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UNIVERSITY OF ARKANSAS, FAYETTEVILLE
ELEANOR MANN SCHOOL OF NURSING

Assessing Quality of Life, Psychological Well-Being and Depression in
Hispanic American Women: Does Cultural Competence Matter?

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ABSTRACT

BACKGROUND: Hispanic people are at an elevated risk of developing depression as compared to any other racial and ethnic groups in the United States. Hispanic women, in particular, experience depression at roughly twice the rate of Hispanic men. The projected growth of the Hispanic population coupled with the high prevalence of depression among Hispanic women will exacerbate this already serious public health conundrum if targeted and culturally competent interventions are not tailored to better tackle this illness.

OBJECTIVE: The purpose of this study was to determine the effectiveness of a culturally competent intervention among Hispanic adult women who suffer from depression.

METHODS: Data from a two-year randomized controlled trial conducted at Massachusetts General Hospital (MGH) were analyzed. Usual care patients were offered standard referrals to MGH mental health resources. Intervention patients received a culturally focused consultation with mental health providers who were trained in culturally competent techniques, and familiar with the cultures and languages of the patients. A Mann-Whitney U-test was performed to examine differences in the Quick Inventory of Depressive Symptomatology-Self Rated Scale (QIDS-SR 16) scores between usual care and intervention groups at baseline and at 6 month-follow-up. A Friedman test was conducted to investigate differences between pretest and posttest Schwartz Outcome Scale (SOS-10) scores in the intervention group. Parametric tests were further performed to determine differences in cumulative scores between the groups, at baseline and at 6 month-follow-up.

RESULTS: Overall, 81 patients completed the baseline and follow-up visits. At 6 month-follow-up, Hispanic women who received the culturally competent intervention *less often* reported feelings of sadness, waking up too early, decreased energy level and decreased concentration and decision-making as compared to Hispanic women who received the usual -non-culturally competent- care. There were statistically significant differences in the average cumulative QIDS-SR 16 scores between usual care and intervention groups. Hispanic women in the intervention group had, on average, higher scores of personal satisfaction (SOS-10, Item 1) at two weeks as compared to baseline, but these scores remained unchanged at 6 months.

CONCLUSION: These findings suggest that health care services rendered by culturally competent mental health providers can be more effective at treating Hispanic American women who suffer from depression.

INTRODUCTION

According to the Centers for Disease Control and Prevention, an estimated 1 in 10 American adults report depression (Centers for Disease Control and Prevention, 2010), making it one of the most prominent mental illnesses in the U.S.

Depression can result in increased work absenteeism, short-term disability, and decreased productivity (Centers for Disease Control and Prevention, 2010). Consequently, the financial burden of depression is monumental: it is estimated to cause 200 million lost workdays each year at a cost to employers of \$17 to \$44 billion (Centers for Disease Control and Prevention, 2013). Across the nation, 88% of people who report symptoms of severe depression experience difficulties with their jobs, at home, and in social settings due to their symptoms (Pratt & Brody, 2014). According to the National Alliance on Mental Illness, Hispanic women have an increased risk of developing depression as compared to other racial/ethnic groups (Shattell, Smith, Quinlan-Colwell, & Villaba, 2008). They experience depression at roughly twice the rate of Hispanic men and they are more likely to experience depression than Caucasian or African American women.

According to the United States Census Bureau, the Hispanic population percentage of Massachusetts in 2013 was 10.5%, and the nationwide Hispanic population percentage in 2013 was 17.1%. In

Boston, where Massachusetts General Hospital is located, the Hispanic population percentage was 17.5% in 2010. The Department of Mental Health in Massachusetts has an initiative in place called “DMH Community Conversations,” which is a facet of the nationwide initiative of the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA). This initiative seeks to increase the amount of conversations that citizens have about their mental health in order to decrease stigma about mental health and increase the number of people seeking help for mental illness. Online, the Department of Mental Health of Massachusetts has posted information, printable flyers and posters in English and Spanish, to extend this initiative to Massachusetts’ Hispanic population (Department of Mental Health, 2015). According to the Massachusetts Department of Public Health, 2% of the RNs in Massachusetts in 2012 are Hispanic, and Spanish was the second most common language spoken when providing care, at 5% (2013). The most common spoken language was English. The Massachusetts Department of Mental Health also has a Cultural and Linguistic Competence Action Plan in place. This plan’s main goals are to improve access to mental health care, achieve higher quality of care, and achieve better outcomes for the population of Massachusetts, with an emphasis on immigrants and refugees. The first objective of this plan is to decrease disparities in healthcare and mental health

services. This objective is to be carried out by partnering with Enhanced Cultural and Linguistic Appropriate Services (CLAS) and in doing so, implement their CLAS standards on cultural competence, which come from the Office of Minority Health under the U.S. Department of Health and Human Services. The CLAS standards are a list of fifteen standards created to guide healthcare organizations on their way to reducing and eliminating healthcare disparities. Other goals and objectives in the Cultural and Linguistics Competence Action Plan include promoting culturally competent leadership, strengthening culturally competent services in the area, improving interpreter services, and collecting more data on existing disparities to reduce them. The projected growth of the Hispanic population coupled with high prevalence of depression among women will become a more serious public health conundrum if targeted and culturally competent interventions are not tailored to better tackle this illness.

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LITERATURE REVIEW

I. Depression

Depression is a mental disorder characterized by prolonged feelings of sadness that affects men and women of all ages and cultures in our country (National Institute of Mental Health, 2013). The World Health Organization identifies three core symptoms of depression: depressed mood, loss of interest, and decreased energy levels (1992).

Depression can also result in increased work absenteeism, short-term disability, and decreased productivity (Centers for Disease Control and Prevention, 2010). Consequently, the financial burden of depression is monumental: it is estimated to cause 200 million lost workdays each year at a cost to employers of \$17 to \$44 billion (Centers for Disease Control and Prevention, 2013). Across the nation, 88% of people who report symptoms of severe depression experience difficulties with their jobs, at home, and in social settings due to their symptoms (Pratt & Brody, 2014). Approximately eight out of ten people with depression report some level of functional impairment associated with their depression (Centers for Disease Control and Prevention, 2013) and over 15% of depressed people commit suicide (National Alliance on Mental Illness, 2013). According to the CDC, there were 41,149 suicide deaths in the U.S. in 2013 (Centers for Disease Control, 2015). Moreover, depression can adversely affect the

course and outcome of common chronic conditions, such as arthritis, asthma, cardiovascular disease, cancer, diabetes, and obesity (Centers for Disease Control and Prevention, 2013). Some factors contributing to this higher risk are the states of fear and frequent pain associated with these chronic conditions. Mental Health America's report on depression found that depression and suicide rates are lower in states that have more mental health resources such as psychologists and social workers.

Furthermore, there seems to be an association between level of education and depression: areas with more educated populations have lower rates of depression. Research done to investigate factors associated with help-seeking behavior among Mexican older adults showed that education level is a main factor contributing to whether or not one with depressive symptoms will seek help (Perez-Zepada et al., 2013). Also, a study on Mexican American women concluded that education level is a factor that can be a predictor of symptoms of depression (Aranda, Castaneda, Lee, & Sobel, et al., 2001). Thus, improvement in the education system as well as increased access to mental health resources and providers, have the potential to attenuate the prevalence of depression in the country.

II. Women and Depression

According to the National Institute of Mental Health, women have a 70% higher chance than men of experiencing depression (Illiades,

2013). This gap begins to emerge in adolescence with the onset of hormonal changes with puberty and can be contributed to a variety of factors: women report to be under more stress than men, which contributes to feelings of depression. Another contributing factor to women becoming more depressed than men is the fluctuation of hormones associated with menstrual cycles, pregnancy, and menopause (Harvard Medical School, 2011) and the incidence of conditions such as postpartum depression and premenstrual dysphoric disorder. Women are more likely than men to seek treatment for depression, possibly because they are more in touch with their emotions and are better able to communicate feelings. This is generally not so with men because in our American society, stereotypically, men are expected to be stronger and less emotional.

III. Assessing and Diagnosing Depression

Unless depression is first diagnosed, it cannot be treated. Health care workers (nurses included) that have known their patients for years can sometimes notice a change in the patient's usual demeanor, raising a flag for possible depression. It is important to ask the patient open-ended questions in this case to obtain further information about possible depression (Thomas & Chan, 2012).

