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Depressed Patients' Acceptability of the Use of Self-Administered Scales to Measure Outcome in Clinical Practice

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Background. *Self-report questionnaires are a cost-effective option to monitor the outcome of clinical care. Even when using self-report scales, consideration should be given to how much time they take to complete and how burdensome they are perceived to be. In the present report from the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project, we compared the acceptability of completing two depression scales—the Beck Depression Inventory (BDI) and the Clinically Useful Depression Outcome Scale (CUDOS).*

Methods. *In the first study, 50 depressed psychiatric outpatients completed the CUDOS and a questionnaire assessing how burdensome it was to complete during the visit. In the second study, a separate sample of 50 depressed outpatients completed the CUDOS and BDI and a measure of scale acceptability.*

Results. *Almost all patients completed the CUDOS in less than 3 minutes (mean = 102.7 seconds, SD = 42.7) and considered the questionnaire very little or a little burdensome (98.0%, n = 49). In the second study comparing the CUDOS and the BDI, significantly more patients indicated that the CUDOS took less time to complete and was less of a burden to complete. Nearly three times as many patients indicated that they would prefer to complete the CUDOS in order to monitor the outcome of treatment (40.0% vs. 14.0%, z = 2.31, p .05).*

Conclusions. *A consumer-friendly, reliable, and valid self-administered questionnaire can improve the efficiency of the clinical encounter. The brevity of the CUDOS lends itself to regular administration in clinical practice.*

Keywords Depression, Outcome assessment, Self-report scale, Evaluation, Measurement, Acceptability

INTRODUCTION

The quantitative measurement of treatment outcome has long been the province of psychiatric researchers conducting investigations of the efficacy and effectiveness of care. Recently, some investigators have suggested that scales should be used to monitor the course of treatment in routine clinical practice (1). If the optimal delivery of mental health treatment depends, in part, on systematically assessing outcome, then precise, reliable, valid, informative, and user-friendly measurement is the key to evaluating the quality and efficiency of care in clinical practice. Clinicians are already overburdened with paperwork, and adding to this load by suggesting repeated detailed evaluations with such instruments as the Hamilton Rating Scale for Depression (HAMD) (2) is unlikely to meet with success. Self-report questionnaires are a cost-effective option because they are inexpensive in terms of professional time needed for administration, and they correlate highly with clinician ratings. Moreover, self-report scales are free of clinician bias, and are therefore free from clinician overestimation of patient improvement (which might occur when there is incentive to document treatment success).

However, even when using self-report scales, consideration should be given to how much time they take to complete and how burdensome they are perceived to be. Patients should find the measure user-friendly and the directions easy to follow. The scale should be brief, ideally taking no more than 2–3 minutes to complete, so that upon repeated administration at follow-up

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visits patients are not inconvenienced by the need to come for their appointment 10–15 minutes early in order to complete the measure.

We are not aware of any studies asking patients to compare the burden imposed by completing different self-report depression scales. In the present report from the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project, we compared the acceptability of completing two depression scales—the Beck Depression Inventory (BDI) (3) and the Clinically Useful Depression Outcome Scale (CUDOS) (4). The CUDOS was designed to be brief (completed in less than 3 minutes), quickly scored (in less than 15 seconds), clinically useful (fully covering the DSM-IV symptoms of major depressive disorder), reliable, and a valid measure of symptom severity. Elsewhere, we described how the CUDOS could be used to determine if a patient's depression was in remission (5). We compared the acceptability of the CUDOS to the BDI because the BDI is the most widely used self-report measure of depression severity.

