Reliability and validity of the Symptoms of Depression Questionnaire (SDQ)

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Abstract

Current measures for major depressive disorder focus primarily on the assessment of depressive symptoms, while often omitting other common features. However, the presence of comorbid features in the anxiety spectrum influences outcome and may effect treatment. More comprehensive measures of depression are needed that include the assessment of symptoms in the anxiety–depression spectrum. This study examines the reliability and validity of the Symptoms of Depression Questionnaire (SDQ), which assesses irritability, anger attacks, and anxiety symptoms together with the commonly considered symptoms of depression. Analysis of the factor structure of the SDQ identified 5 subscales, including one in the anxiety–depression spectrum, with adequate internal consistency and concurrent validity. The SDQ may be a valuable new tool to better characterize depression and identify and administer more targeted interventions.

Keywords

anxious depression; assessment; depression

Introduction

Major depressive disorder (MDD) is one of the most common psychiatric disorders. The Centers for Disease Control has reported that on a national survey 9.1% of respondents met the criteria for current depression (significant symptoms for at least 2 weeks before the survey), including 4.1% who met the criteria for MDD.[1] MDD is associated with significant economic burden and morbidity, and is expected to represent the leading cause of disability worldwide by 2030.[2] According to the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5), in order to meet criteria for MDD, one would have to

exhibit either depressed mood or anhedonia and 4 additional symptoms, including difficulty with sleep, appetite disturbances, fatigue or low energy, low self-esteem or inappropriate guilt, psychomotor retardation or agitation, cognitive impairment, or suicidal ideation, and report significant distress or impairment in functioning. However, as reflected in the latest edition of the DSM (DSM-5), additional symptoms are often present among individuals with MDD. Specifically, the DSM-5 added a new MDD specifier, "with anxious distress," indicating the presence of anxiety symptoms.[3] This revision in the DSM-5 classification results from numerous studies showing that anxiety symptoms are often present among MDD patients, and that the co-occurrence of MDD and anxiety disorders has been observed in many settings.[4–7] Throughout paper, please condense more than two sequential reference numbers with an en dash (ie, 4–7, but 4,5). Moreover, additional anxiety symptoms that are not included in the "anxious distress" specifier are also common among patients with MDD, such as irritability. We previously observed that among 2307 outpatients who enrolled in the Sequenced Treatment Alternatives to Relieve Depression Study (STAR*D) on nonpsychotic major depression, significant irritability was present in 46% of the participants.[8] Similarly, several authors have described the presence of discrete anger attacks among individuals with MDD.[9,10]

Assessing the presence of anxiety symptoms among MDD patients is critical, as it has been associated with greater depression severity, slower remission and lower likelihood of remission on antidepressants, and increased suicidality.[11–13] A recent review has also outlined neurobiological differences between MDD with and without anxiety symptoms,[14] which may influence prognosis and treatment. However, current assessment measures of depression either do not assess anxiety symptoms or assess them in a limited fashion.[15] Measures that capture the common clinical features of MDD, as well as anxiety symptoms, may aid in the identification of patients who will require more tailored or intensive treatment strategies and may also contribute to studies on the pathophysiology of depressive disorders and the development of targeted new treatments. Finally, they may better capture improvement or worsening of symptoms and therefore treatment response. An instrument that assesses all the features of MDD is critical, as it will lead to improved treatment and outcome.

In light of the limitations of current depression measures, our group developed a more comprehensive scale for the assessment of MDD, the Symptoms of Depression Questionnaire (SDQ), which includes features that are often not assessed, such as irritability, anger attacks, and anxiety symptoms. Here we present its preliminary validation information.

Methods

Participants

The analyses reported below were conducted using 2 separate samples.

Sample 1 included 335 college students who were administered study questionnaires in the context of mental health screening conducted as part of a larger project on suicide prevention. This was a convenience sample of primarily female (62%) and Caucasian (78%)

college students, with a mean age of 19.5 years (standard deviation [SD] 1.7 years). We used this sample to conduct the factor analysis and to examine concurrent validity.