Along with a general assessment, there are specific questionnaires employed to diagnose and assess depression. Language barriers can impede a diagnosis of depression, so it is crucial that these

questionnaires are given in a language that the patient is able to read and write. Research proposes that questionnaires such as these should be improved to also take into account differing perceptions of depression among different cultures, and the different words that can be used to report it among different cultures (Lehti, Hammarstrom, & Mattsson, 2009). One common questionnaire to assess depression is the QIDS-SR, or the Quick Inventory of Depressive Symptomatology Self Report. This 16-item survey asks patients to report how often they have difficulties falling asleep, staying asleep, waking up too early, feeling sad, decreased or increased appetite, decision making, and thoughts of death or suicide, etc. (see Table 1). The questionnaire can be administered multiple times throughout treatment, to determine whether the patient is improving or not. The scores can range from 0-27, and contain the nine diagnostic criteria for major depressive disorder laid out in the DSM-IV (Hemilhoch et al., 2011). Scores reflect the level of depression as follows: 0-5 reflect no depression, 6-10 reflect mild depression, 11-15 reflect moderate depression, 16-20 reflect severe depression, and 21-27 reflect very severe depression (University of Pittsburgh Epidemiology Data Center, 2015). The QIDS SR 16 has an internal consistency level of .86 (Rush, et al., 2003).

The Mini International Neuropsychiatric Interview was developed in the 1990s to aid in diagnosing psychological disorders such as major

depressive disorder, dysthymic disorder, suicidality, generalized anxiety disorder, and obsessive compulsive disorder, among many other disorders in the DSM-IV. This interview takes about fifteen minutes to administer and is found to be useful specifically for primary health care providers (de Azevedo Marques & Zuardi, 2008). Kappa coefficients range from .65-.85, reflecting that the test ranges from satisfactory to excellent in terms of validity (de Azevedo Marques & Zuardi, 2008). Further research reports that the MINI is reliable for diagnosing and recommended especially for its short administration time (Lecrubier et al., 1997).

Another questionnaire used in assessing depression is the Schwartz Outcome Scale (SOS-10) , a ten item questionnaire used in outpatient settings to measure treatment effectiveness (Laux & Ahern, 2003).

This questionnaire originated at Massachusetts General Hospital. Each item asks about how the patient has felt about different aspects of their life within the last week such as personal satisfaction and hopefulness, ranking how often they feel that way on a scale of 0-6, with 0 being never, and 6 being all the time (see Table 3) The total scores range from 0-60, with higher numbers reflecting higher psychological health, and lower numbers reflecting lower psychological health (Blais, 2012). A score of 59-40 indicates minimal distress, a score of 39-33 indicates mild distress, a score of 32-23 indicates moderate distress, and a score of 22-1 indicates severe

emotional distress. The internal consistency of the SOS-10 ranges from .84-.96 (Blais 2012).

Data collected from assessing the patient's level of depression or psychological distress is highly useful in planning the type of treatment the patient will receive. The Global Assessment of Functioning scale (GAF) is set up so that a trained clinician ranks a patient at a level of 1-100 to reflect their level of functioning, as well as the severity level of their symptoms, and the GAF can be evaluated over long periods of time to study whether a patient has improved or not (StAre-Valen et al., 2015). The GAF is comprised of ten sections, and is also used for assessing and planning treatment (Sonesson, Arvidsson, & Tjus, 2014). This assessment is used often by organizations such as the Veterans Health Administration because it is a relatively inexpensive way to assess inpatients and outpatients (Greenberg & Rosenheck, 2005). Once patients with depression have been assessed for type and severity of their condition, treatment planning can begin or continue to be improved if it is already in place.

IV. Treatment of depression

Kessler et al (2003) found that only about half of patients with depression actually receive treatment for it. Medication and psychotherapy are the two most common treatments for depression (deGruy, 2015), and they are often employed together, which leads to better outcomes than when employed alone (NICE, 2010). Research

on Latino patients in the primary care setting shows that patients are more likely to carry out their treatment plan when it is solely medication than if it is solely psychotherapy (Ishikawa, et al., 2014). The specific treatment for depression varies per the depressed person's type and severity (mild, moderate, or severe) of depression. Research supports using psychotherapy or medication therapy for mild to moderate depression, and using both for severe depression (Shields & Lyons, 2014). When treating depression with medication, the first drug of choice is one belonging to the SSRI (selective serotonin reuptake inhibitors) class. If this class is ineffective, the second line of medication therapy is the SNRI (serotonin-norepinephrine reuptake inhibitor) class (Shields & Lyons, 2014). Dunlop, Scheinberg, and Dunlop's research on improving depression treatment in the primary care setting suggests a time frame of six weeks to switch medications, if little or no improvement is shown (2013). Cognitive Behavior Therapy, also referred to as CBT, is described as the 'gold-standard' of treatment for depression, according to the National Institute of Clinical Excellence (2009). Martin suggests that explaining depression in a simple way is one intervention nurses can do to increase a patient's overall feeling of hope and decrease feelings of fear (2013). With the IOM's recommendation for an increase in patients' control of their own care, and research that supports patients have better treatment outcomes

when their preferences for treatment options are taken into consideration (Lin et al., 2005), it is important to keep in mind not just how to treat the patient, put the patient's perception of their treatment as well.

V. Hispanic Americans and Depression

According to the National Alliance on Mental Illness, Hispanic women have an increased risk of developing depression as compared to other racial/ethnic groups (Shattel et al., 2008). They experience depression at roughly twice the rate of Hispanic men and they are more likely to experience depression than Caucasian or African American women. Women who immigrate to the United States and have to adjust to a new culture are more likely to have major depression than other women. Lack of acculturation, or adjustment to the new culture, may lead to problems because of issues like self-esteem and stress. High levels of acculturation among immigrants may lead to internalizing, or accepting, stereotypes (Vranich, 2003). A study done in 2012 on factors associated with sleep disturbance in women of Mexican descent found that Mexican women with symptoms of depression are at higher risk for disturbed sleep, which can contribute to many health problems. Thus, this research pointed out that Mexican women who report sleeping problems should be assessed for depression and referred to mental health resources instead of just given medication to treat their sleep disturbances (Heilemann, Choudhury, Kury, & Lee,

2012). Research conducted via self-report showed that differing beliefs about gender roles among family members, when combined with family dysfunction, may contribute to depression in male and female Hispanic adolescents (Cespedes & Huey, 2008). Research on older adults in the Hispanic population to study their perception of depression found that stigma exists for this mental illness in the Hispanic community, in fact these older adults perceived depression as a sign of “personal weakness,” which contributes to antidepressant medications not being readily received as a first choice of treatment for these patients (Sadule-Rios et al., 2014). Cultural factors such as these should be taken into account by providers when giving treatment options for depression to Hispanic patients.

VI. Cultural Competency

Cultural competency is defined as “a set of behaviors, attitudes, and skills that nurses to work effectively in cross-cultural situations (OMH Web Site, 2005). It is important for providers and nurses to have an understanding of the ways that different cultural groups view illnesses (American Nurses Association, 1991). This knowledge can equip them to better relate to their patients, and thus, lead the patients to have a greater trust for the healthcare workers providing care for them and be more open about their symptoms, which is crucial in the process of diagnosing and treating depression. Nurses are trained to be advocates for their patients, and by becoming more

culturally competent, nurses can be better patient advocates. Patients of primary care providers that are more culturally competent have higher chances of patients following up on treatment referrals to mental health services (Ishikawa, et al., 2014). Cultural competency begins with an awareness of one's own cultural beliefs and the awareness of what any biases that one may have towards other cultures or belief systems. Rather than trying to understand every aspect of every culture, nurses should focus on how different cultures view aspects such as illness perception, perception of authority figures, and perception of physical contact (Carilo, Green, & Betancourt, 2002). Understanding of these elements contributes to nurses providing more respectful and culturally competent care. As nurses practice cultural competency, they provide an example to their fellow healthcare professionals, which leads to a greater cultural competence overall in the healthcare workforce (Salimbene, 2004). Another way for nurses to further the spread of cultural competency is to advocate for changes in facility policy as well as statewide and federal policies that promote cultural competency.