METHODS

The feasibility and acceptability of incorporating the CUDOS into routine clinical practice was examined in two studies of depressed psychiatric outpatients who were in ongoing treatment. In the first study, the amount of time needed to complete the CUDOS during a follow-up appointment with a psychiatrist was recorded in a consecutive series of 50 depressed outpatients presenting at a follow-up visit. The group included 12 (24.0%) men and 38 (76.0%) women who ranged in age from 22 to 78 years (M = 48.0, SD = 13.9). The patients also completed a questionnaire assessing how burdensome it was to complete the scale during the visit (0 = very little burden, 3 = a large burden) and their willingness to complete the scale at every visit to help monitor the progress of their treatment (0 = not at all willing, 3 = very willing to fill it out at every visit). Patients were told not to put their name on the forms in order to reduce the potential bias due to patients' reluctance to acknowledge their objection to filling out the scale and thereby displease the clinicians and researchers. Of course, this bias cannot be completely eliminated, but anonymous scale completion makes it less likely.

In the second study of feasibility, a separate sample of 50 depressed outpatients completed both the CUDOS and the BDI during a follow-up visit. This sample included 21 (42.0%) men and 29 (58.0%) women who ranged in age from 18 to 61 years (M = 39.6, SD = 11.0). The order of the forms was counterbalanced. After completing the two questionnaires, the patients completed a questionnaire asking which of the two measures took less time to complete, was easier to understand, less burdensome to complete, and more acceptable to complete at every follow-up appointment. The patients were not aware that we had developed one of the two questionnaires they were comparing. The Rhode Island Hospital institutional review committee approved both research protocols, and all patients provided informed, written consent.

Because the CUDOS is a relatively new instrument, we briefly describe the scale and its psychometric properties. A more detailed description of the scale's reliability and validity is available elsewhere (6). The CUDOS contains 18 items assessing all of the DSM-IV inclusion criteria for MDD as well as psychosocial impairment and quality of life. The 16 symptom items were derived from a larger pool of 27 items. Alternative wordings of items were written, and the psychometric performances of the alternative items were compared to select the best performing versions of the items. Compound DSM-IV symptom criteria referring to more than one construct (e.g., problems concentrating or making decisions, insomnia, or hypersomnia) were subdivided into their respective components, and a CUDOS item was written for each component. The individual symptoms assessed by the CUDOS are depressed mood, loss of interest in usual activities, low energy, psychomotor agitation, psychomotor retardation, guilt, worthlessness, thoughts of death, suicidal ideation, impaired concentration, indecisiveness, decreased appetite, increased appetite, insomnia, hypersomnia, and hopelessness. The CUDOS also includes items assessing global perception of psychosocial impairment due to depression and overall quality of life. A copy of the scale is reprinted in the Appendix, and an electronic copy is available from M.Z.

On the CUDOS the respondent is instructed to rate the symptom items on a 5-point Likert scale indicating "how well the item describes you during the past week, including today" (0 = not at all true/0 days, 1 = rarely true/1–2 days, 2 = sometimes true/3–4 days, 3 = usually true/5–6 days, 4 = almost always true/every day). A Likert rating of the symptom statements was preferred in order to keep the scale brief. Scales such as the BDI, Diagnostic Inventory for Depression (7), and Inventory of Depressive Symptoms (8) assess symptoms with groups of 4 or 5 statements and are thus composed of 80 or more statements. These scales take respondents 10–15 minutes to complete, and this was considered too long for regular use in clinical practice in which the scale would be routinely administered at follow-up appointments. Shorter versions of some of these scales have been developed, but they are less comprehensive in their symptom coverage (9, 10).

As described elsewhere, the initial studies of the reliability and validity of the CUDOS have indicated that the scale has strong psychometric properties (4, 5, 6). Briefly, 568 psychiatric outpatients completed the scale, and the internal consistency reliability coefficient was .90. Test-retest reliability examined in 176 patients was .92. The convergent and discriminant validity of the CUDOS was examined in 204 patients who completed a package of questionnaires at home less than a week after completing the CUDOS. The CUDOS was more highly correlated with the BDI (r = .81) than with measures of the other symptom domains (mean of correlations = .35). Moreover, the CUDOS was nearly as highly correlated with the Hamilton Rating Scale for Depression (r = .69) and the

Clinical Global Index (CGI) of severity (r = .71), clinician ratings of the severity of depressive symptoms, as with the self-rated BDI.