Sample 2 included 11 individuals enrolled in a study examining the effectiveness of open-label placebo. Briefly, this sample included 5 (45.6%) males and 6 (54.4%) females. Participants were on average 38.8 years old (SD 12.5). We used this sample to examine test–retest reliability of the SDQ.

Procedures

Sample 1—Data were collected at one mid-size Boston college. For a detailed description of recruitment procedures, please see Guidi et al.[16] Briefly, during an on-campus mental health screening study, staff explained to interested students the details and aims of the project and provided a consent form approved by the Partners Human Research Committee (IRB) and college IRB along with a packet of screening questionnaires. The screening packet included several measures about mental health symptoms. For the current study, we considered information collected by the SDQ, the Beck Depression Inventory,[17] the Beck Anxiety Inventory,[18] and the Suicide Behavior Questionnaire–Revised (SBQ-R).[19]

Sample 2—Participants in Sample 2 were enrolled in a randomized, controlled, pilot study to assess feasibility and effectiveness of an open-label placebo treatment for subjects with MDD. Eligible subjects were randomly assigned to 4 weeks of open-label placebo or to 2 weeks of wait-list/no-treatment followed by 4 weeks of open-label placebo. Following informed consent, subjects underwent a screening visit to determine eligibility. Participants randomized to the immediate treatment group were given the placebo pills after the screen visit. Patients randomized to the wait-list group were given the placebo pills 2 weeks after the screen visit. The SDQ was administered at the screening visit and afterward every 2 weeks for the duration of the study.

Measures

Symptoms of Depression Questionnaire (SDQ)—The SDQ is a 44-item, self-report scale designed to measure the severity of symptoms across several subtypes of depression. As such, the SDQ includes items that inquire about an extensive number of depressive symptoms. Items reflect a broad and heterogeneous collection of depression-related symptom features. Moreover, it includes several items that inquire about anxiety symptoms often present among depressed patients. The scale was developed by 2 of the authors (R.S. and M.F.) who chose the items on the basis of the most current knowledge of depressive symptoms and MDD subtypes. The 43 SDQ items are rated on a 6-point scale. Each item is rated based on a subject's perception of what is normal for the individual (score = 2), what is better than normal (score = 1), and what is worse than normal (scores = 3–6).

Beck Depression Inventory (BDI)[17]—The BDI is a 21-item, self-report scale designed to measure the severity of depressive symptoms. The scale has been extensively used in depression research and has demonstrated solid reliability and construct validity.[20] In the present study, the BDI had an internal consistency (coefficient α) of .90.

Beck Anxiety Inventory (BAI)[18]—The BAI is a 21-item, self-report measure of anxiety symptom severity. The BAI is considered the gold standard self-report anxiety measure and has been widely used in anxiety research. The BAI has been shown to have strong psychometric properties,[21] and in the present study, the BAI had an internal consistency (coefficient α) of .92.

The Suicide Behavior Questionnaire–Revised (SBQ-R)[21]—The SBQ-R is a brief, 4-item measure of suicidal ideation, desire, and behaviors. The scale is widely used as a screening measure for suicide risk and as a measure of suicide severity. In the present study, the SBQ-R had an internal consistency (coefficient α) of .84 despite having only 4 items.[22]

Results

Factor Structure of SDQ (Table 1)

A principal axis factor analysis (PAF) was employed to determine the internal structure of the 43 SDQ items. Prior to conducting the PAF, a parallel analysis (PA) was undertaken to help determine the number of meaningful factors that could be extracted from the PAF.[22,23] The first 6 random eigenvalues generated by the PA were 1.83, 1.72, 1.66, 1.60, 1.55, and 1.50, while the first 6 real eigenvalues generated by the PAF were 14.17, 2.64, 2.05, 1.96, 1.55, and 1.46. Although the sixth eigenvalue generated by the PAF was greater than 1, it was also lower than the one generated by the PA, suggesting that 5 meaningful factors were present in the SDQ matrix. The 5 factors were extracted and varimax rotated to improve interpretability. These 5 factors contained meaningful (.35 or greater) loadings for 43 of the 44 items. Table 1 shows the factor loadings for the SDQ items. While a number of multiple loadings were observed, only 8 SDQ items failed to achieve a clear primary loading (primary factor loading of .35 and .10 greater than its secondary loading) on a factor. Each SDQ item was assigned to a subscale based on its strongest factor loading.

