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Research paper

Quality of life and functioning of Hispanic patients with Major Depressive Disorder before and after treatment

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ABSTRACT

Background: Similar rates of remission from Major Depressive Disorder (MDD) have been documented between ethnic groups in response to antidepressant treatment. However, ethnic differences in functional outcomes, including patient-reported quality of life (QOL) and functioning, have not been well-characterized. We compared symptomatic and functional outcomes of antidepressant treatment in Hispanic and non-Hispanic patients with MDD.

Methods: We analyzed 2280 nonpsychotic treatment-seeking adults with MDD who received citalopram monotherapy in Level 1 of the Sequenced Treatment Alternatives to Relieve Depression study. All subjects (239 Hispanic, 2041 non-Hispanic) completed QOL, functioning, and depressive symptom severity measures at entry and exit.

Results: Hispanic participants had significantly worse QOL scores at entry and exit ($p < 0.01$). However, after controlling for baseline QOL, there was no difference between Hispanic and non-Hispanic patients' QOL at exit ($p = 0.21$). There were no significant between-group differences at entry or at exit for depressive symptom severity or functioning. Both groups had significant improvements in depressive symptom severity, QOL, and functioning from entry to exit (all p values < 0.01). Patients with private insurance had lower depressive symptom severity, greater QOL, and better functioning at exit compared to patients without private insurance.

Limitations: This study was a retrospective data analysis, and the Hispanic group was relatively small compared to the non-Hispanic group.

Conclusions: Hispanic and non-Hispanic participants with MDD had similar responses to antidepressant treatment as measured by depressive symptom severity scores, quality of life, and functioning. Nevertheless, Hispanic patients reported significantly worse quality of life at entry.

1. Introduction

Major Depressive Disorder (MDD) affects 350 million people worldwide and is the leading cause of disability among mental health disorders (World Health Organization, 2017). MDD is associated with greater morbidity and mortality, both as a standalone diagnosis and in the context of other medical illnesses such as coronary heart disease, myocardial infarction and HIV/AIDS (Fawcett, 1993; Leserman, 2008; Pence, 2009; Whooley et al., 2008). Patients with MDD present symptoms of depression and impairments in functioning and quality of life (QOL) (Ishak et al., 2011). QOL is an individual's perception and satisfaction of their psychological, social and physical health (World Health Organization, 1997). In recent years, there has been increased attention on enhancing QOL, as it is strongly correlated with greater MDD symptom severity via socio-demographic factors such as employment, education, race and medical insurance status (Trivedi et al., 2006). Additionally, a number of studies have demonstrated that antidepressant monotherapy improves QOL in MDD, as measured by various validated assessment tools (Chokka and Legault, 2008; Demyttenaere et al., 2008; Ishak et al., 2011; Kocsis et al., 2002; Steiner et al., 2017).

The Hispanic population is currently the largest ethnic minority in

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the United States, with MDD rates similar to non-Hispanic Whites (Murray and Lopez, 1997), although some data suggest a higher prevalence among Hispanics (Blazer et al., 1994; Dunlop et al., 2003). Despite the high burden of MDD, most studies suggest that Hispanics are less likely than non-Hispanic Whites to seek mental health care and are also less likely to receive appropriate treatment for depression (Simpson et al., 2007; Young et al., 2001). Several studies have identified factors that may predispose Hispanics to disparities for MDD treatment, including language and health literacy barriers, lower cultural acceptability and reduced adherence to antidepressants, and a higher uninsurance rate, as compared to non-Hispanic Whites (Harman et al., 2004; Lagomasino et al., 2005; Miranda and Cooper, 2004; Schraufnagel et al., 2006; Young et al., 2001). In fact, the uninsurance rate is 2.6 times higher for Hispanics than non-Hispanic Whites and was correlated to worse health outcomes (Denavas-Walt et al., 2011). Additionally, Hispanics are less likely to have private insurance coverage, and may contribute to MDD treatment disparity, given that publicly insured patients have greater severity of depression, greater functional impairment, and lower life satisfaction, as compared to privately insured patients (Lesser et al., 2005). Furthermore, as the demographics of United States continue to change, there are other sociocultural variables that often contribute to racial marginalization for Hispanics, such as public education disparities (Mordechay and Orfield, 2017). Numerous factors related to education inequality can have a significant influence on patients' ability to gain access to healthcare, and navigate the healthcare system, which may ultimately affect health outcomes in the landscape of American mental-health for Hispanics.

Previous studies examining antidepressant treatment response in Hispanics with MDD demonstrated similar rates of symptom remission compared to other ethnic groups (Lesser et al., 2007, 2011), but few studies have compared functional outcomes such as QOL and functioning by ethnicity. A secondary analysis reported these functional outcomes among ethnicities, the Combining Medications to Enhance Depression Outcomes (CO-MED) study, which determined that symptom remission, QOL and functioning outcomes were similar among Hispanics, Whites, and Blacks, after treatment with single or combined antidepressant therapy (Lesser et al., 2011). The Sequenced Treatment Alternatives to Relieve Depression (STAR*D) study, which was funded by the National Institutes of Health (NIH), remains the largest prospective randomized, multicenter, multistep clinical trial examining treatment efficacy for nonpsychotic individuals with persistent MDD in outpatient settings to date (Fava et al., 2003; Rush et al., 2004). The STAR*D study also contains the largest number of ethnic minority patients in a single clinical trial for depression, and includes systematic collection of patient-reported QOL, functioning, and depressive symptom severity data. The STAR*D study was designed to ascertain the efficacy of various antidepressant treatments for MDD in patients who did not respond to initial treatment of MDD with citalopram, a first-line selective serotonin reuptake inhibitor (SSRI) antidepressant.