The BDI is a 21-item self-report inventory that measures the cognitive and vegetative symptoms of depression. It is the most widely used self-administered measure of depression with well-established reliability and validity (11).

To compare differences between the two measures in terms of time completion, perceived burden, understandability, and preference for future completion, we conducted four separate tests of approximate inference for a single proportion on those patients who made a clear selection. Using this test, a z-score is computed from the observed proportions of favorability for the two scales and compared against a null hypothesis of equivalent selection.

RESULTS

In study 1, the amount of time to complete the CUDOS during a follow-up visit was recorded in 50 depressed outpatients seen in ongoing treatment. All but 2 patients completed the scale in less than 3 minutes (mean = 102.7 seconds, SD = 42.7). Almost all patients considered questionnaire completion very little or a little burdensome (98.0%, n = 49), and no patient perceived it as very burdensome (Table 1). More than 90% of patients indicated a willingness to complete the CUDOS at every visit in the future if their clinician believed that it was helpful (94.0%, n = 47).

In study 2, an independent sample of 50 depressed patients completed the CUDOS and the BDI and a questionnaire comparing the acceptability of each measure. Half the patients completed the CUDOS first. Because there was no effect of the order of administration, the results were combined for the entire sample. Significantly more patients indicated that the CUDOS took less time to complete (64.0% vs. 12.0%, z = 4.04, p < .001; 24% indicated no difference between the two measures) and was less of a burden to complete (Table 2) (z = 3.48, p < .001). The majority of patients indicated that the two scales were equally understandable (56%). Although twice as many patients indicated that the CUDOS was easier to understand, this difference was not significant (30.0% vs. 14.0%, z = 1.47, p > .05). Almost half (46%) of the patients did not express a preference for either scale to be used for regular outcome evaluation, though nearly three times as many patients indicated that they would prefer to complete the CUDOS to monitor the outcome of treatment (40.0% vs. 14.0%, z = 2.31, p .05).

Table 1 Perceived Burden in Completing the Clinically Useful Depression Outcome Scale (CUDOS) in 50 Depressed Outpatients

Degree of burden	% (n)
Very little burden	84.0(41)
Little burden	14.0 (7)
Moderate burden	2.0 (1)
Large burden	0.0 (0)

Table 2 Relative Burden of Completing the Clinically Useful Depression Outcome Scale (CUDOS) and Beck Depression Inventory (BDI) (n = 50)

Relative burden	% (n)
CUDOS less burdensome	50.0 (25)
BDI less burdensome	10.0 (5)
No difference between the scales	40.0 (20)

DISCUSSION

Although self-administered questionnaires are not impositions on the clinicians' time, they are nonetheless a burden on patients' time. Therefore, clinicians who are considering the routine use of self-report scales to assess outcome should consider scale length, as this might impact upon patients' acceptability of such assessments. In our first study of the CUDOS, we found that only one patient found its completion more than minimally burdensome, and almost all patients expressed a willingness to complete the measure at every follow-up visit if their clinician believed it would be helpful. Thus, from a consumer-oriented perspective, the CUDOS achieved high levels of patient acceptability.

In the second study we compared the acceptability of the CUDOS with the BDI, the most widely used self-report depression scale. The CUDOS was reported to take less time to complete and was perceived as less burdensome than the BDI. Although we did not assess the respective completion times of the CUDOS and BDI in this study, it is not surprising that patients reported that the BDI took longer to complete because it requires the patient to read more than 80 statements. Importantly, not only did the patients not perceive the CUDOS as less time-consuming and burdensome to complete, they indicated a greater willingness to complete it routinely in order to assist their clinician in monitoring their progress.