VII. Disparities

Healthy People 2020 aims to eliminate health disparities in the U.S. by the year 2020, and they defines a *health disparity* as “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage” (U.S. Department of Health and Human

Services). These disparities can decrease the willingness of patients to seek out healthcare. Research by Strunk, Townsend-Rocchiccioli, and Sanford (2013) proposed that along with an overall disparity in access to health insurance between Hispanic American immigrants and citizens born in the U.S., prominent factors causing disparities include a lack of Spanish-speaking healthcare professionals and a lack of knowledge of Hispanic culture among these professionals. Effective communication with Hispanic patients is highly important, but these patients also need to be respected and their perspectives understood, so that they can more effectively contribute to their own treatment plans. The National Health Care Disparities Report stated that Asian, Hispanic, and American Indian/Alaskan Native adults are more likely than Caucasians to state that they do not feel like they are respected by their health care providers in that they feel the providers do not spend enough time with them or explain things to them clearly (2005). Research done by Mann and Garcia found that ‘weak empathy’ and discrimination from providers are existing barriers to effective coping for depression among Mexican women, among the other common barrier of stigma surrounding mental illness (2005). Discrimination has been found to be a stressor that plays a negative role in psychological health in the Hispanic population (Torres, 2009). Shattell, et al. reviewed numerous studies on depression in Mexican women and created important implications for nurses who interact

with Hispanic patients with depression, advising them to create a sense of safety and respect for Mexican and Mexican American female patients. It is important for nurses to be aware of barriers to care for these patients and to assess for not only universal, but also culture-specific signs of depression. Furthermore, nurses should be aware that immigrants to the U.S. face many challenges with acculturation not just right after moving to the U.S., but also throughout the acculturation process (Shattell, et al., 2008).

VIII. Mental Health in Massachusetts

The Massachusetts Department of Mental Health has a Cultural and Linguistic Competence Action Plan in place. This plan's main goals are to improve access to care, achieve higher quality of care, and achieve better outcomes for the population of Massachusetts, with an emphasis on immigrants and refugees. The first objective of this plan is to decrease disparities in healthcare and mental health services. This objective is to be carried out by partnering with Enhanced Cultural and Linguistic Appropriate Services (CLAS) and in doing so, implement their CLAS standards on cultural competence, which come from the Office of Minority Health under the U.S. Department of Health and Human Services. Other goals and objectives in the plan include promoting culturally competent leadership, strengthening culturally competent services in the area, improve interpreter services, and collect more data on existing disparities to reduce them.

The CLAS standards are a list of fifteen standards created to guide healthcare organizations on their way to reducing and eliminating healthcare disparities.

According to the United States Census Bureau, the Hispanic population percentage of Massachusetts in 2013 was 10.5%, and the nationwide Hispanic population percentage in 2013 was 17.1%. In Boston, where Massachusetts General Hospital is located, the Hispanic population percentage was 17.5% in 2010 (United States Census Bureau, 2015). The Department of Mental Health in Massachusetts has an initiative in place called “DMH Community Conversations,” which is a facet of the nationwide initiative of the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA). This initiative seeks to increase the amount of conversations that citizens have about their mental health in order to decrease stigma about mental health and increase the number of people seeking help for mental illness. Online, the Department of Mental Health of Massachusetts has posted information, printable flyers and posters in English and Spanish, to extend this initiative to Massachusetts’ Hispanic population (Department of Mental Health, 2015). According to the Massachusetts Department of Public Health, 2% of the RNs in Massachusetts in 2012 are Hispanic, and Spanish was the most often language spoken well enough to provide care other than English, at 5% (2013).

Hispanic American women with depression deserve high quality, respectful and effective care. There is a need for research to find ways to do so, and cultural competency can be a major key to providing that high quality care.

PURPOSE OF THE STUDY AND RESEARCH QUESTIONS

The purpose of this study is to examine the impact of a culturally competent intervention on depression among Hispanic women. The National Alliance for Hispanic health defines cultural competency as “the set of behaviors, attitudes, and policies that come together in an institution, agency, or among a group of individuals, that allows them to work effectively in cross-cultural situations.” The findings of this study will be used to highlight the importance and implications for nurses to provide culturally competent care within health care organizations.

This research focuses on women because they are more likely to be depressed than men, and particularly, Hispanic women as they are more likely to experience depression and are less likely to receive mental health support than White women or African American women (Shattell et al, 2008).

More specifically, the research questions that will be investigated in this research are:

1. Is a culturally appropriate intervention more effective than usual treatment at diagnosing and treating depression in adult Hispanic

American women?

2. Are there differences over time in psychological well-being and quality of life between Hispanic American Women who receive a culturally appropriate intervention?

HYPOTHESES

Hypothesis 1: A culturally appropriate intervention will be more effective than usual treatment at diagnosing and treating depression in adult Hispanic American women.

Hypothesis 2: There are statistically significant differences over time in psychological well-being and quality of life between Hispanic American women who receive a culturally appropriate intervention.

METHODOLOGY

I. The Intervention

Asian and Latino American primary care patients at Massachusetts General Hospital (MGH) received a culturally focused psychiatric (CFP) consultation with a team of mental health providers who were bilingual/bicultural, trained in culturally competent techniques, and familiar with the cultures and languages of the patients served.

Targeted patients who screened positive for clinical depression were eligible to participate in the trial. The intervention patients were offered the CFP consultation at baseline and, if eligible, received the CFP patient toolkit as part of their treatment. The toolkit provided psychoeducation and tools for managing depression as well as information on community resources. The

usual care patients were offered standard referrals to MGH mental health resources.

II. The Instruments

Questionnaires were administered to the patients at screening, baseline, two-week follow-up, and six-month follow-up. Assessment measures administered to the intervention patients at baseline included the Mini International Neuropsychiatric Interview (MINI), Quick Inventory of Depressive Symptomatology-Self Rated Scale (QIDS-SR 16), Global Assessment of Functioning (GAF), Schwartz Outcome Scale (SOS-10), and a demographic questionnaire. At six month follow-up, the intervention arm was administered a resource utilization questionnaire, patient satisfaction questionnaire (Treatment Satisfaction Scale), qualitative interview, and the QIDS-SR 16 and SOS-10. The SOS-10 is a measure of psychological health and well-being. Psychological health is conceived of as an overarching construct that encompasses life satisfaction, interpersonal effectiveness, positive self-appraisal, optimism, and the absence of psychiatric symptoms. The SOS-10 was also administered to the intervention patients at two-week follow-up. In the usual care arm, the QIDS-SR 16 and resource utilization questionnaire was administered at baseline and six months, the qualitative interview at six months, and the demographic questionnaire at baseline or six-months. There was no two-week assessment for the usual care patients.

III. Study Population

This research solely focuses on Latina American adult women who participated in the culturally focused psychiatric intervention as well as those who received the usual care. Asian and males were excluded from the analysis.

STATISTICAL ANALYSIS

I. Descriptive Statistics

To describe the study population, percentages were used for categorical variables whereas mean and standard deviation were used for continuous variables. Median and quartiles were used as measures of central tendency and dispersion for variables pertaining to the Quick Inventory of Depressive Symptomatology-Self Rated Scale (QIDS-SR 16), and Schwartz Outcome Scale (SOS-10).

Data on resource utilization and patient satisfaction were not analyzed because of the preponderance of missing data, and because these variables do not pertain to the objectives of this study. The qualitative interview was not made available to the public.

II. Nonparametric Tests

This research is based a secondary data analysis of a randomized clinical trial that used a pre-test posttest design. We analyzed changes in scores between the usual care and intervention groups as well as differences between baseline and posttest scores.

Nonparametric tests (Mann-Whitney U-test and Friedman test) were used since data are measured on an ordinal scale, the collected sample is small and normality cannot be assumed based on Shapiro-Wilk tests conducted.

