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Determining severity subtypes of depression with a self-report questionnaire

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ABSTRACT

The American Psychiatric Association's recently revised guidelines for the treatment of major depressive disorder indicated that it is important to consider symptom severity in initial treatment selection. In the present report from the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project, we conducted two studies of psychiatric outpatients examining the correlates of severity classification based on a self-report depression scale. The first sample consisted of 470 depressed outpatients who completed the Clinically Useful Depression Outcome Scale (CUDOS) and measures of psychosocial morbidity at the time of presentation. The second sample consisted of 112 depressed outpatients who completed the CUDOS and were evaluated with the Hamilton Depression Rating Scale at baseline and after 3 months of treatment. Compared to mildly depressed patients, moderately depressed patients reported significantly more psychosocial morbidity across all functional domains. The same differences were found between moderately and severely depressed patients. Greater severity of depression was associated with lower rates of response and remission. The results of the present studies suggest that a self-report depression questionnaire can validly subtype depressed patients according to gradations of severity.

1. Introduction

Patients with major depressive disorder vary in the severity of their symptoms. Illness severity has clinical significance because it predicts treatment outcome. In placebo-controlled studies of antidepressant medications, greater symptom severity was associated with a higher response to antidepressant medication, a lower response to placebo, and thus greater separation between active drug and placebo response (Elkin et al., 1995; Khan et al., 2002). In severely depressed patients, response to psychotherapy has been found to be inferior to medication response (Elkin et al., 1995), though a recent meta-analysis of psychotherapy studies found that greater symptom severity did not predict poorer response in controlled studies examining the moderating effect of severity (Driessen et al., 2010). It has been suggested that certain medications or classes of medication are more effective than others for severe depression, though this has not received consistent empirical support (Schatzberg, 1999; Kilts et al., 2009; Schmitt et al., 2009; Wiles et al., 2011; American Psychiatric Association, 2010).

In efficacy and effectiveness studies of antidepressant medication that did not include a placebo control group, greater severity has been associated with lower rates of remission in most (Hirschfeld et al., 1998; Schmitt et al., 2009 Friedman et al., 2012) but not all reports (Sugawara et al., 2006). The relationship between baseline severity and treatment response, usually defined as a 50% or greater reduction in symptom severity scores, has been more variable (Kocsis et al., 1990; Henkel et al., 2011).

The recently revised American Psychiatric Association (APA) guidelines for the treatment of major depressive disorder indicated that it is important to consider symptom severity in initial treatment selection (American Psychiatric Association, 2010). Specifically, the guidelines recommended both psychotherapy and pharmacotherapy as monotherapies for mildly and moderately severe depression and pharmacotherapy with or without psychotherapy for severely depressed patients. Guidelines from other countries also recommended pharmacotherapy as the first treatment option for severely depressed patients and either pharmacotherapy or psychotherapy for mildly and moderately depressed patients (National Institute for Health and Clinical Excellence, 2009; van der Lem et al., 2011).

Surprisingly few studies have compared the demographic and clinical characteristics of severity-defined groups. In a large sample of outpatients with chronic or recurrent major depressive disorder participating in a treatment study comparing the effectiveness of a single antidepressant vs. combined treatment, patients were subdivided into four severity groups based on their scores on the Quick Inventory of Depressive Symptoms (QIDS)

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(Rush et al., 2003). The more severely ill patients were more suicidal at the time of the initial evaluation, had an earlier age of onset, more frequently attempted suicide in the past, more frequently reported a history of childhood trauma, and reported more axis I diagnostic comorbidity, poorer quality of life and more impaired functioning (Friedman et al., 2012). In another large study of depressed outpatients participating in a drug treatment comparison study, greater severity was associated with unemployment, more life events, poorer social support, and suicidal thoughts (Wiles et al., 2011). In a small study of depressed inpatients subdivided according to scores on a composite index derived from 3 depression measures, greater severity was associated with higher levels of anxiety, functional impairment, and a lower rate of substance abuse in female but not male patients (Goethe et al., 1993). Greater severity based on ICD-10 and DSM-IV classification predicted an increased risk of relapse (Kessing, 2004) and completed suicide (Kessing, 2004; Bradvik et al., 2008).

In addition to making recommendations for treatment approach based on severity, the APA's revised treatment guidelines for major depressive disorder advocated the use of standardized, quantitative measures to evaluate treatment outcome. Reliable and valid self-report questionnaires may be preferable to clinician-rated scales such as Hamilton Depression Rating Scale (Hamilton, 1960) or the Montgomery–Asberg Depression Rating Scale (Montgomery and Asberg, 1979) because they are inexpensive in terms of professional time needed for administration. To be sure, there are also limitations with self-report questionnaires such as response set biases, and their use may be limited by the readability of the scale and literacy of the respondent. However, self-report scales are free of clinician bias and are therefore free from clinician overestimation of patient improvement (which might occur when there are incentives to document treatment success).

