0 to -2.0*	-1.75	2	4.8	13	-20.97
	-1.1	1	12.7				-1.5	1	6.5		
0 to -1.0	-0.85	1	14.5	15	-27.27		-1.35	7	17.7		
	-0.56	6	25.5				-1.25	2	21		
	-0.21	1	27.3				-1.1	1	22.6		
	-0.16	4	34.5			*0 to -1.0*	-0.96	2	25.8	11	-17.74
	-0.06	3	40				-0.71	1	27.4		
0 to 1.0	0	1	41.8	23	41.82		-0.6	1	29		
	0.04	1	43.6				-0.56	4	35.5		
	0.19	1	45.5				-0.25	1	37.1		
	0.24	11	65.5				-0.16	2	40.3		
	0.34	1	67.3			*0 to 1.0*	0.09	3	45.2	24	38.71
	0.49	4	74.5				0.24	10	61.3		
	0.69	1	76.4				0.25	1	62.9		
	0.74	1	78.2				0.49	5	71		
	0.94	1	80				0.54	1	72.6		
	0.99	1	81.8				0.74	3	77.4		
1.0 to 2.0	1.15	1	83.6	6	10.91		0.99	1	79		
	1.24	1	85.5			*1.0 to 2.0*	1.09	1	80.6	9	14.52
	1.69	1	87.3				1.15	1	82.3		
	1.9	1	89.1				1.19	1	83.9		
	1.99	2	92.7				1.24	2	87.1		
2.0 to 3.0	2.34	1	94.5	2	3.64		1.25	1	88.7		
	2.99	1	96.4				1.44	1	90.3		
3.0 to 4.0	3.19	1	98.2	2	3.64		1.74	1	91.9		
	3.99	1	100				1.84	1	93.5		
						2.0 to 3.0	2.74	1	95.2	1	1.61
						3.0 to 4.0	3.59	1	96.8	1	1.61
						4.0 to 5.0	4.24	2	100	2	3.23
Total		55		55	100			62		62	100

Relative Difference Scores for Psychoticism between Self-evaluations and Nurse Evaluations across Ethnicity and Gender Subgroups									
Hispanic									
Male					Female				
Range	x_i	f	*C%	total	%	Range	x_i	f	*C%	total	%
-1.0 to -2.0	-1.25	1	6.7	1	-6.67	-1.0 to -2.0	-1.75	1	6.7	3	-20.00
0 to -1.0	-0.56	2	20	3	-20.00		-1.5	1	13.3		
	-0.16	1	26.7				-1	1	20		
0 to 1.0	0.24	5	60	10	66.67	0 to -1.0	-0.96	1	26.7	2	-13.33
	0.49	2	73.3				-0.16	1	33.3		
	0.74	2	86.7			0 to 1.0	0.15	1	40	6	40.00
	0.99	1	93.3				0.24	1	46.7		
2.0 to 3.0	2.24	1	100	1	6.67		0.34	1	53.3		
							0.49	2	66.7		
							0.99	1	73.3		
						1.0 to 2.0	1.49	1	80	2	13.33
							1.74	1	86.7		
						3.0 to 4.0	3.59	1	93.3	2	13.33
							3.74	1	100		
Total		15		15	100			15		15	100

Appendix I: Absolute Difference Summary

Physician - Somaticism (Distress – Somatic Concern):

Minimum Difference

- All ethnic and gender groups showed remarkable similarity across the smallest difference values for each group (0.07% to 0.13%);

- CM smallest percentage of subjects in the minimum disagreement level (2.8%);

- HM had the greatest (20.0%), indicating a higher degree of consensus at the lowest levels of disagreement between physicians and HM.

Median Scores

- Median point for all ethnicity and gender combinations occurred at approximately the same difference score (e.g., 0.43 to 0.49);

- HM slightly lower (0.36) reflecting higher agreement;

- HF slightly higher (0.59) reflecting less agreement.

Maximum Disagreement

- AAF had the largest maximum difference score (5.41);

- HM had the lowest (1.63) maximum value;

- Physician evaluations concur sooner with self evaluations for AAF as well as differ most dramatically.