Since parametric assumptions were not met, we conducted the Mann-Whitney U-test (2-tailed) to compare the two groups: the intervention and usual care groups at baseline and at six month post-intervention. The Mann-Whitney U-test is the alternative of the t-test when parametric assumptions are not met. This test does not require that groups be of the same size (Portney and Watkins, 2012). Under the null hypothesis, we would expect the groups to be equally distributed with regard to high and low ranks, and the mean of the ranks would be equal for both groups. The test determines if the difference between the sums of ranks is sufficiently large to be considered significant. Friedman test (2-tailed) was used to test the second hypothesis. SOS measures were collected at baseline (pre-test), 2 weeks and 6 months post-intervention. The Friedman analysis of variance by ranks is an alternative to the parametric repeated measures ANOVA when ordinal data are used or when parametric assumptions are not tenable (Portney and Watkins, 2012). We further summed the scores of the QIDS and

SOS variables, and analyzed them parametrically (i.e. unpaired t-test and repeated measures ANOVA). Statistical significance was determined at $\alpha=0.05$. The study received irb approval from the University of Arkansas.

RESULTS

I. Socio-Demographic Characteristics of Latina Patients

A total of 415 Latina women agreed to be contacted and were eligible for the study. In 89% and 93% of patients in the usual care and intervention group, respectively, the screening was conducted in Spanish.

Only a smaller number (81 patients) completed baseline visit and the study, and not all patients answered all items of the questionnaires, leading to missing data.

The average age of the participants was 43 years old (standard deviation of 13.9). Most patients were not educated in the U.S., 66% and 68% in the usual care and intervention group, respectively (Chart 1). Over half of Latina patients were not employed (62% and 42% in the usual and intervention arm, respectively) (Chart 2).

In the group who received the usual care, 40% were single, 15% were married, 21% were living in cohabitation, 15% were separated, 9% were divorced. In the group who received the culturally competent intervention, 23% were single, 45% were married, 7% were in cohabitation, 10% were separated, 7% were divorced, and 10% were widowed (Chart 3). Nine out of ten patients (92%) in the usual care group had children, as compared to eight out of ten (84%) in the intervention group (Chart 4).

Chart 1. Educated in the U.S

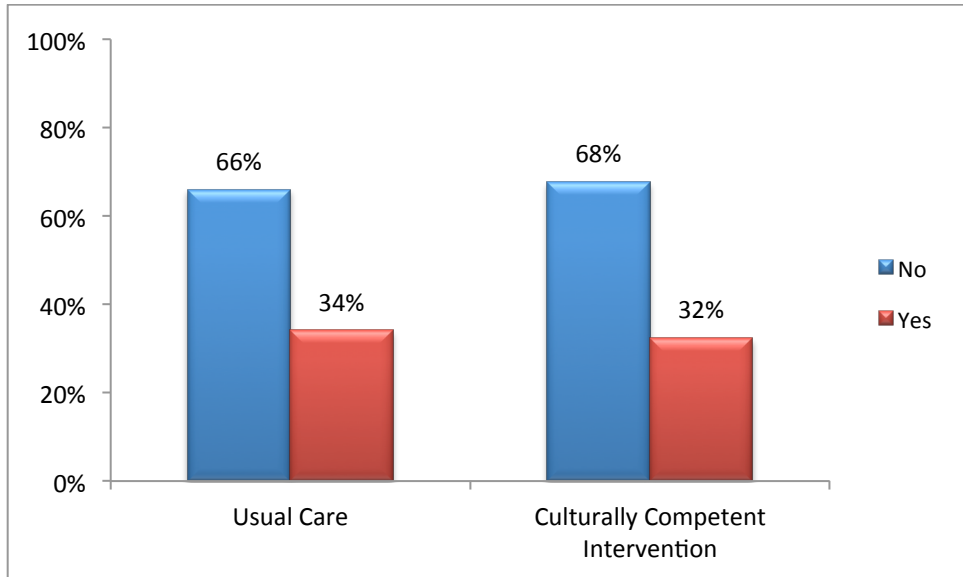


Chart 2. Employment Status

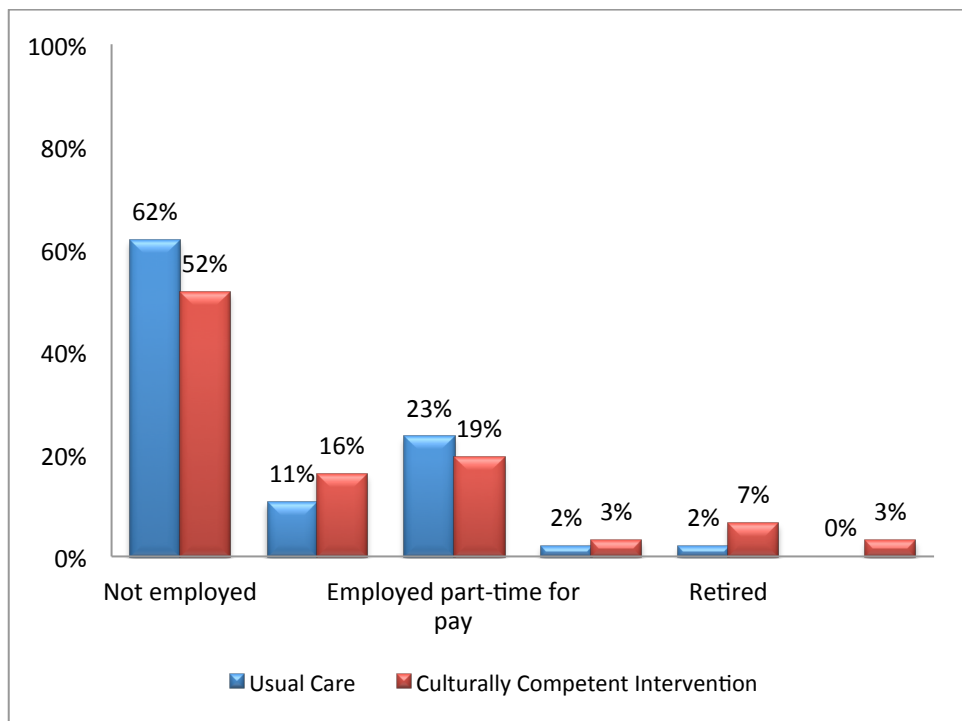


Chart 3. Marital Status

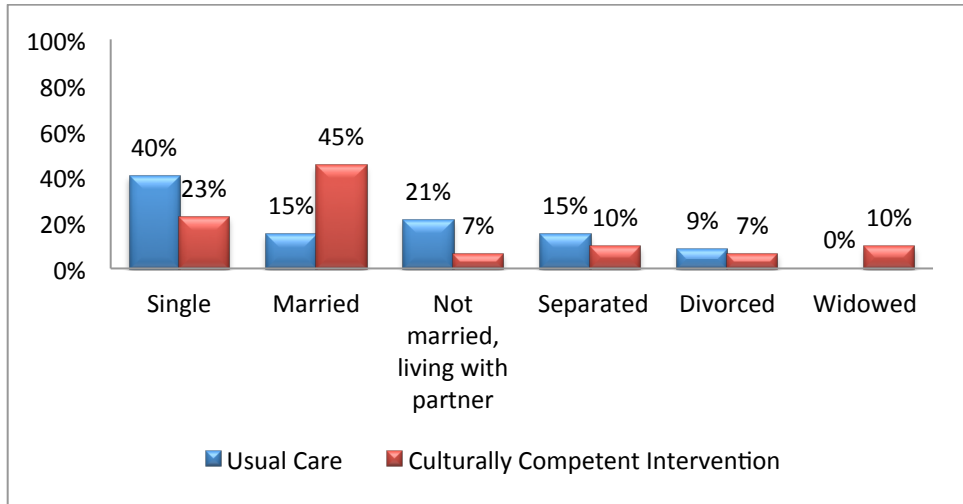
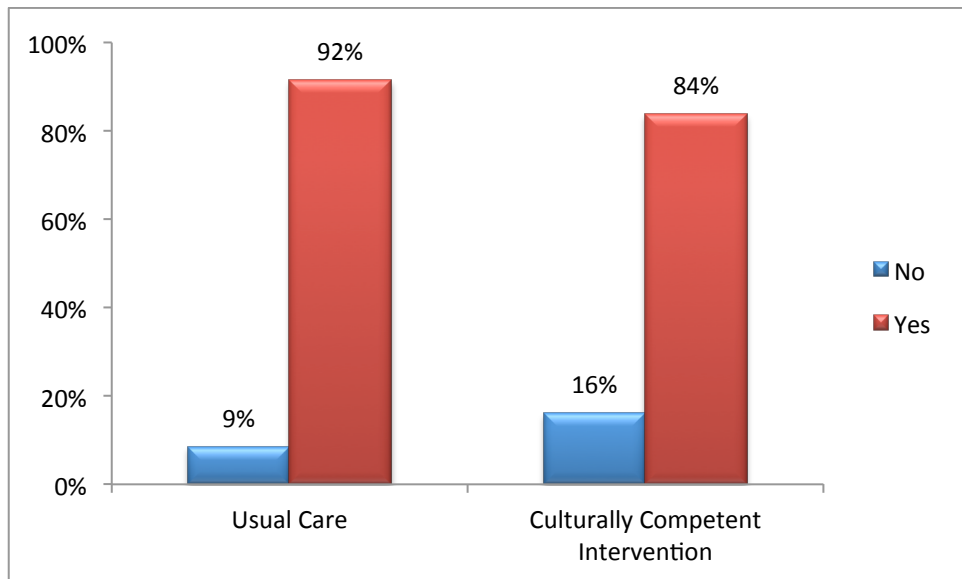