As Table 1 shows, the first factor was marked by SDQ item 20 ("How has your energy been over the past months?") and item 7 ("How has your motivation/interest/enthusiasm been over the past month?"). This factor appears to tap a dimension of lassitude, mood, and cognitive and social functioning. The second factor was marked by item 23 ("How agitated have you felt over the past month?") and item 24 ("How irritable have you felt over the past month?"). This factor appears to capture anxiety, agitation, irritability, and anger. The third factor was marked by item 10 ("How has your outlook on life been over the past month?"), which measures the extent to which one wishes to be dead, and by item 11 ("How has your outlook on suicide been over the last month?"), which measures the extent to which one wishes to kill oneself. Therefore, it appears that factor 3 assesses suicidal ideation. The fourth factor was marked by item 14 ("How has your ability to fall asleep been over the past month?"), which assesses disruptions in sleep quality. The fifth factor was marked by item 31 ("Have you gained weight over the last month?"), which seems to capture changes in appetite and weight. Only one item, item 40 ("How has your sexual functioning been over the last month?"), failed to load (.35) onto a factor. This item had its highest loading (.298) and strongest correlation to factor 1, and was therefore assigned to that factor.

Scale and Item Level Analyses

Table 2 presents the basic scale and item-level analyses for the SDQ Full Scale and subscales along with the properties of the concurrent validity measures (BDI, BAI, and SBQ-R). The SDQ Full Scale had excellent internal consistency (.94), low mean inter-item correlation, and only 2 items with adjusted item-to-scale correlations below the boundary of .30.[24] The SDQ subscales 1, 2, and 3 showed good internal consistency (.85–.91), while the SDQ subscales 4 and 5 had internal consistencies that were slightly below the acceptable level of .80 (.78 and .71, respectively), as recommended by Nunnally and Bornstein.[24] The lower internal consistency of these 2 subscales likely results from the limited number of items assigned to each scale (3 and 4 items, respectively).

Concurrent Validity

Correlation analyses were used to evaluate the concurrent validity of the SDQ Full scale and subscales (Table 3). Correlations were obtained to examine the relationships of the SDQ Full Scale and subscales with the BDI, BAI, and SBQ-R. The SDQ Full Scale had strong significant correlations with all the concurrent validity scales, but was most strongly associated with depression, as measured by the BDI (.85). The SDQ Subscales were all strongly correlated with depression (BDI), but also revealed a meaningful pattern of secondary correlations. For example, SDQ Subscale 2 (anxiety, agitation, irritability, and anger) had the highest correlations with anxiety (BAI, .70), and SDQ Subscale 3 (suicide, self-harm, and worthlessness) had a high correlation with depression (.75) and suicide (SBQ-R, .57) and lower correlation with anxiety (.56).

While the SDQ is not intended to be used as a diagnostic tool, it might be helpful for clinicians and researchers to have an indication of depressive symptoms severity associated with SDQ score ranges. Thus, we determined the percentile equivalent SDQ scores for common BDI score depression benchmarks. Specifically, a BDI-I of 0–9 indicates no or minimal depression, 10–18 indicates mild depression, 19–29 indicates moderate depression, and 30–63 indicates severe depression. In the present sample, a BDI score of 9 fell at the 75th percentile, and the corresponding SDQ score was a 79; likewise the BDI score of 19 fell at the 91st percentile, and the corresponding SDQ score was 105; last, a BDI score of 29 fell at the 98th percentile of the sample, and the corresponding SDQ score was a 133. Using these SDQ scores (79, 105, and 133) and ranges, clinicians and researchers can estimate mild, moderate, and extreme depressive severity. However, these scores have not been replicated in other samples, and therefore should be considered preliminary at best.