In light of an increasing recognition of QOL as an important clinical outcome, this study presents a formal comparison of QOL, functioning, and depressive symptom outcomes in the STAR*D trial between Hispanic and non-Hispanic individuals with MDD, before and after citalopram monotherapy. Based on the data suggesting similar symptom remission rates between Hispanics and other ethnic groups with MDD treated with antidepressants, we hypothesized that Hispanic patients would have comparable improvements in QOL and functioning in response to antidepressant monotherapy compared to non-Hispanic patients.

2. Methods

2.1. Participants

Any participants who met criteria for remission upon entry to level 1, or who were missing complete entry and exit scores, were excluded from data analyses. Level 1 of the STAR*D study was a fixed-flexible dosing schedule for citalopram monotherapy, with permitted modifications based on treatment response per individual. Any participants who were unable to achieve remission by 14 weeks advanced to the next subsequent treatment level of the STAR*D study. Our sample included 2280 participants stratified by ethnicity into Hispanic ($N = 239$) and non-Hispanic ($N = 2041$) adults, who completed measures assessing depressive symptom severity, QOL and functioning before and after 12–14 weeks of citalopram monotherapy. In order to determine concurrent Axis 1 diagnoses, the Psychiatric Diagnostic Screening Questionnaire was administered (Zimmerman and Mattia, 2001a, 2001b). All participants in the STAR*D study consented to participate in the study. To conduct data analysis for this study, we acquired a certificate from the NIH to access and use the STAR*D Pub Ver3 dataset.

2.2. Measures

QOL was assessed using the 16-item QOL Enjoyment Satisfaction Questionnaire-Short Form (Q-LES-Q) (Endicott et al., 1993), which is a self-reported measure that assesses enjoyment and satisfaction across several domains, with higher scores representing better QOL. The WHO acquired community norms and found the mean value of the Q-LES-Q was 78.3 ($SD = 11.3$) (WHOQOL, 1997). Scores that fall within one standard deviation of the community norms (scores ≥ 67) are defined as 'within-normal' QOL. Scores less than or equal to two standard deviations below the mean (scores ≤ 55.7) were classified as 'severely-impaired' QOL (Schechter et al., 2007). The Q-LES-Q has robust psychometric properties (Cronbach's $\alpha = 0.90$, test-retest reliability $r = 0.74$) (Endicott et al., 1993). To assess functioning, the Work and Social Adjustment Scale (WSAS) was chosen on the premises of good psychometric properties (Cronbach's α range = 0.70–0.94, test-retest reliability $r = 0.73$). Scores range from 0 (best possible functioning) to 40 (worst possible functioning) (Mundt et al., 2002). Previous work operationally defined within-normal scores on the WSAS as < 10 and scores ≥ 20 as severely-impaired (Mundt et al., 2002). Lastly, to quantify depressive symptom severity, the Quick Inventory of Depressive Symptomatology-Self Report (QIDS-SR) (Rush et al., 2003) was selected due to its high internal consistency (Cronbach's $\alpha = 0.86$), and convergent validity with the clinician-rated Hamilton Rating Scale for Depression (Hamilton, 1960) and the Beck Depression Inventory-II (Becket al., 1997). The range of scores for the QIDS-SR is between 0 (no depression) and 27 (severe depression); with remission defined as QIDS-SR scores ≤ 5 post-treatment (Rush et al., 2003).

2.3. Statistical analyses

All raw scores (Q-LES-Q, QIDS-SR, WSAS) had approximately normal distributions for the Hispanic and Non-Hispanic group. Sample sizes in each group were sufficiently large enough to overcome normality violations. Continuous variables, means and standard deviations (*SD*), are represented in the tables, whereas categorical variables include frequencies and percentages. The majority of between-group comparisons were conducted using student's *t*-tests for independent samples and all within-group comparisons were conducted using paired samples *t*-tests. However, two-way ANOVAs were run to test for possible interactions between Hispanic status and private insurance status on all outcome variables at entry and at exit, and additional ANCOVAs controlling for baseline QOL scores for each outcome measure at exit were also conducted. Effect size was measured by calculating Cohen's *d* where values were represented as 0.2 (small), .5 (medium), and 0.8 (large) effect sizes (Cohen, 1988; Kraemer et al., 2011). While Cohen's *d* values assessed treatment effects from pre- to post-treatment, we used Equation 3 from Dunlap and colleagues (1996) in order to correct for Cohen's *d* for correlated designs. To assess between-group differences of