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Value of a One-Item OCD Severity Perception Screener

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Abstract Obsessive compulsive disorder (OCD) is a debilitating mental illness comprised of unwanted obsessions followed by repetitive rituals (American Psychiatric Association, 2000). The gold standard for measuring OCD severity is the Yale-Brown Obsessive-Compulsive Scale (YBOCS; Goodman et al. *Archives of General Psychiatry*, 46(11), 1006–1011, 1989). This study sought to understand how well individuals with OCD reported their severity levels through the use of a one-item severity perception screener compared to the YBOCS and the impact that the accuracy of this rating can have on disability and motivation. Data were collected from assessments from a free and openly available OCD self-help internet website. Findings conclude that individuals with OCD have a good understanding and ability to accurately rate their OCD severity level and warrant additional research to determine if a one-item OCD severity perception screener can serve as a quick assessment tool to help understand one's OCD severity level. Additionally, findings from this study conclude that inaccurately understanding one's OCD severity level is associated with disability and motivation levels around wanting to keep one's OCD versus challenge it. Future research should examine the validity of a one-item OCD severity perception screener and further examine the impact inaccurately rating one's severity level has on disability, motivation, treatment, and treatment outcomes.

Keywords OCD · Severity · Screener · Disability · Motivation

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Introduction

Obsessive-compulsive disorder (OCD) is a chronic, debilitating disorder characterized by recurrent, intrusive thoughts, ideas, or images that are experienced as unwanted (obsessions), followed by repetitive acts or mental rituals performed to reduce resulting anxiety (compulsions) (American Psychiatric Association, 2000). OCD is estimated to affect 2% of the global population (Bjorgvinsson, Hart, & Heffelfinger, 2007), making it the fourth most common psychological disorder after depression, substance abuse, and phobias (Masellis, Rector, & Richter, 2003). Individuals with OCD may spend up to 10 years before seeking treatment (Rasmussen & Tsuang, 1984) and up to 17 years prior to obtaining effective treatment (Jenike, 2004). Although effective empirically based interventions for OCD exist, only 40.5% of individuals with the disorder receive adequate treatment (Hollander & Wong, 1998), and an estimated 25% of individuals refuse treatment (Franklin & Foa, 1998); illness perception of one's OCD may play a role in this lack of treatment-seeking behavior. Illness perceptions are the beliefs

that individuals have about their mental illness and their understanding of the symptoms associated with the condition (Petrie, Jago, & Devcich, 2007). These perceptions may cause individuals with OCD to overrate or underrate their symptom severity, which may impact treatment outcomes. Perception of one's mental illness may have a significant impact on coping strategies, treatment perception, and medication adherence (Brown et al., 2001; Hagger & Orbell, 2003; Fortune, Barrowclough, & Lobban, 2004; Karasz, Sacajiu, & Garcia, 2003; Kucukarslan, 2012; Lobban, Barrowclough, & Jones, 2002). Although illness perception is recognized as an important factor in properly diagnosing mental health disorders, only one study to date has investigated it as a predictor of seeking treatment for OCD. Fernandez de la Cruz et al. (2015) explored illness perceptions and health-seeking attitudes about OCD and concluded that a lack of knowledge and understanding about the disorder and available treatment options influenced perception of OCD symptomology and subsequent treatment-seeking behavior. These findings suggest that perception of one's illness can impact attitudes about accessing appropriate care for the disorder. An additional gap in the literature is the lack of understanding of illness perception in relation to the negative effects of psychiatric disability. Such perceptions may present as another barrier for individuals in accessing care and seeking treatment for their OCD.

Poor mental health literacy is cited as an impediment for individuals seeking treatment for OCD (Coles, Heimberg, & Weiss, 2013). In a study that explored the attitudes of individuals regarding psychotherapy, participants reported insufficient knowledge about the signs and symptoms of mental health problems and found it difficult to discern when a condition had reached a stage that required professional services (Thompson, Bazile, & Akbar, 2004). As a result, mental health literacy may strongly affect understanding and perception of one's psychological symptoms, thereby influencing desire to seek proper treatment. Another study examined the effects of mental health literacy for generalized anxiety disorder (GAD), social anxiety disorder (SoAD), and major depressive disorder (MDD), and discovered that participants underrated mild and moderate SoAD cases, underrated GAD cases at all severity levels, and overrated all MDD cases (Paulus, Wadsworth, & Hayes-Skelton, 2015). These findings indicate that mental health literacy directly impacts whether individuals can accurately understand their mental health symptoms, which may contribute to a deficit in accessing appropriate care.