Chart 4. Presence of Children



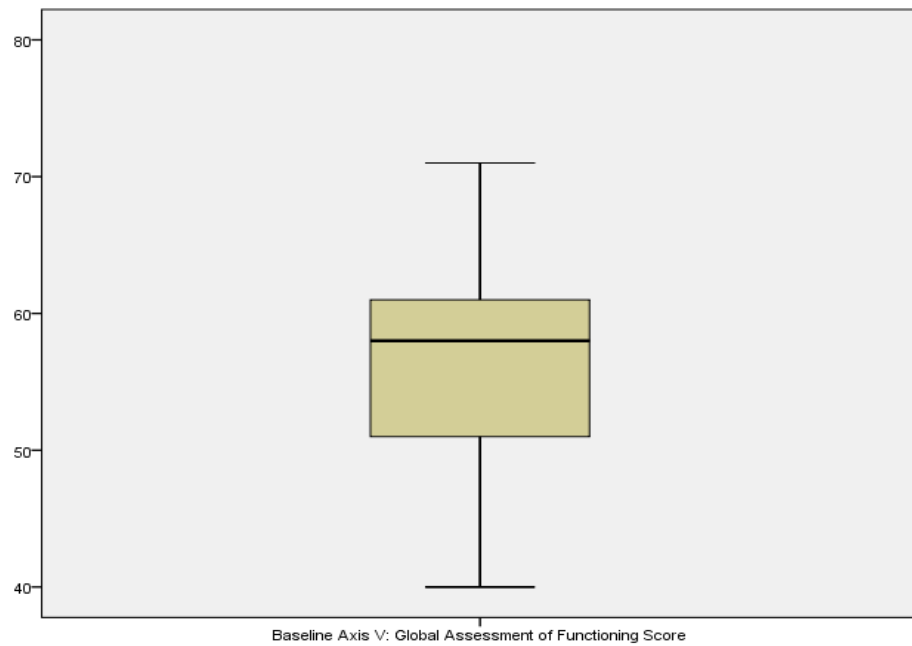
ASSESSING THE EFFECTIVENESS OF THE INTERVENTION**I. Baseline Neuropsychiatric Evaluation of Latina Patients receiving the Culturally Competent intervention**

The Mini International Neuropsychiatric Interview (MINI) was used to diagnose psychiatric disorders in the intervention group only. At baseline, the intervention group scored an average of 37.6 (standard deviation of 20), and an average of 57.8 (standard deviation of 8) for the Mini International Neuropsychiatric and Global Assessment of Functioning Score, respectively. Chart 5 reveals that the MINI score changes from a minimum of 1 to a maximum of 68. According to the Hamilton's depression rating scale, a MINI ≥ 24 is considered as severe depression. Half of the scores changes between 22 and 58 with a median of 37. For the GAF, the lower quartile is farther from the median (58) than is the lower quartile (Chart 6). Half of the scores changes between 52 and 63. Patients with a GAF between 51-60 have moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks), or moderate difficulty in social or occupational functioning (e.g., few friends, conflicts with peers).

Chart 5. Box Plot of MINI scores for Latina Patients receiving the Culturally Competent intervention



Chart 6. Box Plot of GAF scores for Latina patients receiving the Culturally Competent intervention



II. Differences in QIDS Scores between Usual Care and Intervention

Table 1 presents the median QIDS scores as well as quartiles at baseline and at six-month for Latina patients who received the usual care vs. those who received the culturally competent intervention.

At baseline, no statistically significant differences were found in most of the QIDS items between patients who received the usual care vs. those who received the culturally competent intervention. At baseline, statistically significant differences were found between Latina patients who received the intervention group vs. usual care for QIDS1, QIDS 11, QIDS 12, and QIDS14 (based on the Mann-Whitney U-Test).

At six month follow-up, statistically significant differences between the intervention and usual care groups -with the former reporting lower scores- were found in QIDS 3 (mean rank 28.79 vs. 38.50; $Z=-2.087$; $p=0.037$) (Chart 7). On average, Latina patients who received a culturally competent care reported lower scores on item 5 than those who received the usual care (mean rank 26.45 vs. 40.14, $z= -2.926$, $p=0.003$) (Chart 8). Statistically significant differences between Latina patients who received a culturally competent care and those who received the usual care were found for QIDS 14, i.e. patients receiving the intervention reported less problems with their energy level (mean rank 28.96 vs. 38.38, $z= -2.001$, $p=0.045$) (Chart 10).

Statistically significant differences between the two groups were marginally significant for QIDS 10, i.e., patients receiving the intervention reported less problems with concentration and decision-making (29.46 vs 38.03; $z= -$

1.821; $p=0.069$) (Chart 9).

We then added the QIDS at baseline and at 6 months. Shapiro-Wilk tests revealed that the cumulative scores were normally distributed. At baseline, the mean cumulative QIDS score was 21 (standard deviation=7) for the usual care group, and 23 (standard deviation = 8) for the intervention group. At 6 months, the mean cumulative QIDS score was 23 (standard deviation=8) for the usual care group, and 18 (standard deviation =9) for the intervention group.

An unpaired t-test revealed no statistically significant differences in the average cumulative QIDS scores at baseline between the two groups, whereas significant differences in the average cumulative QIDSs score at 6 months were found between the two groups (Table 2).

Table 1. Baseline and 6 month QIDS Average Scores for the Usual Care and Intervention Group: Median (Quartiles)

Quick Inventory of Depressive Symptomatology	BASELINE	SIX-MONTHS	BASELINE	SIX-MONTHS
	Usual Care (n=50)	Intervention (n=31)	Usual Care (n=50)	Intervention (n=31)
QIDS 1 (falling asleep)	2 (1-3)	3 (2-3)	1 (0-3)	0 (2-3)
QIDS 2 (sleep during the night)	2 (2-3)	2 (1-3)	2 (1-3)	2 (1.5-2)
QIDS 3 (waking up too early)	2.5 (1-3)	2 (0-3)	2 (1-3)	1 (0-3)
QIDS 4 (sleeping too much)	0 (0-1)	0 (0-1)	0 (0-1)	0 (0-1)
QIDS 5 (feeling sad)	2 (1-3)	3 (1-3)	2 (1-3)	1 (0.5-2)
QIDS 6 (decreased appetite)	1 (0-2)	1 (0-2)	0.5 (0-2)	0 (0-1)
QIDS 7 (increased appetite)	1 (1-1)	2 (1-3)	1 (1-2)	1 (1-2)
QIDS 8 (decreased weight, last 2 weeks)	1 (0-2)	0 (0-1)	0 (0-2)	0 (0-1)

