

QUANTITATIVE BIPOLARITY SCALE (QBS)

User Instructions and Questionnaire

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Instructions for Interviewer

The original BSDS is a self-report form developed by S. Nassir Ghaemi, Christopher J. Miller, and Ronald W. Pies (Nassir Ghaemi S et al. (2005): Sensitivity and specificity of a new bipolar spectrum diagnostic scale. *Journal of affective disorders*. 84:273-277) and designed to screen for bipolar spectrum disorders. We adopted most of the BSDS content and the format but included additional items to cover symptoms in the DSM-5 bipolar I disorder diagnostic criteria, and also implemented a new severity rating on each symptom item. The QBS is designed as a quantitative phenotype to measure polarity and fluctuation of mood. QBS consists of 24 specific items and 1 summary item, all rated in 4-point Likert scales. Items 3 through 8 refer to depressive symptoms. Items 11 through 24 refer to manic symptoms. Items 1, 2, 9, and 10 refer to mood fluctuation. It is intended to capture the severity of an individual's long-term experience of bipolar disorder symptoms.

The changes from BSDS to QBS and the rationales are described here. We added items addressing the DSM-5 symptoms of inflated self-esteem and decreased need for sleep as well as items addressing racing thoughts and distractibility. The BSDS item "may be more talkative, outgoing, or sexual" was separated into three items as they are represented as different symptom criteria in DSM-5. An item in BSDS regarding increased substance use during periods of elevated mood was removed as this is not a specific criterion for bipolar disorder in DSM-5. Furthermore, as we aimed to develop a quantitative phenotype, a severity scale was implemented for each item and subjects were asked to rate each item from 0 to 3. For example, for the item "Sometimes during these high periods these individuals feel as if they had too much energy or feel hyper", the BSDS asked the participant to rate yes or no, while in the revision, we asked participants to rate 0 for "this description doesn't really describe me at all", 1 for "this description fits me to some degree but not in most respects", 2 for "this description fits me fairly well", and 3 for "this description fits me very well or almost perfectly."

The participant is asked to read the passage and decide how it fits them as a whole and then to go back and rate each individual item.

The anchors for the individual items are defined as the following:

0. This description doesn't really describe me at all
1. This description fits me to some degree, but not in most respects
2. This description fits me fairly well
3. This description fits me very well, or almost perfectly

The anchors for the summary item are:

0. This story doesn't really describe me at all
1. This story fits me to some degree, but not in most respects
2. This story fits me fairly well
3. This story fits me very well, or almost perfectly

The scale should be administered in a “self-rating under clinical interview environment” format. Treat this as a formal clinical interview. An interviewer should sit with the respondent as if this is a rater-administered interview and provide instructions. The interviewer should remain in the room as the respondent completes the scale, but should not directly inspect what the respondent is rating so that symptom rating remains strictly self-report. Raters can explain voluntary questions from the respondent to assist them in understanding the questions, but should not instruct on how to choose the actual rating. These procedures are to maximize consistency in the understanding of the questions and anchors, minimize variability in the style and judgment of interviewers, and ensure the respondent’s attentiveness to each question.

(Do not present the face page and the instruction pages to the respondent)

QBS

Read the following passage all the way through first, then follow the instructions which appear below it.

Some individuals notice that their mood and/or energy levels shift drastically from time to time _____. These individuals notice that, at times, their mood and/or energy level is very low, and at other times, very high _____. During their "low" phases, these individuals often feel a lack of energy, a need to stay in bed or get extra sleep, and little or no motivation to do things they need to do _____. They often put on weight during these periods _____. During their low phases, these individuals often feel "blue," sad all the time, or depressed _____. Sometimes, during these low phases, they feel hopeless or even suicidal _____. Their ability to function at work or socially is impaired _____. Typically, the low phases last for a few weeks, but sometimes they last only a few days _____.

Individuals with this type of pattern may experience a period of "normal" mood in between mood swings, during which their mood and energy level feels "right" and their ability to function is not disturbed _____. They may then notice they have a big shift or "switch" in the way they feel _____. Their energy increases above what is normal for them, and they often get many things done they would not ordinarily be able to do _____. Sometimes during these "high" periods, these individuals feel as if they had too much energy or feel "hyper" _____. Their self-esteem is often higher than what is normal for them during these time periods _____. During these times, they often do not need as much sleep as usual (feel rested after 3 or less hours a night) _____. Some individuals, during these high periods, may feel irritable, "on edge", or aggressive _____. During these periods, they may experience racing thoughts _____. They may have a hard time staying focused and not becoming distracted _____. Some individuals, during the high periods, take on too many activities at once _____. During the high periods, some individuals may spend money in ways that cause them trouble _____. They may be more talkative _____, outgoing _____ or more interested in sexual activities _____ during these periods. Sometimes, their behavior during the high periods seems strange or annoying to others _____. Sometimes, these individuals get into difficulty with co-workers or police during these high periods _____.

After you have read this passage, please decide which of the following most accurately describes you:

0. This story doesn't really describe me at all
1. This story fits me to some degree, but not in most respects
2. This story fits me fairly well
3. This story fits me very well, or almost perfectly

Now please go back and rate after each sentence in the passage above how accurately it describes you:

0. This description doesn't really describe me at all
1. This description fits me to some degree, but not in most respects
2. This description fits me fairly well
3. This description fits me very well, or almost perfectly