Additionally, self-perception and knowledge of one's mental illness may directly impact motivation to change in relation to OCD. An individual's motivation level is a pivotal factor in psychological treatment (Drieschner, Lammers, & van der Staak, 2004), and lack of motivation has been cited as a reason for treatment dropout, failure to comply, frequency of relapse, and other negative treatment outcomes (Ryan, Plant, & O'Malley, 1995). Because treatment for OCD is associated with high levels of discomfort and requires active participation during and between treatment sessions, an individual's motivation to change can predict treatment response and reduce the likelihood of premature termination of treatment (Vogel, Hansen, Stiles, & Götestam, 2006).

A gap in literature exists between illness severity perception and severity levels, disability and its relationship with motivation to change in a sample of individuals with OCD. To date, no published studies have examined the relationship between OCD severity perception and OCD severity scores per measurement outcomes. The aim of this study is to evaluate self-perception of OCD compared with a validated OCD measurement, explore perception and its relationship with psychiatric disability, and determine if a relationship exists between OCD severity perception and motivation to change in the treatment of OCD. Overall, this study seeks to understand if there is value in a one-item severity screener for OCD as evident by whether individuals with OCD have good insight into their illness severity as illustrated by accurately accessing their severity level.

Methods

The OCD Challenge (ocdchallenge.org/com) is a free, interactive self-help website designed for individuals with OCD (McIngvale, Bordnick, & Hart, 2015) and is the site of data collection (secondary data) for this internet-based research study. The OCD Challenge site was used as our data source to address our research question evaluating a one-item severity measure for OCD. The institutional review board (IRB) at Baylor University has approved the use of data for this project. Website dissemination took place via standard website recruitment for the OCD Challenge program. Individual users who accepted the terms of agreement (consenting to their data being used for research) indicated their ages as 18 years or older and who completed assessments required for this study via the website (both the self-perception of OCD severity question and the initial assessment of the Yale-Brown Obsessive Compulsive Scale (YBOCS; Goodman et al., 1989)) were included. Eight hundred and sixty-six participants met inclusion criteria and were assessed for this study.

Measures

Various demographic questions are assessed through the OCD Challenge website, including a single-item measure used to determine users' perception of their OCD severity. This question is assessed during the first phase of the website, prior to any formal measurements, by asking users to rate their OCD severity using response options including: mild, moderate,

severe, extreme, or would rather not say. Output from this assessment question is used throughout this study to assess self-perception of one's OCD severity. Categories for assessing self-perception of OCD severity did not include the sub-clinical option, which the YBOCS measurement does; therefore, this category was collapsed into the mild category for analyses.

The YBOCS is a validated measure used to assess OCD severity through 10 questions, which are divided into two categories, five questions on obsessions and five on compulsions (Goodman et al., 1989). Output measurement scores from the YBOCS lump individuals into one of five severity ratings: sub-clinical (0–7), mild (8–15), moderate (16–23), severe (24–31), and extreme (32–40) (Goodman et al., 1989). Each website users' first YBOCS score completed during the assessment phase of the website was used in this study. YBOCS measurement scores and individual responses to participants' perception of their OCD severity were examined to establish if a relationship between self-perception and OCD severity per YBOCS outcomes was evident, as well as its relationship with disability and motivation for change. Internal consistency of the YBOCS within our study sample was excellent with a Cronbach's alpha of .91.

Website participants were also evaluated using the Sheehan Disability Scale (SDS; Sheehan, Sheehan, & Raj, 1996) to examine whether a relationship among OCD severity perception, YBOCS severity scores, and disability was present. The SDS is a validated scale used to assess disability in three different areas: work/school, social, and family life. Selection options for the scale's various categories include the following: not at all, mildly, moderately, markedly, and extreme (Sheehan et al., 1996). Internal consistency of the SDS within our sample was good with a Cronbach's alpha of .86.