Test–Retest Reliability

Test–retest reliability was conducted on data from Sample 2, which included 11 subjects who completed the SDQ approximately 2 weeks apart. Given the limited sample size, we restricted the test–retest analyses to the SDQ Full Scale. For these subjects, the test–retest reliability for the SDQ Full Scale was .80 ($P<.01$).

Discussion

This study examined the validity and reliability of a novel scale, the SDQ, which was developed to more fully capture the heterogeneity of symptom presentations of depressive disorders than current, widely used scales for MDD. The SDQ Full Scale had excellent internal consistency, low mean inter-item correlation, and good temporal stability. Moreover, the SDQ includes 5 meaningful factors, each with adequate reliability and concurrent validity. SDQ factors 1, 3, 4, and 5 assess psychological and physiological symptoms that are typically included in measures of depression. Factor 1 measures common dimensions of depressive symptoms including lassitude, energy, mood, and cognitive, and social functioning (subscale 1). Factor 3 includes items on outlook on life, pessimism, suicide, self-harm, and worthlessness (subscale 3). The validity of these 2 factors is supported by their strong correlation with the BDI. Moreover, subscale 3, which captures suicide ideation and worthlessness, had a high association with a specific measure of suicide. Factors 4 and 5 measure physiological features of depression, namely sleep difficulties and changes in appetite/weight, respectively. Given that these 2 factors focus on specific aspects of depression, they had a lower, though still significant, correlation with the total score of the BDI. The most innovative aspect of SDQ is its inclusion of a factor that measures anxiety, agitation, irritability, and anger. Our findings indicate that subscale 2 has strong reliability, and a review of its items suggests that it also has good construct (face) validity. Moreover, concurrent validity was supported by the fact that SDQ factor 2 was the SDQ subscale with the highest correlation with the BAI.

One of the strengths of the SDQ is that it includes several items that assess anxiety symptoms, which are often present among depressed patients. To date, in order to evaluate anxiety symptoms among depressed patients, some clinicians would administer a measure of depressive symptoms as well as a separate measure of anxiety. However, the administration of 2 separate measures does not allow accurate determination of a patient's response to treatment. For example, it would be difficult to determine whether a person is responding to treatment in the case where the depression measure would indicate improvement while the anxiety measure would indicate worsening.

Thus, the administration of 1 measure that assesses depressive symptoms as well as anxiety symptoms would best guide treatment. Although scales of depression that include items measuring anxiety and tension exist, the number of items addressing these areas is low, and the scales tend to omit other important features of depression. For example, the Hamilton Depression Rating Scale (HAM-D)[25] is a 17-item scale that includes only 3 items measuring anxiety, and it does not inquire separately about other important aspects of depression that are included in the SDQ, such as hypersensitivity to criticism and irritability. Similarly, the Quick Inventory of Depressive Symptomatology (QIDS),[26] another very common 16-item measure of depression, includes only *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (DSM-IV) symptoms of depression. To our knowledge, the SDQ is the most comprehensive measure of depression available, as it includes items on depression as well as on anxiety and irritability. Given that anxious depression features are associated with greater severity of illness[10,27] and lower response and remission rates to standard treatments,[11] and that depression with irritability and anger attacks is characterized

by distinctive psychological and neurobiological features,[13] the SDQ and its subscales may provide a more complete characterization of depressed patients along clinically and biologically meaningful dimensions. Thus, the SDQ provides information on symptom severity on a more comprehensive level than previous scales and may be able to better inform treatment.

A limitation of the study is that the measure was developed primarily on the bases of a theoretical conceptualization of what symptoms constitute depression. The SDQ was not developed based on a method of identification of relevant items. Moreover, items were developed by 2 of the authors on the bases of their extensive clinical and research knowledge. Patients were not consulted on the level of comprehension of the items. However, many items include clarification in parentheses of terms that respondents may not be familiar with (items 3, 8, and 10), and the options of answers provide further clarification. Nonetheless, future studies are needed to further evaluate the level of understanding of the items and their content validity. An additional limitation is the fact that the factor analysis was conducted among young, generally healthy, college students with low levels of depressive symptoms. Future studies are needed to determine whether our results are generalizable to diverse, clinical populations. Despite these limitations, the SDQ appears to have face validity, concurrent validity, and high reliability.

