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Prevalence and Frequency of Residual Symptoms of Depression in U.S. Adults

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Abstract

Introduction: Patients with depression who receive antidepressant (AD) treatment often do not achieve complete remission of depressive symptoms. Even among those who achieve symptomatic remission, the majority have residual symptoms that result in functional impairment. This study describes the prevalence of residual symptoms in those with AD-treated depression in a representative sample of US adults.

Hypothesis: Patients with AD-treated depression continue to experience residual symptoms despite adequate duration of treatment.

Methods: The data are from the 2012 U.S. National Health and Wellness Survey (NHWS), a representative, cross-sectional general health survey of 71,157 US adults, projected to represent 230.3 M people. Results were weighted to reflect the sex, age, ethnicity, and educational make-up of the US population. After excluding participants with schizophrenia or bipolar disorder, 8,873 (12.5%) reported that a doctor had diagnosed them with depression, including 5,354 respondents taking AD medication for at least the three months preceding the survey (DEP-RX), representing 17.3 M people. The frequency of self-reported depressive symptoms (defined by PHQ-9 items) was assessed. Within DEP-RX patients, these are considered residual symptoms.

Results: Despite adequate AD treatment duration, 26.9% of DEP-RX patients, projected to represent 4.7 M US adults, still met PHQ-9 criteria for major depressive disorder. The two most commonly reported residual symptoms were "feeling tired or having little energy" (50.7% of DEP-RX vs. 21.2% of total population) and "trouble falling or staying asleep / sleeping too much" (44.3% of DEP-RX vs. 19.9% of total population). Among DEP-RX patients, both decreased energy and sleep disturbance symptoms were more common among women than men (52.3% vs. 48.4%, p<0.05 and 45.0% vs. 43.1%, respectively). When asked to rate their general health on a scale from 1 = "Poor" to 5 = "Excellent," DEP-RX patients had a significantly lower average rating (mean = 2.86, SD = 0.97) than those in the general adult population without schizophrenia, bipolar disorder, or AD-treated depression (mean = 3.45, SD = 0.92) (p<0.05).

Discussion: Despite AD treatment of at least three months' duration, patients with depression in a nationally representative sample of adults continue to experience residual symptoms of decreased energy and sleep disturbance. Furthermore, DEP-RX patients report poorer overall health relative to the general population.

Conclusion: Despite adequate duration of AD treatment, among depressed patients, the residual symptoms of sleep disturbance and decreased energy may not be effectively addressed by current available AD therapy. The need exists to develop novel treatments that may address these unmet medical needs.

Introduction

- The goal of treating patients with depression is remission, a virtual absence of depressive symptoms. Remitters have better function, a better prognosis, and a more stable, enduring state than those with residual symptoms.[1]
- Pharmacological treatment for depression is a key component in helping patients achieve remission. However, the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) study revealed that even patients treated with citalopram for 14 weeks had a remission rate of about a third, leaving two-thirds of the patients with symptoms of depression.[2]
- Inadequate response to treatment can result in higher healthcare resource use and work productivity loss as well as elevated comorbidities such as sleep disturbances.[3]

Objectives

- To describe demographics, residual depressive symptoms, and comorbidities experienced by patients who have been using prescription antidepressant (AD) treatment for a duration adequate to achieve therapeutic effects (three or more months).

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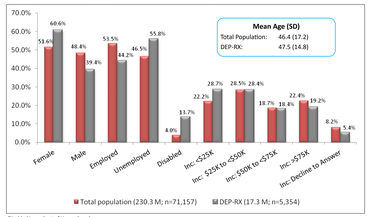
Methods