Range of Difference Scores

- Wide differences in distribution indicating substantial variability in agreement congruence across groups;

- Minority females exhibited the greatest variance across agreement;

- HM showed the highest consistency (i.e., lower range reflects more agreement).

Physician – Depression (Distress – Depressed):

Minimum Difference Scores

- Notable differences in the proportion at the minimum difference scores;

- Minority males had scores twice as large as all other ethnic and gender groups;

- AAF had the smallest percentage of subjects (1.6%) in the smallest disagreement level (0.06%);

- HM had the greatest (30.0% at 0.12%);

- AAM had a similarly large proportion (41.5%) at the second lowest difference value (0.24%).

Median Scores

- AAM were lowest (~ 0.24);

- HM (0.29) followed closely (reflecting higher agreement);

- CF considerably higher (0.62), reflecting less agreement at midpoint.

Maximum Difference Scores

- AAF displayed the largest maximum difference score (4.40);

- HM displayed the lowest (1.49).

177

Nurse - Depression (Depression):

Minimum Difference Scores

- All ethnic and gender groups showed similarity in the smallest values (0.03% to 0.06%);

- AAF had the smallest percentage of subjects in the smallest disagreement level (1.6%);

- Followed closely by AAM (1.8%);

- HM had the greatest proportion of agreement at minimum difference scores (53.3%);

- Followed by CF (30.8%).

Median Scores

- Median point for most ethnicity and gender groups occurred at approximately the same level (0.36 - 0.44) ;

- HM were substantially lower (0.06, also the minimum difference score);

- AAM (0.25) reflecting higher agreement.

Maximum Difference Scores

- AAF had the largest maximum difference score (4.58);

- HM had the lowest (1.71).

Range of Difference Scores

- AAF had the highest degree of variability (4.55);

- HM had the highest consistency (1.65).

Physician – Anxiety (Distress – Anxiety):

Minimum Difference Scores

- Lowest values for males of all three ethnicities (AA, C, H) were identical (0.03%);

- Lowest values for females of all three ethnicities were higher but similar in range (0.12% - 0.18%);

- AAM had the smallest percentage of subjects (2.4%) in the minimum disagreement level (0.03%);

- Followed closely by AAF (3.3%);

- CF had the greatest proportion (18.8%) at the lowest difference score for females;

- CF absolute difference score (0.18%) was also the highest minimum value of all the groups regardless of gender;

- Greater degree of disagreement compared to the substantially larger proportional distributions of the other groups: CM = 27.8%, AAM = 39.0%, AAF = 36.1%, HM = 50.0%, and HF = 41.2%;

- HM had a higher percentage (10.0%) at very low minimum difference score (0.03%);

- HM reflected a high degree of consensus at the lowest levels of disagreement between physicians and HM self-evaluations.

Median Scores

- Median point for anxiety for CM, CF, and AAF occurred at approximately the same difference score (0.44 – 0.54);

- AAM (0.18) and HM (0.18) were equal but substantially lower, reflecting a higher level of agreement with physicians;

- HF were notably higher (0.61) than all

179

other groups, indicating higher levels of disagreement.

Maximum Difference Scores

- AAF had the largest maximum difference score (4.31);

- HM had the lowest (2.45).

Range of Difference Scores

- Revealed similarities within Caucasian and African American groups, despite gender;

- HM differed from all other groups with a substantially smaller range (2.42);

- HF were more similar to African American males and females.

Nurse – Anxiety (Anxiety):

Minimum Difference Scores

- Most of the ethnic x gender groups showed similarity in the smallest values (0.03% - 0.04%);

- AAM displayed a higher minimum difference score (0.10%);

- HF displayed a notably higher minimum difference score (0.23%);

- Hispanic males, had a greater proportion in agreement with minimal differences in nurse evaluations (13.3%);

- Followed closely by Hispanic females, (12.5%) ;

- Contrasted to CM at 2.1%, CF at 1.9%, AAM at 1.8%, and AAF at 1.7%.

Median Scores

- Median point for all ethnicity x gender combinations covered a wide variation in

scores (0.23 - 0.85);

- At the high end were AAF (0.85);

- The low end were HM (0.23).

Maximum Difference Scores

- AAF had the largest maximum difference score (4.37);

- HM had the lowest (2.51).