Conclusion

In summary, we found that the SDQ is a valid measure of depression. It encompasses 5 subscales, with good convergent validity, as shown by a high correlation with other measures of depression, anxiety, and suicide ideation. Given that symptoms of anxiety and anger are common among depressed patients, the SDQ represents a valid and novel measure that assesses a more complete spectrum of physical and cognitive depressive symptoms than previous scales, and will be a valuable new tool in efforts to better characterize depression and identify and administer more targeted interventions.

Acknowledgments

Appendix 1

Name or ID #:_____   Date: _____

MM   DD   YYYY

Symptoms of Depression Questionnaire (SDQ)

Please answer all questions by circling the correct answer or the answer which seems the most appropriate to you.

Instructions: Please read each item and circle the number above the statement that you think applies to you. Some questions use the words "minimally," "moderately," "markedly," and "extremely." Minimally means that this item happens to you only rarely or that it is mild when it happens. Moderately means that this item bothers you some of the time but that it does not interfere with your life in any way. Markedly means that this item bothers you quite a bit and that it causes you some problems in your life. That is, it interferes with your ability to do certain things that are important to you such as working, taking care of your family, or enjoying time with friends. Extremely means that this problem troubles you a lot and that it interferes with your ability to do a lot of things.

1) How has your mood been over the past month?

1	2	3	4	5	6
better than normal	normal	minimally sad	moderately sad	markedly sad	extremely sad

2) How responsive has your mood been over the past month?

1	2	3	4	5	6
more than usual	normal	minimally flat	moderately flat	markedly flat	extremely flat

3) How has your affect (or how you display your mood to the external world) been over the past month?

1	2	3	4	5	6

| better than normal | normal | minimally sad | moderately sad | markedly sad | extremely sad |

4) How prone to tears have you been over the past month?

1	2	3	4	5	6
less than usual	normal	minimally tearful	moderately tearful	markedly tearful	extremely tearful

5) How reactive have you been to positive things/events over the past month?

1	2	3	4	5	6
more than usual	normal	minimally less reactive	moderately less reactive	markedly less reactive	not reactive at all

6) How reactive have you been to negative things/events over the past month?

1	2	3	4	5	6
less than usual	normal	minimally more reactive	moderately more reactive	markedly more reactive	extremely reactive

7) How has your motivation/interest/enthusiasm been over the past month?

1	2	3	4	5	6
greater than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

8) How sensitive (e.g., thin-skinned) have you been to rejection/criticism over the past month?

1	2	3	4	5	6
less than usual	normal	minimally more reactive	moderately more reactive	markedly more reactive	extremely reactive

9) How optimistic have you been over the past month?

1	2	3	4	5	6
More optimistic than usual	normal	minimally pessimistic	moderately pessimistic	markedly pessimistic	extremely pessimistic

10) How has your outlook on life been over the past month?

1	2	3	4	5	6
more positive than usual	normal; happy to be alive	minimally wishing to be dead	moderately wishing to be dead	markedly wishing to be dead	extremely wishing to be dead

11) How has your outlook on suicide been over the past month?

1	2	3	4	5	6
more against it than usual	normally not thinking about it	minimally wishing to kill yourself	moderately wishing to kill yourself	markedly wishing to kill yourself	extremely wishing to kill yourself

12) How has your outlook on harming your body been over the past month?

1	2	3	4	5	6
more against it than usual	normally not thinking about it	minimally wishing to harm yourself	moderately wishing to harm yourself	markedly wishing to harm yourself	extremely wishing to harm yourself

13) How has your ability to fall asleep been over the past month?

1	2	3	4	5	6
easier than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

14) How has your ability to stay asleep in the middle of the night been over the past month?

1	2	3	4	5	6
easier than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

15) How has your ability to stay asleep around the time before waking up been over the past month?

1	2	3	4	5	6
easier than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

16) How has your wakefulness/alertness been over the past month?

1	2	3	4	5	6
more than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

17) How sleepy during the day have you been over the past month?