- Sample
  - Data for the analyses were taken from the 2012 U.S. National Health and Wellness Survey (NHWS), a national, Internet-based health survey conducted each year among U.S. adults 18 and over (n=71,157).
  - Respondents of the NHWS were recruited from an Internet panel using a random stratified sampling framework to ensure the demographic composition (with respect to age, gender, and race / ethnicity) is identical to that of the U.S. Census.
  - The sample was weighted using the U.S. Census to match the age, sex, ethnic, and educational characteristics of the U.S. adult population (230.3 M).
- Measures
  - The validated Patient Health Questionnaire (PHQ-9) was used to assess nine residual symptoms of depression and classify respondents by disease severity as well as screen patients for major depressive disorder (MDD).[4] All respondents provided answers for this scale.
  - The validated Mood Disorder Questionnaire (MDQ) was used to screen all respondents for characteristics of bipolar disorder.[5]
  - Respondents who self-reported using prescription AD treatment for at least three months and who did not self-report bipolar disorder, schizophrenia, or screen positive on the MDQ were considered to be DEP-RX patients (n=5,384; 17.3 M).
  - Demographics and health history were assessed for all respondents.
- Statistical Analysis
  - Respondent characteristics were compared using chi-square tests for categorical variables and independent sample t-tests for continuous variables.

Results

- After removing the respondents with self-reported bipolar disorder, schizophrenia, or those who scored positive on the MDQ, 12.5% (29.6 M; n=8,873) of respondents reported experiencing depression in the past 12 months and indicated a physician had diagnosed them with the condition. Of those, n=5,354 (17.3 M; 58%) self-reported using an AD medication to treat depression for at least three months (DEP-RX).
  - DEP-RX patients were more likely to be female, unemployed, and disabled compared to the total population (Figure 1).

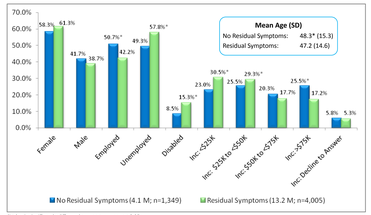
Figure 1. Demographics in the Total Population and DEP-RX Patients



Disabled is a subset of Unemployed
DEP-RX = Using prescription medication to treat depression for at least three months; Inc = Yearly household income

- Of the estimated 17.3 M DEP-RX patients, 23.9% (4.1 M) screened on the PHQ-9 as having "none-minimal depression," and thus were considered not to have residual symptoms. The remaining 76.1% (13.2 M) had mild to very severe depression. Of all DEP-RX patients, 26.9% (4.7 M) also met the criteria for MDD; 8.8% of the total population was classified as having MDD (data not shown).
  - A higher proportion of DEP-RX patients with residual symptoms reported being unemployed, disabled, and had lower incomes than those without residual symptoms (p's<0.05) (Figure 2).

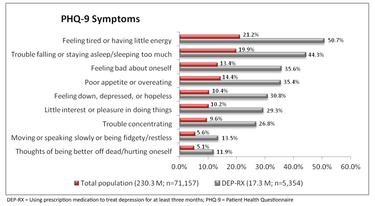
Figure 2. Demographics in DEP-RX Patients With and Without Residual Symptoms



*Value is significantly different between groups at p<0.05
Disabled is a subset of Unemployed
DEP-RX = Using prescription medication to treat depression for at least three months; Inc = Yearly household income
Note: Residual symptoms were defined as screening from mild to severe depression per the PHQ-9.

- The two most common residual symptoms in DEP-RX patients were "feeling tired or having little energy" (50.7%) and "trouble falling or staying asleep / sleeping too much" (44.3%). In the total population, the prevalences of these symptoms were 21.2% and 19.9%, respectively (Figure 3).