QIDS 9 (increased weight, last 2 weeks)	2 (2-3)	2 (1-3)	2 (1-2)	2 (2-2)
QIDS 10 (increased weight, last 2 weeks)	2 (1-2)	2 (1-3)	2 (1-3)	1 (0-2)
QIDS 11 (view of myself)	1 (0-2)	2 (1-3)	1 (0-2)	0 (0-1)
QIDS 12 (thoughts of death/suicide)	0 (0-2)	1 (0-1)	0 (0-1)	0 (0-0)
QIDS 13 (general interest)	1 (0-2)	1 (0-2)	1 (0-2)	1 (0-2)
QIDS 14 (energy level)	1 (0-2)	2 (1-3)	2 (1-2.5)	1 (0-2)
QIDS 15 (feeling slowed down)	1 (0-2)	1 (1-2)	1 (1-2)	1 (0-2)
QIDS 16 (feeling restless)	1 (0-3)	1 (0-2)	1 (0-2.5)	1 (0-2)
QIDS 17 (taking antidepressant medication)	2 (0-6)	4 (0-8)	1.5 (0-3)	2 (1-2)

Chart 7. Differences in Average QIDS 3 Scores between Intervention and Usual Care

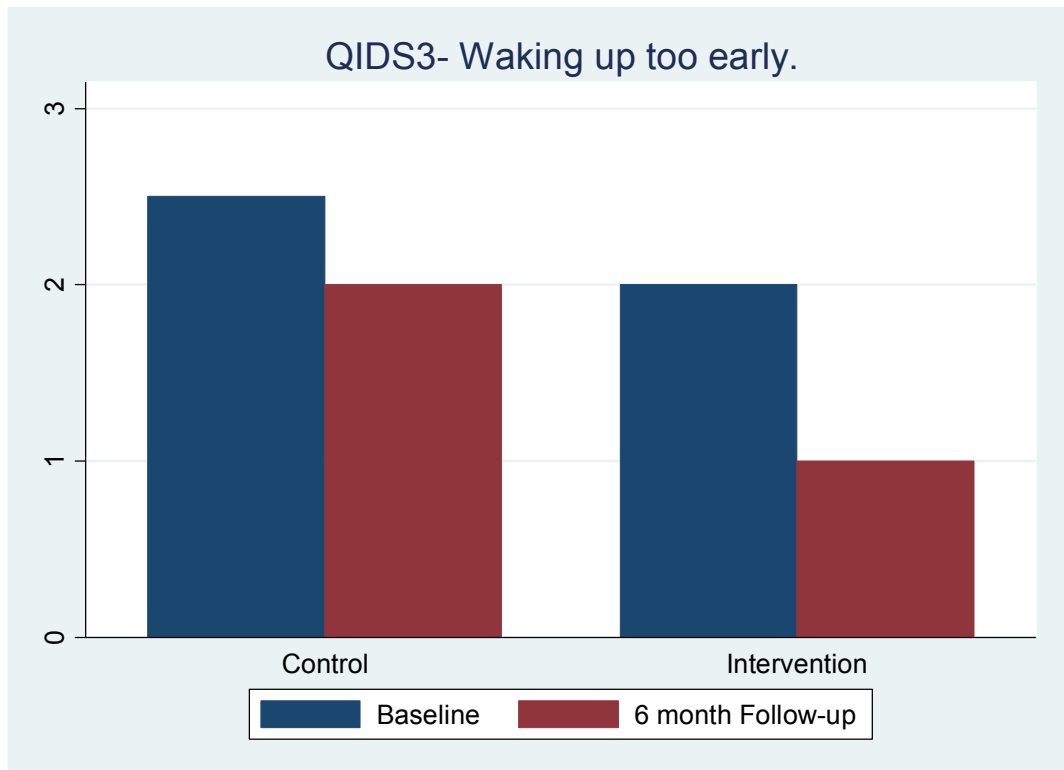
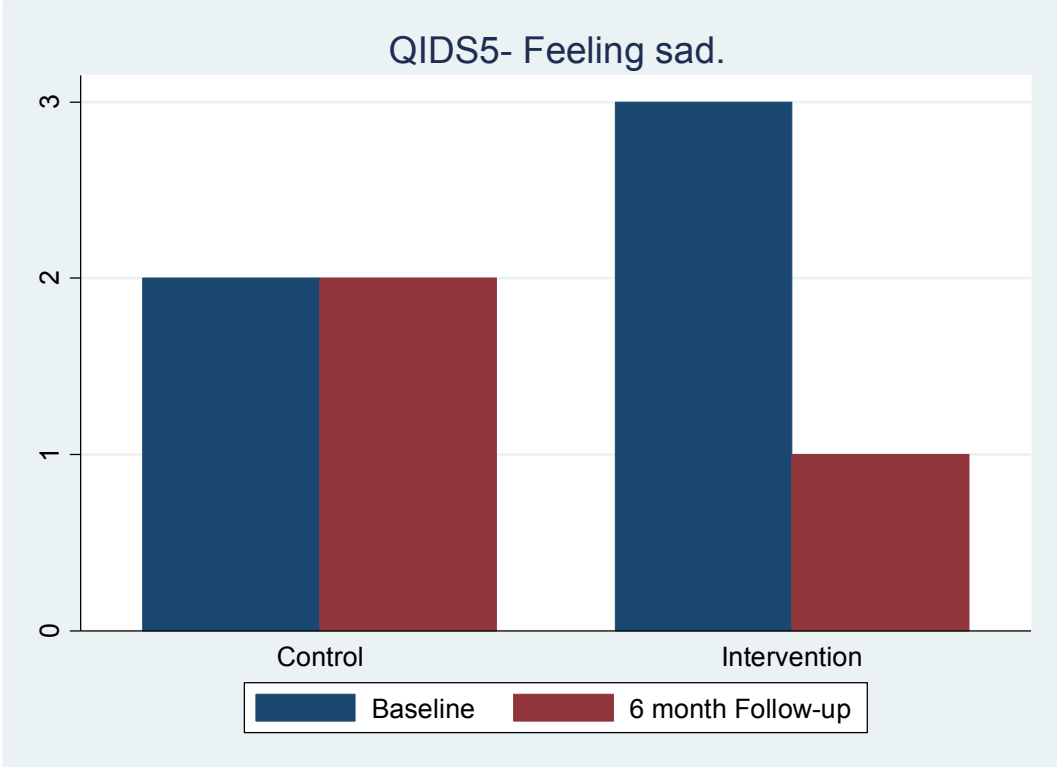


Chart 8. Differences in Average QIDS 5 Scores between Intervention and Usual Care



|

Chart 9. Differences in Average QIDS 10 Scores between Intervention and Usual Care

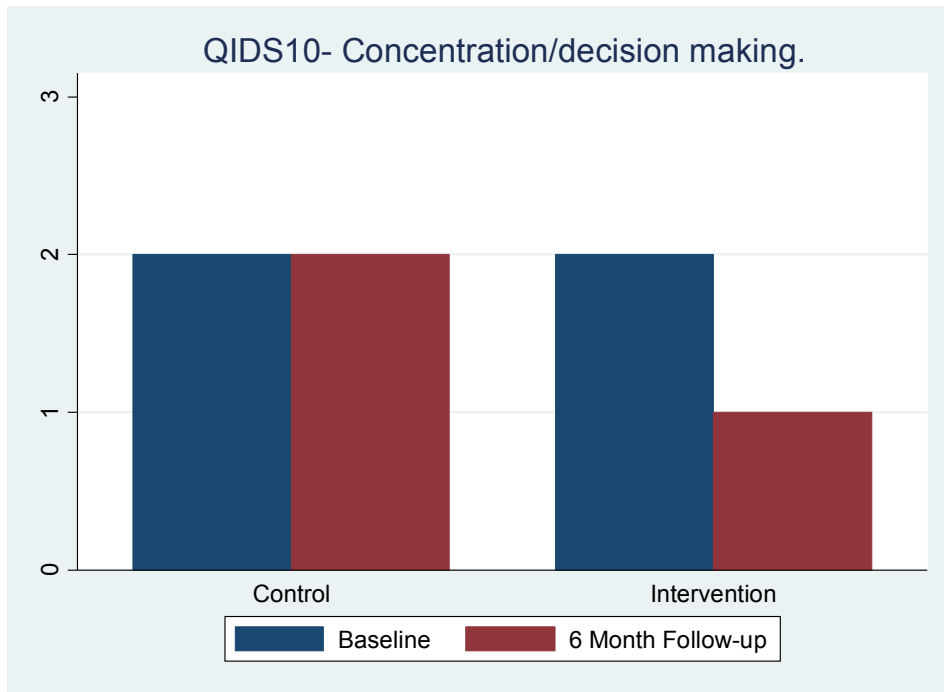


Chart 10. Differences in Average QIDS 14 Scores between Intervention and Usual Care