A consumer-friendly reliable and valid self-administered questionnaire can improve the efficiency of the clinical encounter and allow clinicians to spend more time discussing topics other than symptoms. In this era, when many clinical encounters are 15-minute medication visits, increased efficiency can make the visit more meaningful and beneficial to both clinicians and patients. The brevity of the CUDOS lends itself to regular administration in clinical practice. Although brief, it nonetheless covers the full range of DSM-IV diagnostic criteria and thus provides clinically useful information. Other scales such as the Diagnostic Inventory for Depression (7) and the Quick Inventory for Depressive Symptoms (9) likewise cover all of the DSM-IV diagnostic criteria for depression. However, the items on these scales are constructed similar to the BDI, thereby taking more time to complete and perhaps reducing the feasibility of routine clinical use. The 9-item Patient Health Questionnaire (PHQ-9) (12) is another brief self-report measure assessing each of the nine DSM-IV diagnostic criteria of major depressive disorder using a Likert

scale similar to the CUDOS. In fact, because it contains fewer items than the CUDOS, it may take even less time to complete. However, the advantage offered by being somewhat briefer is offset by some loss of information. The PHQ-9 adheres to the construction of the DSM-IV criteria; thus compound DSM-IV criteria, which refer to more than one symptom (e.g., insomnia or hypersomnia, increased or decreased appetite), are represented by a single item on PHQ-9. Since treatment decision making might be influenced by whether a patient has problems sleeping or is sleeping too much, or has a poor appetite or is eating too much, the PHQ-9 does not capture potentially clinically significant information.

A limitation of the study was that it was based in a large general adult outpatient private practice setting in which patients had health insurance. Replication in samples with other demographic characteristics is warranted. Also, we only compared two scales. Comparisons of other self-report depression measures could provide information to guide clinicians as to which measure to incorporate into their clinical practice. We studied the original version of the BDI rather than the more recently developed revision. Perhaps the more recent version takes less time to complete, though both scales are constructed similarly, with respondents needing to select from a group of four statements which item most accurately reflects their current state. We therefore would expect the results to be similar for the BDI-II. Finally, the present studies did not compare the respective validities of the two measures as indices of treatment outcome. Because the CUDOS and BDI are highly correlated, we would expect them to be similarly sensitive to treatment effects, though this has not yet been studied.

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APPENDIX

INSTRUCTIONS

This questionnaire includes questions about symptoms of depression. For each item please indicate how well it describes you during the PAST WEEK, INCLUDING TODAY. Circle the number in the columns next to the item that best describes you.

RATING GUIDELINES

0 = not at all true (0 days)
1 = rarely true (1–2 days)
2 = sometimes true (3–4 days)
3 = often true (5–6 days)
4 = almost always true (every day)

During the PAST WEEK, INCLUDING TODAY . . .

1. I felt sad or depressed	0 1 2 3 4
2. I was not as interested in my usual activities	0 1 2 3 4
3. My appetite was poor and I didn't feel like eating	0 1 2 3 4
4. My appetite was much greater than usual	0 1 2 3 4
5. I had difficulty sleeping	0 1 2 3 4
6. I was sleeping too much	0 1 2 3 4
7. I felt very fidgety, making it difficult to sit still	0 1 2 3 4
8. I felt physically slowed down, like my body was stuck in mud	0 1 2 3 4
9. My energy level was low	0 1 2 3 4
10. I felt guilty	0 1 2 3 4
11. I thought I was a failure	0 1 2 3 4
12. I had problems concentrating	0 1 2 3 4
13. I had more difficulties making decisions than usual	0 1 2 3 4
14. I wished I was dead	0 1 2 3 4
15. I thought about killing myself	0 1 2 3 4
16. I thought that the future looked hopeless	0 1 2 3 4

17. Overall, how much have symptoms of depression interfered with or caused difficulties in your life during the past week?
    0 not at all
    1 a little bit
    2 a moderate amount
    3 quite a bit
    4 extremely

18. How would you rate your overall quality of life during the past week?
    0 very good, my life could hardly be better
    1 pretty good, most things are going well
    2 the good and bad parts are about equal
    3 pretty bad, most things are going poorly
    4 very bad, my life could hardly be worse