Range of Difference Scores

- The range of difference scores was similar for CM (3.65) and CF (3.3);

- Scores between genders of African Americans and Hispanics indicated substantial variability in ethnic x gender groups: AAM (3.79), AAF (4.33), HM (2.47), and HF (3.18);

- Hispanic males showed the smallest variability (2.47);

- AAF showed the greatest variability (4.33).

Physician – Hostility (Resistance – Hostility):

Minimum Difference Scores

- HM had the highest proportion of minimal disagreement (44.4%) indicating greater consensus with physician evaluations;

- AAM had the smallest (2.5%) proportion;

- Other groups clustered on the lower end with CM at 2.8%, AAF at 4.9%, HF at 5.9%, and CF at 6.3%.

Median Scores

- There was wide variation in the median point of difference scores for all ethnicity and

gender group combinations compared with physician evaluations;

- Hispanic males were the lowest (0.14);

- HF were the highest (0.67).

Maximum Difference Scores

- AAF had the largest maximum difference score (5.21);

- HM had the lowest (0.81) (AAM=2.77, CF=3.07, HF=3.67, CM=4.87).

Range of Difference Scores

- There was substantial variability in the range of difference scores among the ethnicity x gender groups ;

- Most notably, AAF exhibited the greatest variance of all the ethnic x gender groups (5.19);

- HM showed the lowest (HM=0.74, AAM=2.74, CF=3.05, HF=3.64, CM=4.85).

Nurses – Hostility (Anger):

Minimum Difference Scores

- Majority of ethnic x gender groups showed remarkable similarity in the smallest values (0.10 - 0.13);

- CF (0.06) were the exception;

- AAM had the smallest percentage of subjects in the smallest disagreement level (1.8%);

- There were three groups with substantially low agreement between patient self evaluations and the nurse evaluations:

o HM had the greatest percentage (64.3%) of disagreement with nurse ratings

- o   AAF with 43.5%

- o   CM with 35.4%.

- AAM had the lowest percentage of disagreement with nurse ratings (1.8%);

- CF (2.0%);

- HF (12.5%).

Median Scores

- There are low thresholds due to the large proportions populating the lowest difference scores

- HF were the exception, with significantly higher median score (0.77).

Maximum Difference Scores

- Highest score was for AAF (5.24);

- HM (2.27) had the lowest value;

- CM (4.67) score was second lowest.

Range of Difference Scores

- AAF exhibited the highest range of difference scores (5.11);

- CM (4.54) followed closely;

- HM showed the highest consistency (i.e., lowest range reflects more agreement).

Physician – Paranoid Ideation (Positive Symptoms – Suspiciousness):

Minimum Difference Scores

- Majority of ethnic and gender groups showed similarity in the smallest values (0.025 - 0.08%);

- CM (0.13) were the exception;

- HM and HF had the largest percentage of subjects (10% and 6.3%, respectively) in the minimum disagreement levels.

Median Scores

- HM were the lowest, with a median occurring at approximately (0.18), reflecting a higher level of agreement;

- HF were the highest (0.86);

- Followed by AAF (0.74).

Maximum Difference Scores

- HF had the largest maximum difference score (4.36);

- Followed by AAF (4.15);

- HM had the lowest (1.91).

Range of Difference Scores

- Revealed similarities within Caucasian and African American groups;

- Highest and lowest ranges were found within the Hispanic group;

o HF exhibited the greatest variance across agreement (4.28);

o HM showed the lowest agreement (1.88).

Physician – Psychoticism (Positive Symptoms – Hallucinatory Behavior):

Minimum Difference Scores

- HM and HF (10% and 13.3%, respectively) had the highest proportions at minimum difference scores;

- HF also had the highest minimum difference score across all groups (0.21 versus 0.05 for all other groups).

Median Scores

- Majority of ethnicity and gender difference scores clustered in the 0.31 to 0.59 range;

- HM displayed a substantially lower median at 0.21 (reflecting higher agreement);

- HF (0.83) had a higher median of (reflecting poorer agreement).

Maximum Difference Scores

- High maximum difference scores across all groups except for HM (1.43).

Range of Difference Scores

- HN demonstrated the smallest variability of range scores (1.38);

- AAM had the highest (4.41).