Most studies comparing depressed patients of differing levels of severity have been based on clinician rated scales and have been secondary analyses of samples recruited to participate in treatment research protocols. The inclusion and exclusion criteria of these studies limit the generalizability of the results to routine clinical practice (MacEwan and Remick, 1988; Wisniewski et al., 2009; van der Lem et al., 2011). We are not aware of any large-scale studies comparing the demographic and clinical characteristics of mildly, moderately, and severely depressed outpatients evaluated in routine clinical practice and who, therefore, did not first pass through an inclusion/exclusion criteria filter.

In the present report from the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project, we examined the validity of the correlates of severity classification based on a self-report depression scale in patients presenting for outpatient treatment. In the first of two studies, we compared the baseline characteristics of patients with mild, moderate, and severe depression and hypothesized that increasing symptom severity would be associated with greater psychosocial impairment, suicidality, and lower life satisfaction. In the second study, we compared remission rates after three months of treatment and predicted that increasing symptom severity would be associated with lower rates of remission.

2. Methods

2.1. Study 1

The Rhode Island MIDAS project represents an integration of research methodology into a community-based outpatient practice affiliated with an academic medical center (Zimmerman, 2003). A comprehensive diagnostic evaluation is conducted upon presentation for treatment. This private practice group predominantly treats individuals with medical insurance (including Medicare but not Medicaid) on a fee-for-service basis, and it is distinct from the hospital's outpatient residency training clinic that predominantly serves lower income, uninsured and medical assistance patients. Not all patients who presented for treatment participated in the study. Patients were offered the opportunity to have a more comprehensive evaluation as part of the clinical-research program, though they were not required to undergo this evaluation. The varying number of trained diagnostic interviewers available influenced the number of patients who were invited to participate. As reported elsewhere, patients who did and did not participate in the study were similar in scores on self-administered symptom questionnaires (Zimmerman and Mattia, 1999). The Rhode Island Hospital institutional review committee approved the research protocol, and all patients provided informed, written consent.

The sample consisted of 470 psychiatric outpatients evaluated with semi-structured diagnostic interviews who were given a principal diagnosis of major depressive disorder and completed the Clinically Useful Depression Outcome Scale (CUDOS) (Zimmerman et al., 2008) at the time of presentation. Patients were interviewed by a diagnostic rater who administered a modified version of the Structured Clinical Interview for DSM-IV (SCID) (First et al., 1995). The data in Table 1 shows the demographic characteristics of the sample. The majority of the subjects were white, female, married or single, and graduated from high school.

We integrated into the SCID interview the items from the Schedule for Affective Disorders and Schizophrenia (SADS) (Endicott and Spitzer, 1978) on symptoms of depression including current suicidal ideation (rated on a 0 to 6 scale). The interview also included the item from the SADS assessing the amount of time missed from work due to psychiatric reasons during the past 5 years. This item was rated as follows: 0=did not work at all because was not expected to work (e.g., retired, student, housewife, physically ill, or some other reason not related to psychopathology); 1=virtually no time at all out of work or absenteeism unrelated to psychopathology; 2=only a few days to 1 month; 3=up to 6 months; 4=up to 1 year; 5=up to 2 years; 6=up to 3 years; 7=up to 4 years; 8=up to almost 5 years; 9=worked none, or practically none of the time because of reasons related to psychopathology. Based on the results of the SCID/SADS interview, the Global Assessment of Functioning (GAF) was rated.

The diagnostic raters were highly trained and monitored throughout the project to minimize rater drift. The diagnostic raters included Ph.D. level psychologists and research assistants with college degrees in the social or biological sciences. Research assistants received three to four months of training during which they observed at least 20 interviews, and they were observed and supervised in their administration of more than 20 evaluations. Psychologists only observed five interviews, and they were observed and supervised in their administration of 15 to 20 evaluations. During the course of training the senior author met with each rater to review the interpretation of every item on the SCID. Also during training every interview was reviewed on an item-by-item basis by the senior rater who observed the evaluation and by the senior

Table 1
Demographic characteristics of depressed psychiatric outpatients in Study 1 (n=470) and Study 2 (n=112).

Characteristic	Study 1		Study 2	
	N	%	*N*	%
Gender				
Male	163	34.7	31	27.7
Female	307	65.3	81	72.3
Education[a]				
Less than high school	26	5.5	8	7.3
Graduated high school	297	63.2	56	50.9
Graduated college or greater	147	31.3	46	41.8
Marital status				
Married	201	42.8	51	45.5
Living with someone	21	4.5	14	12.5
Widowed	11	2.3	3	2.7
Separated	27	5.7	6	5.4
Divorced	85	18.1	16	14.3
Single	125	26.6	22	19.6
Race				
White	419	89.1	95	84.8
Black	24	5.1	11	9.5
Hispanic	18	3.8	3	2.7
Other	9	2.0	3	2.7
Age (years)	41.8	12.0	44.5	14.8

[a] Information on education was missing for two patients leaving a final sample of 110 for Study 2.