Participants' motivation for change was measured via output on the motivation scale completed by users of the OCD Challenge program. This scale was created as a way for individuals to assess their feelings and beliefs about changing their OCD and is divided into two categories: (1) why challenge my OCD and (2) why keep my OCD. Individuals can select applicable examples within each category and are provided with an option to describe their own reasons to challenge versus keep their OCD. Once the scale has been completed, a bar graph is generated depicting users' motivation levels for fighting versus keeping one's OCD. This scale was used to assess motivation for change and was compared to OCD severity perception.

Participants

The present study included 866 participants ranging from 18 to 72 years of age (M = 32.65, SD = 11.33). The sample was slightly skewed toward female (62.2%), and a majority (77.9%) was Caucasian followed by Asian/Pacific Islander (6.9%) and individuals who preferred not to disclose (4.7%). The majority of participants identified as Christian (36.1%), followed by non-religious (22.4%) and Catholic (18.4%).

All participants in the present study self-identified with OCD symptoms and visited the OCD Challenge website. The onset for OCD symptoms ranged from 0 to 66 years of age (M = 15.55, SD = 8.91). The most frequent method of referral to the OCD Challenge website was the internet (25.5%), followed by Google (20.6%), a professional (18.4%), and the International Obsessive Compulsive Foundation (18.0%). Severe was the most endorsed self-rating of symptoms (41.5%) followed by moderate (39.7%) and extreme (11.9%).

Results

Comparisons of the one-item self-reported severity perception level (severity perception) to measured YBOCS scores (measured symptom severity) revealed that the majority of participants accurately reported severity ratings (N = 452, 52.2%). Just over a quarter of participants under-reported the severity of their symptoms (N = 232, 26.8%), followed by those who over-reported (N = 182, 21.0%) (see Table 1). Further breakdown of comparisons, shown in Table 2, revealed that a rating of "severe" had the highest level of agreement (21.5%), followed by "moderate" (20.2%), "extreme" (7.4%), and finally "mild" (3.2%). Rater agreement was calculated using Cohen's kappa, which revealed fair agreement (Kappa = 0.30; $p < 0.001$).

Utilizing the groupings of participants who over-reported, under-reported, or accurately reported their symptoms, comparisons of means were calculated using analyses of covariance (ANCOVAs) controlling for measured symptom severity category, and post hoc comparisons using a Bonferroni procedure. Analyses examined motivations for treatment and disability. Motivations for treatment were measured by participants' reasons for both managing and keeping their symptoms. The covariate, measured symptom severity was significantly related to managing their symptoms [$F(1862) = 41.351$, $p < 0.001$, $r = 0.21$]. There was also a significant effect of illness severity perception on managing symptoms after controlling for measured symptom severity [$F(2,862) = 5.052$, $p = 0.007$, partial $\eta^2 = 0.012$]. Planned contrasts revealed that over-reporting symptoms was significantly related to an increase in the reasons for managing symptoms compared to both those who accurately reported [$t(862) = -1.073$, $p = 0.002$, $r = 0.10$] and under-reported [$t(862) = -1.204$, $p = 0.006$, $r = 0.09$] symptoms (Table 3). The covariate measured symptom severity was significantly related to keeping their symptoms [$F(1,862) = 53.082$, $p < 0.001$, $r = 0.24$]. There was no significant effect of illness

Table 1 Comparisons of the one-item self-reported severity perception level to measured YBOCS scores

Category	*N* (%)
Under report	232 (26.8)
Accurate report	452 (52.2)
Over report	182 (21.0)

severity perception on keeping symptoms after controlling for the effect of measured symptom severity [$F(2,862) = 0.667$, $p = 0.514$, partial $\eta^2 = 0.002$]. Planned contrasts revealed no significant difference between those who over- and under-reported symptoms [$t(862) = -0.047$, $p = 0.876$, $r = 0.01$] and those who accurately and over-reported their symptoms [$t(862) = 0.168$, $p = 0.481$, $r = 0.02$].