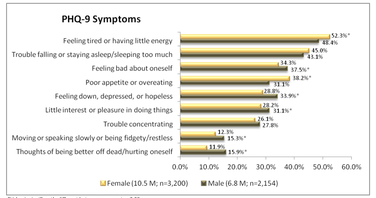
Figure 3. Symptoms Experienced More Than Half the Days in the Past Two Weeks in the Total Population and DEP-RX Patients



DEP-RX = Using prescription medication to treat depression for at least three months; PHQ-9 = Patient Health Questionnaire

- Rates of individual residual symptoms differed between men and women (Figure 4).
  - Women were significantly more likely to experience: feeling tired or having little energy and poor appetite or overeating (p's<0.05).
  - Men were more likely to experience: feeling bad about themselves; feeling down, depressed, or hopeless; having little interest or pleasure in doing things; moving or speaking too slowly or too quickly; and thoughts of being better off dead or hurting oneself (p's<0.05).

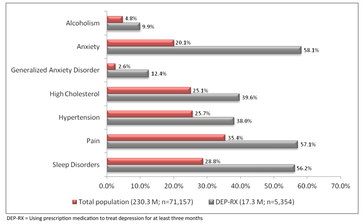
Figure 4. Symptoms Experienced More Than Half the Days in the Past Two Weeks in Male and Female DEP-RX Patients



*Value is significantly different between groups at p<0.05
DEP-RX = Using prescription medication to treat depression for at least three months; PHQ-9 = Patient Health Questionnaire

- Rates of several mental and cardiovascular comorbidities were more frequently self-reported by DEP-RX patients than the total population (Figure 5).

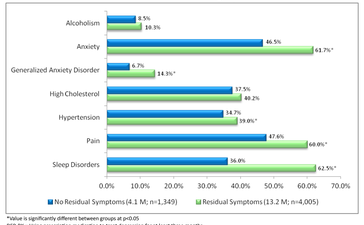
Figure 5. Self-reported Comorbidities in the Total Population and DEP-RX Patients



DEP-RX = Using prescription medication to treat depression for at least three months

- Anxiety, generalized anxiety disorder (GAD), hypertension, pain, and sleep disorders were all more commonly self-reported in the DEP-RX patients with residual symptoms than by those without residual symptoms (p's<0.05) (Figure 6).

Figure 6. Self-reported Comorbidities in DEP-RX Patients With and Without Residual Symptoms



*Value is significantly different between groups at p<0.05
DEP-RX = Using prescription medication to treat depression for at least three months
Note: Residual symptoms were defined as screening from mild to severe depression per the PHQ-9.

- When describing their general health on a scale from 1 = "Poor" to 5 = "Excellent," DEP-RX patients averaged 2.86 (SD = 0.97). This was significantly lower than that of the non-DEP-RX population, which had a mean of 3.45 (SD = 0.92; p<0.05) (data not shown).

Discussion

- NHWS 2012 results showed 8.8% of the total adult population screened positive for MDD based on self-reported symptoms in the past two weeks; in 2003, Kessler et al reported a 12-month prevalence of MDD of 6.6%.[6] The difference in prevalences may be due to the years between study fieldings and/or the nature of the instrument (self-reported on the internet versus in-person interview).
- Despite AD treatment of sufficient duration to achieve therapeutic effects, over three-quarters of depression patients still experienced residual symptoms, suggesting their current therapy is not sufficient to achieve remission – the ultimate goal of treatment.
- DEP-RX patients with residual symptoms had lower overall health than patients without residual symptoms, including more comorbidities and higher rates of disability.
- Residual symptoms differed by sex, suggesting clinicians should be aware that inadequately treated depression will present differently between men and women.

Limitations

- The NHWS is cross-sectional and self-reported; no clinical, diagnostic, or medication data were verified.
- Residual symptoms were defined by a single assessment of the PHQ-9, a screener designed for multiple measurements across time to assess changes in depression severity by a clinician.
- This study is primarily descriptive and further adjusted analyses – including associations of residual symptoms of MDD with health outcomes – should be established.

Conclusions

- There is an unmet need to treat residual symptoms of depression in patients who are already using AD therapy. Investigation into novel adjunct therapies to treat these patients is warranted.
- Rates and types of residual symptoms may manifest differently between the sexes, suggesting gender should be taken into account when assessing remission and recommending AD therapy.

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