1	2	3	4	5	6
less than normal	not at all	minimally sleepy	moderately sleepy	markedly sleepy	extremely sleepy

18) How much have you been oversleeping at night over the past month?

1	2	3	4	5	6
less than normal	not at all	minimally increased	moderately increased	markedly increased	extremely increased

19) How much have you been oversleeping during the day over the past month?

1	2	3	4	5	6
less than normal	normal	minimally increased	moderately increased	markedly increased	extremely increased

20) How has your energy been over the past month?

1	2	3	4	5	6
greater than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

21) How heavy (in arms or legs) have you felt over the past month?

1	2	3	4	5	6
less than normal	not at all	minimally heavy	moderately heavy	markedly heavy	extremely heavy

22) How slowed down have you felt over the past month?

1	2	3	4	5	6
less than normal	not at all	minimally slowed down	moderately slowed down	markedly slowed down	extremely slowed down

23) How agitated have you felt over the past month?

1	2	3	4	5	6
less than normal	not at all	minimally agitated	moderately agitated	markedly agitated	extremely agitated

24) How irritable have you been over the past month?

1	2	3	4	5	6
less than normal	not at all	minimally irritable	moderately irritable	markedly irritable	extremely irritable

25) Have you had anger attacks (suddenly feeling very angry and like exploding with anger) over the past month?

1	2	3	4	5	6
never	almost never	rarely	sometimes	frequently	all the time

26) How anxious/worried have you felt over the past month?

1	2	3	4	5	6
less than normal	not at all	minimally anxious	moderately anxious	markedly anxious	extremely anxious

27) Have you had panic attacks over the past month?

1	2	3	4	5	6
felt calmer than normal	not at all	rarely	sometimes	frequently	all the time

28) How has your appetite been over the past month?

1	2	3	4	5	6
greater than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

29) Have you lost weight over the past month?

1	2	3	4	5	6
gained some weight	not at all	minimally	mildly	moderately	markedly

30) Has your appetite been excessive over the past month?

1	2	3	4	5	6
less	not at all	rarely	sometimes	frequently	all the time

31) Have you gained weight over the past month?

1	2	3	4	5	6
lost some weight	not at all	minimally	mildly	moderately	markedly

32) Have you had tachycardia/palpitations over the past month?

1	2	3	4	5	6
my heart rate felt slower than usual	not at all	rarely	sometimes	frequently	all the time

33) Have you had pains or aches over the past month?

1	2	3	4	5	6
fewer aches and pains than usual	not at all	rarely	sometimes	frequently	all the time

34) Have you had gastrointestinal (stomach or bowel) symptoms over the past month?

1	2	3	4	5	6
fewer symptoms than usual	not at all	rarely	sometimes	frequently	all the time

35) How has your ability to focus/sustain attention been over the past month?

1	2	3	4	5	6
greater than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

36) How has your ability to remember/recall information been over the past month?

1	2	3	4	5	6
greater than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

37) How has your ability to find words been over the past month?

1	2	3	4	5	6
greater than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

38) How has your sharpness/mental acuity been over the past month?

1	2	3	4	5	6
greater than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

39) How has your ability to make decisions been over the past month?

1	2	3	4	5	6
greater than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

40) How has your sexual functioning been over the past month?

1	2	3	4	5	6
better than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

41) How has your social functioning been over the past month?

1	2	3	4	5	6
better than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

42) How has your ability to work/study/function at home been over the past month?

1	2	3	4	5	6
better than normal	normal	minimally diminished	moderately diminished	markedly diminished	totally absent

43) How guilty have you felt over the past month?

1	2	3	4	5	6
less than normal	not at all	minimally guilty	moderately guilty	markedly guilty	extremely guilty

44) How worthless have you felt over the past month?