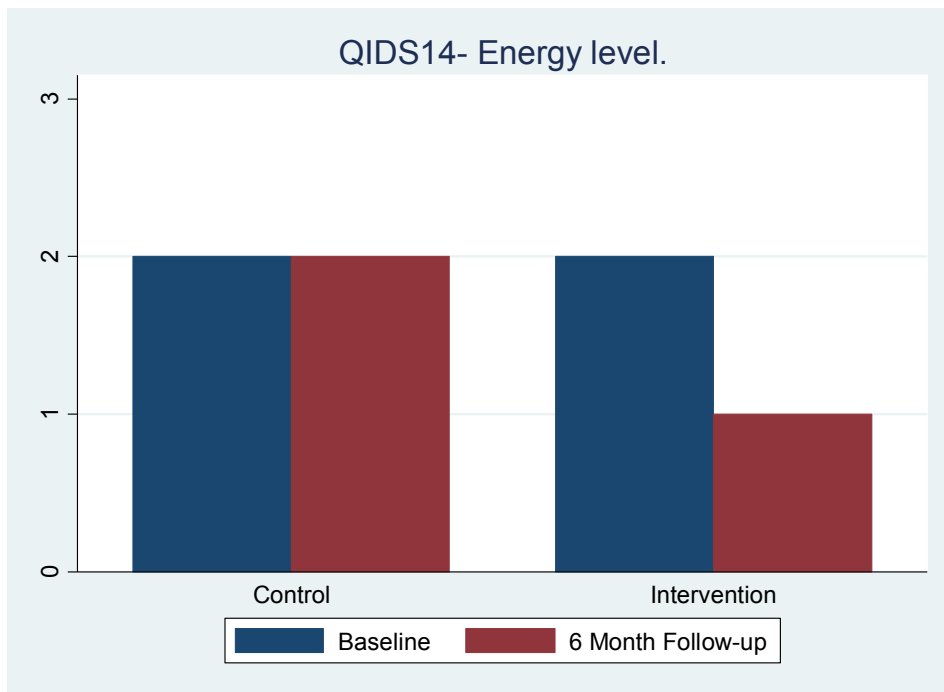


Table 2: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Cumulative Baseline QIDS	Equal variances assumed	0.26	0.61	1.11	0.27	-1.89	1.70	-5.27	1.49
	Equal variances not assumed			1.08	0.28	-1.89	1.74	-5.38	1.60
Cumulative QIDS at 6 Months	Equal variances assumed	0.81	0.37	2.04	0.046	4.20	2.06	0.09	8.32
	Equal variances not assumed			1.99	0.052	4.20	2.11	-0.03	8.44

III. Differences in SOS Scores

The SOS-10 scores are used to rapidly identify a patient’s level of emotional distress or psychological dysfunction. The Friedman tests revealed that statistically significant changes were found for SOS 1 only. Hispanic women in the intervention group had, on average, higher scores of personal satisfaction (SOS-10, Item 1) at two weeks as compared to baseline, but these scores remained unchanged at 6 months. The SOS scores were then summed and averaged at baseline, 2 weeks and 6 months with a respective mean of 31 (standard deviation of 15), 36 (standard deviation of 15), and 38 (standard deviation of 16). Repeated measures ANOVA revealed no statistically significant effect of the intervention with respect to the within-subjects variances.

Table 3. Baseline, 2 weeks and 6 months SOS Average Scores for the Intervention Group: Median (Quartiles)

Schwartz Outcome	DEFINITION	BASE LINE (n=31)	TWO-WEEKS (n=25)	SIX-MONTHS (n=27)
SOS 1	Given my current physical condition, I am satisfied with what I can do.	3 (2-4)	4 (3-5)	4 (3-5)
SOS 2	I have confidence in my ability to sustain important relationships.	4 (2-5)	4 (3-5)	4 (2-6)
SOS 3	I feel hopeful about my Future.	4 (3-6)	4 (3-6)	4.5 (3-6)
SOS 4	I am often interested and excited about things in my life.	3 (2-5)	4 (3-5)	5 (3.5-5)
SOS 5	I am able to have fun.	3 (1-4)	3 (2-5)	3.5 (2.5-5)
SOS 6	I am generally satisfied with my psychological health.	3 (1-4)	3 (2-4)	4 (3-5)
SOS 7	I am able to forgive myself for my failures.	4 (2-4)	3 (2-5)	4 (2-6)
SOS 8	My life is progressing according to my expectations.	3 (1-4)	4 (3-5)	4 (3-5)
SOS 9	I am able to handle conflicts with others.	4 (3-5)	4 (2-5)	5 (3-6)
SOS 10	I have peace of mind.	3 (1-4)	4 (3-5)	4 (3-5)

DISCUSSION

According to the United States Census Bureau (2012), Hispanic Americans make up about 17% of the entire American population. By 2060, nearly one in three U.S. residents will be Hispanic (United States Census Bureau, 2012b). The projected growth of the Hispanic population coupled with high prevalence of depression among women will become a more serious public health conundrum if targeted and culturally competent interventions are not tailored to better tackle this illness.

Healthy People 2020 has set out a series of specific goals to help Americans live healthier lives by providing objectives for the nation to achieve by the year 2020. These objectives are numerous, focusing on improving many facets of health. Relevant objectives for our study include the objectives of increasing depression screening by primary care providers, and increasing the proportion of adults with mental health disorders who receive treatment (U. S. Department of Health and Human Services). The “Disparities” page of Healthy People 2020’s website lists “access to culturally sensitive health care providers” as an influencer of health for “all Americans,” (U.S. Department of Health and Human Services). Thus, it is crucial to increase the amount of healthcare providers in our country that fall under the category of “culturally sensitive.” This increase can be obtained by more widespread implementation of cultural competency training for healthcare providers, nurses, and clinicians.

Our research consisted of a secondary analysis of the study by Nhi-Ha Trinh, et al. (2011) entitled “A study of a culturally focused psychiatric consultation service for Asian American and Latino American primary care patients with depression” which was conducted at Massachusetts General Hospital between 2009 and 2011 and investigated the effect of a culturally focused intervention. The culturally focused intervention had two components: a culturally focused consultation by a multidisciplinary team of mental health providers (administered

by providers who are bilingual and or bicultural and have received culturally competent training with the Engagement Interview Protocol toolkit) at baseline, and a toolkit (in the patient's preferred language) for the patient at the baseline assessment that contained information about the topics of depression, antidepressant medications, and psychological counseling. This toolkit also provided a list of mental health resources in the area, and the toolkit was reviewed with the patient by a culturally focused clinician at the two week follow up. The original study set out to describe the population that participated in the study, evaluate the effects of the culturally competent intervention on the patients' depression, and also to analyze the cost of implementing the culturally competent intervention, to see if it was feasible to eventually implement the culturally competent interventions for every patient that could benefit from them. Research has shown that Hispanic American patients of primary care providers that are more culturally competent have higher chances of patients following up on treatment referrals to mental health care services (Ishikawa, et al, 2014). Our study showed that culturally competent interventions can contribute to a higher number of Hispanic American patients following up to their referrals. This study focused on the impact of a culturally focused intervention on depression in one portion of the original study's population, that is, Hispanic American women. We also chose to see if there were

measurable differences in psychological well-being and quality of life between Hispanic American women who receive a culturally competent intervention and those who do not.

This research focuses on women because they are more likely to be depressed than men, and particularly, Hispanic women as they are more likely to experience depression and are less likely to receive mental health support than White women or African American women (Shattel et al., 2008). Research has also shown that in the population of adolescent Hispanic women, there are higher rates of suicidal thoughts than Black and Caucasian females in this age group. This research is important to the Hispanic population in that suicide is the 12th leading cause of death in the Hispanic population in the United States (Suicide Prevention Resource Center, 2013). Our research, which showed that culturally competent interventions are beneficial, furthers the case for more culturally competent training for healthcare workers across the nation.