Nurse – Psychoticism (Psychoticism):

Minimum Difference Scores

- Similarly small minimum difference scores for CM, AAM, and AAF

- CF, and both HM and HF displayed larger minimum difference scores (0.15% - 0.16%);

- Percentages in minimal difference scores were highest for CF and both HF and HM.

Median Scores

- Median point for four of the six ethnicity and gender groups occurred with a

range of 0.34 to 0.49;

- Higher median scores were demonstrated by minority females (AAF=0.74 and HF=0.99), reflecting higher levels of disagreement at the median for these groups compared to the other groups.

Maximum Difference Scores

- AAF exhibited the largest maximum difference score (4.24);

- HM had the lowest (2.24).

Range of Difference Scores

- Lowest variability in HM (2.08), and CM (2.89);

- Highest in AAF (4.15), and AAM (3.99).

Appendix J: Dependent Variables with Significant Levene's

Dependent Variable	Levene's p	Variable		Mean ranks	KW Wallis	MW-U Pairwise comparison		Mean Rank
BPRS4 – Conceptual Disorganization	.036	RaceGender	CM	3.50	.001	AAM - .003*	CM (150) AAM (295)	
			CF	3.60		AAM - .011*	CF (172) AAM (295)	
			AAM	4.26		CM - .003*	AAM (295) CM (150)	
						CF - .011*	AAM (295) CF (172)	
						AAF - .080*	AAM (295) AAF (234)	
			AAF	3.78		AAM - .080*	-	-
			HM	4.06		-	-	-
			HF	3.89		-	-	-
BPRS 5 – Guilt Feeling	.005	RaceGender	CM	1.79	.020	-	-	-
			CF	2.00		-	-	-
			AAM	1.72		-	-	-

			AAF	1.71		-	-	-
			HM	1.80		-	-	-
			HF	2.23		-	-	-
BPRS 8 - Grandiosity	.002	RaceGender	CM	2.16	.021	-	-	-
			CF	2.33		-	-	-
			AAM	2.49		-	-	-
			AAF	2.71		-	-	-
			HM	2.09		-	-	-
			HF	2.53		-	-	-
BPRS 9 – Depression Mood	.001	RaceGender	CM	3.20	.000	AAM - .008*	CM (150)	255.06
							AAM (295)	210.63
			CF	3.37		AAM - .000*	CF (172)	267.56
							AAM (295)	214.42
			AAM	2.45		CM - .008*	AAM (295)	210.63
							CM (150)	255.06
						CF - .000*	AAM (295)	214.42
							CF (172)	267.56
						HF - .000*	AAM (295)	181.86
							HF (98)	242.56
			AAF	2.94		-	-	-
			HM	2.86		-	-	-

			HF	3.58		AAM - .000*	HF (98)	242.56
							AAM (295)	181.86
BPRS 13 – Motor Retardation	.017	RaceGender	CM	2.17	.366	-	-	-
			CF	2.22		-	-	-
			AAM	2.17		-	-	-
			AAF	2.36		-	-	-
			HM	2.60		-	-	-
			HF	2.52		-	-	-
ADRS Anger	.047	RaceGender	CM	5.40	.047	-	-	-
			CF	5.21		-	-	-
			AAM	6.02		HF - .007*	AAM (311)	211.45
							HF (92)	170.06
			AAF	5.19		-	-	-
			HM	5.58		-	-	-
			HF	4.40		AAM - .007*	HF (92)	170.06
							AAM (311)	211.45

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Thom's clinical experience includes emergency and critical care nursing, preoperative and post anesthesia care, and psychiatric mental health nursing. He has held a number of management and administrative positions including Chief Nursing Officer, and Assistant Administrator at various facilities in the greater Houston area. Thom has worked as the director of risk management for a professional liability insurance company and as the executive vice president of the largest medical-legal support firm in the United States. While attending the University of Texas Medical Branch (UTMB) Graduate School of Biomedical Sciences Nursing Ph.D. program, he twice received the Eleanor Brasher Farley and Stephanie Farley Pardue Memorial for Nursing Leadership Award, given by Dean Pamela Watson of the UTMB School of Nursing.

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