1	2	3	4	5	6
less than normal	not at all	minimally worthless	moderately worthless	markedly worthless	extremely worthless

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Table 1

SDQ item factor structure with varimax rotation

SDQ items	F-1	F-2	F-3	F-4	F-5	h²
SDQ 1	43	27	**53**	18	04	58
SDQ 2	**56**	15	13	06	07	36
SDQ 3	**48**	28	25	07	15	41
SDQ 4	21	**35**	24	11	00	24
SDQ 5	**55**	14	32	09	11	45
SDQ 6	25	**45**	42	16	00	47
SDQ 7	**60**	16	21	14	07	45
SDQ 8	23	**50**	36	04	02	43
SDQ 9	45	31	**51**	17	08	59
SDQ 10	27	16	**78**	08	06	72
SDQ 11	09	13	**76**	08	03	62
SDQ 12	06	17	**65**	06	10	47
SDQ 13	19	24	10	**60**	−04	47
SDQ 14	14	17	13	**77**	−06	67
SDQ 15	18	17	09	**65**	13	51
SDQ 16	**57**	30	07	20	−09	48
SDQ 17	**52**	33	03	24	−06	45
SDQ 18	**38**	19	18	−18	−10	26
SDQ 19	**35**	27	18	00	−17	26
SDQ 20	**65**	30	13	14	−09	56
SDQ 21	34	**43**	11	25	−05	38
SDQ 22	**55**	40	11	14	00	50
SDQ 23	28	**71**	15	13	−01	62
SDQ 24	32	**69**	10	12	04	61
SDQ 25	23	**55**	09	04	−06	37
SDQ 26	20	**56**	30	29	09	54
SDQ 27	19	**46**	21	21	09	35
SDQ 28	27	16	21	09	**49**	39

SDQ items	F-1	F-2	F-3	F-4	F-5	h²
SDQ 29	13	13	14	06	**65**	48
SDQ 30	07	27	04	15	**-53**	38
SDQ 31	09	02	-03	-00	**-81**	66
SDQ 32	15	**37**	19	03	05	20
SDQ 33	25	**44**	11	28	-03	35
SDQ 34	13	**39**	06	24	-10	25
SDQ 35	**52**	31	11	28	10	48
SDQ 36	**60**	20	-01	07	03	40
SDQ 37	**47**	09	13	07	02	25
SDQ 38	**53**	29	09	13	05	41
SDQ 39	**46**	44	32	00	09	52
SDQ 40	29	03	16	04	00	12
SDQ 41	**52**	16	43	06	02	49
SDQ 42	**51**	27	12	18	08	39
SDQ 43	23	**48**	39	12	11	46
SDQ 44	34	40	**57**	07	11	62
% Variance	31.0	4.93	3.44	3.32	2.29	

N = 313. Factor loadings and commonalities (h²) are presented without decimal points. Primary item loadings are presented in bold.

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Table 2

Item level analysis of the SDQ Full Scale and Subscales

Scales	Items	Mean/SD	α	Mean inter-item r	Corrected item-total correlation <.30
SDQ-T	44	66.06/21.50	.94	.28	2
SDQ-1	18	24.43/9.66	.91	.36	0
SDQ-2	13	20.62/8.03	.88	.37	0
SDQ-3	6	6.77/4.06	.85	.53	0
SDQ-4	3	4.48/2.68	.78	.55	0
SDQ-5	4	5.11/1.39	.71	.39	0
BDI	21	7.77/7.79	.90	.31	0
SBQR	4	5.14/3.25	.84	.58	0
BAI	21	7.84/8.97	.92	.37	0

Sample size (Ns) range from 308 to 325.

Table 3

SDQ Full Scale and Subscales concurrent validity correlations

Scales	BDI	SBQR	BAI
SDQ-T	.85	.55	.72
SDQ-1	.76	.44	.58
SDQ-2	.78	.53	.70
SDQ-3	.75	.57	.56
SDQ-4	.54	.37	.44
SDQ-5	.52	.32	.42

SDQ-T refers to the total score of the SDQ. SDQ-1 is the first subscale of the SDQ and includes items related to lassitude, mood, and cognitive functioning. SDQ-2 includes items related to anxiety, agitation, irritability, and anger. SDQ-3 includes items related to suicidal ideation. SDQ-4 assesses disruptions in sleep quality. SDQ-5 includes items on changes in appetite and weight.

Sample size (Ns) range from 308 to 325. All correlations are statically significant at $p < .001$.