STRENGTHS AND LIMITATIONS

One limitation of the study was in its structural properties, as the intervention arm was more thoroughly assessed at baseline than the usual care group, with the MINI, QIDS-SR, GAF, and SOS-10 questionnaires were administered to the intervention group and only the QIDS-SR and SOS-10 were administered to the usual care group at baseline. Had both groups received the same assessments at baseline,

we would have been able to draw more data to measure the effect of the intervention and perhaps would have seen more differences between the usual care arm and the intervention arm at the end of the study. In fact, all of the questionnaires should have been administered at baseline, two week follow up, and six month follow up to get a clearer picture of the differences from the beginning of the study to the end. Also, the intervention group had a two-week follow up visit, during which they received the interventional CFP toolkit. The usual care group did not have a two week follow up visit. Perhaps the two week follow up visit in itself (without receiving the toolkit that the intervention group received) would have had a positive psychological effect on the intervention group. Follow up visits are beneficial in that the patient may feel more cared for, and overall better, just by being seen again.

Sample size was also a limitation of this study, as 415 Hispanic American women were deemed eligible for the study, but only 81 patients completed the baseline assessment visit and the visit at 6 months. A larger sample size might have shown more significant differences in questionnaire scores between the usual care group and intervention group. Another limitation lies here in that not all patients answered every item on the questionnaires, which led to some gaps in information gathered, leading to inability to observe the potential significant differences in all of the questionnaire items.

There were some socio-demographic differences in the usual care and intervention groups at baseline that could have implications for their depression. Firstly, 15% of women in the usual care group was married, as compared to 45% in the intervention group. A study conducted in North Carolina investigating common factors influencing depression in Latina women found that divorced or widowed women report more symptoms of depression than single or married women (Fox and Kim-Godwin, 2011). Also, over half of all of the Hispanic American women patients that participated in the study were unemployed (62% in the usual care group, 42% in the intervention arm).

Another limitation of this study was the use of the Global Assessment of Functioning Scale (GAF) during the baseline assessment of the usual care group. The GAF's purpose is to measure severity of symptoms as well as overall functioning of the patient, providing a score from 0-100 in terms of mental health (100 being the highest level of mental health). This assessment scale was not included in the newest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), as it has been replaced by the World Health Organization Disability Assessment Schedule 2 (WHODAS 2.0).

Reasons for leaving the GAF out of the new DSM include its decreased reliability and validity when not administered by a clinician who has received specific training on how to administer it (scores may vary

between clinician, as some have received more training than others) and its lack of inclusion of physical and environmental factors weight in determining overall functioning (Gold, 2014). The American Psychological Association went so far as to say that it had “questionable psychometrics” (2013). However, the GAF is still widely used in research to assess effectiveness of interventions on a patient’s symptoms and level of functioning (Van Korff et al, 2011). Lehti et al. concluded that all questionnaires that assess and diagnose depression should cater to more cultures’ perception of this mental illness, and allow for cultural differences in the reporting of depression, such as using words other than “depression” (2009). Kleinman (2004) agrees that culture has a major effect on the ways patients talk about their depressive symptoms.

Strengths of the study were numerous. The use of the QIDS-SR 16 was beneficial in that we were able to pinpoint specifically which depressive symptoms were impacted by the intervention. We found that the symptoms that were impacted were those of waking up too early, concentration level, and feeling sad. The World Health Organization recognizes “depressed mood” and “decreased energy level” as core symptoms of depression. Thus, the study showed that the culturally competent intervention was able to impact symptoms of high importance. Another strength of this study was the use of toolkits for providers and patients, which provided concise and clear

information on cultural competence and depression for the providers and patients, respectively. The EIP toolkits the providers received included culturally specific elements in educating the providers how to perform a psychiatric evaluation. The more aware providers are of the vastly different perceptions of illness across cultures, specifically the perception of mental illness, the more they can involve their patients in the plan of care, increasing in more patient-centered care. The toolkit for the patients included information about depression, its causes, possible treatment options, and a list of resources in the area of the hospital that was the setting of the study (MGH). These toolkits were successful for providers and patients, as we observed significant differences in the intervention arm and usual care arm. These toolkits could easily be duplicated and distributed nationwide to primary care settings as well as mental health care settings. EIP toolkits for different cultures could be developed and distributed to areas of the U.S. that contain higher populations of certain cultures. The need for the toolkits is coupled with the need for assessments of populations in the U.S. to gather data on cultural populations in different areas. Lastly, another strength of the study was that we were able to observe significant differences between the intervention group and the usual care group in some domains. These significant differences further the need for more studies on how best to implement cultural interventions and how best to train providers and healthcare workers

to be culturally competent. At this point, it is important to use these findings to persuade healthcare facilities to provide cultural competency trainings, seminars, and toolkits not just once, but frequently to healthcare providers and nurses as they have the most frequent contact with patients in primary care and mental health care settings.

CONCLUSION

Our secondary analysis showed significant differences in the average cumulative QIDS-16 (questionnaire that assesses depressive symptoms) scores in the intervention group and usual care group at the 6 month follow up. Also in the intervention group, we saw a significant difference in one item of the SOS-10 (questionnaire that reveals level of psychological health) in the intervention group. In seeing these differences, we can conclude that the intervention group that received the culturally focused intervention had more improvement in their depressive symptoms than the usual care group, in the chosen population of Hispanic American women.

As the United States becomes a more diverse country with the growth of minority groups such as the Latino population, more culturally competent healthcare is absolutely necessary to provide higher quality of healthcare to every American. Mental healthcare is one area in which cultural awareness is highly important, as many cultures view mental health differently, and stigma surrounding mental can be

a factor in patients' choices to seek help or not seek help. Research by Mann and Garcia found that stigma associated with depression was a barrier to successful coping in Mexican American women (2005). Our hope with the study is that as providers and healthcare workers become more culturally aware and culturally sensitive, they are able to pick up on common stressors of this population, and assess for depression in the primary care setting, thus providing treatment for depression to patients who may not seek it on their own. Research on Mexican American women showed that stress from being separated from their family members in Mexico can be a contributing factor in depressive symptoms (Grzywacz, et al, 2005). Thus, when taking a health history it is important for primary care providers to ask about this possibility, or provide a form that asks about this possibility, as Hiott, Grzywacz, Arcury, and Quandt (2006) reported in their research.

RECOMMENDATIONS

This analysis showed that culturally competent interventions can have a positive impact on depressive symptoms in the Hispanic American female population. Thus, more cultural competence in healthcare facilities nationwide is much needed. Resources such as CLAS standards and the toolkits for providers such as the EIP toolkit need to be implemented at more facilities, including hospitals, primary care clinics, and mental health facilities. CLAS standards stress the importance of not just providing culturally competent training to nurses, but also assessing the community for which demographics are most numerous and thus, providing higher quality care to every cultural group in every area of the U.S. Students in both Medical and Nursing schools should have coursework that trains them in cultural competency in medical school, specifically a thorough study of at least one culture, to really grasp the differences between their own culture and other cultures in the world, rather than just surface level information about many cultures, as per Renee Fox, Ph.D.'s suggestion (2005). Furthermore, content on cultural competence should be included in the coursework of Bachelor's Degree nursing students, as nurses are on the front lines of patient interactions of primary care settings and mental health facilities and as more minority groups in the U.S. are growing, the next generation of nurses

needs to be as culturally aware before entering the workforce so as to provide better care for all patients. As nurses practice cultural competency, they provide an example to their fellow healthcare professionals, which leads to a greater cultural competence overall in the healthcare workforce (Salimbene, 2004). As for the nurses who are already part of the workforce, education on cultural competency should be provided as an option for continuing education credits that nurses are required to obtain yearly. Such continuing education should include common risk factors in different cultural populations for depression, so that nurses may more fully assess the possibility of depression in their patients. Research has shown that some of these common factors associated with depression in the population we studied include marital status and separation from family members (Fox & Kim-Godwin, 2011). Future research should investigate ways that cultural competency can be increased nationwide. There is a need for research to be done on ways to more effectively provide primary healthcare and mental healthcare to other cultures present in the U.S. besides the Hispanic culture. Research should also be done on ways that providers can contribute to a decrease in stigma surrounding mental illnesses such as depression.

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