Disability was measured using the SDS and was calculated using the total score, as well as the family, social, and work subscales. The covariate, measured symptom severity was significantly related to overall disability [$F(1,862) = 583.213$, $p < 0.001$, $r = 0.63$], as well as its subscales work [$F(1,862) = 338.571$, $p < 0.001$, $r = 0.53$], family [$F(1,862) = 408.752$, $p < 0.001$, $r = 0.57$], and social [$F(1,862) = 457.782$, $p < 0.001$, $r = 0.59$]. There was also a significant effect of illness severity perception on overall disability after controlling for measured symptom severity [$F(2,862) = 55.213$, $p < 0.001$, partial $\eta^2 = 0.114$]. Similar significant results were found for the SDS subscales work [$F(2,862) = 30.420$, $p < 0.001$, partial $\eta^2 = 0.066$], family [$F(2,862) = 38.839$, $p < 0.001$, partial $\eta^2 = 0.083$], and social [$F(2,862) = 46.052$, $p < 0.001$, partial $\eta^2 = 0.098$].

Planned contrasts for overall SDS revealed that over-reporting symptoms was significantly related to an increase in disability compared to both those who accurately reported [$t(862) = -4.158$, $p < 0.001$, $r = 0.25$] and under-reported [$t(862) = -7.305$, $p < 0.001$, $r = 0.33$] symptoms. This same pattern held true across all SDS domains: work [accurate: $t(862) = -1.173$, $p < 0.001$, $r = 0.16$; under: $t(862) = -2.379$, $p < 0.001$, $r = 0.26$], family [accurate: $t(862) = -1.499$, $p < 0.001$, $r = 0.23$; under: $t(862) = -2.382$, $p < 0.001$, $r = 0.29$], and social [accurate: $t(862) = -1.486$, $p < 0.001$, $r = 0.24$; under: $t(862) = -2.544$, $p < 0.001$, $r = 0.31$].

Table 2 Breakdown of comparisons

Self-report	YBOCS category				
	Mild	Moderate	Severe	Extreme	Total
Mild	28	23	9	0	60
Moderate	52	174	109	9	344
Severe	10	81	186	82	359
Extreme	0	10	29	64	103
Total	90	288	333	155	866

Table 3 Means and standard error after controlling for severity

	Under report *M* (*SE*)	Accurate report *M* (*SE*)	Over report *M* (*SE*)
Managing motivations	10.20 (0.26)	10.33 (0.17)	11.40 (0.30)
Keeping motivations	3.12 (0.18)	3.34 (0.12)	3.17 (0.21)
SDS total	14.14 (0.42)	17.29 (0.27)	21.45 (0.48)
SDS work	4.07 (0.19)	5.28 (0.12)	6.45 (0.21)
SDS social	5.15 (0.16)	6.17 (0.10)	7.66 (0.18)
SDS family	4.96 (0.16)	5.84 (0.11)	7.34 (0.19)

Finally, Pearson's chi-squared test was conducted to determine the relationship between gender and illness perception. Results revealed a significant association between gender and perception $\chi^2(2) = 13.83$, $p = 0.001$. Based on the odds ratios, compared to those on target, females were more likely to under-report their symptoms (OR = 1.64) and less likely to over-report their symptoms (OR = 0.77) than males (see Table 4). No differences were found by race and ethnicity.

Discussion

Findings from this research study suggest that a majority of individuals with OCD have an accurate perception and understanding of their symptom severity. Individuals who report their symptoms differently from their measured YBOCS ratings are most likely to under-report their severity with females more likely to under-report their OCD severity compared to males. Individuals who under-report their OCD severity have higher levels overall of OCD severity per YBOCS measurement outcomes than individuals who over-report their symptom severity. Individuals who under-report their symptom severity report more reasons to keep their OCD, whereas individuals who over-report report less reasons for wanting to keep their OCD. Additionally, our results suggest that over-reporting significantly correlates to disability levels. Individuals who over-report their OCD severity levels have higher levels of disability than individuals who are both on target and under report, which could be due to a general inflation in overall reporting, or possibly due to a lack of mental health awareness, so further research is needed.

Our findings indicate that inaccurate perception of OCD severity correlates with overall measured severity, disability, and motivation for change. This comports with the literature surrounding perception of illness severity and the impact it can have on mental health issues. Our most meaningful finding indicated that the majority of participants with OCD reported their illness severity accurately; therefore, simply asking patients with OCD to rate their OCD severity may serve as an accurate way to understand symptom severity without the need for a full severity measure via the YBOCS.

Table 4 Association between gender and perception

		Gender		
		Female	Male	Total
Under report	Count	166	66	232
	% within perception	71.6%	28.4%	100.0%
	% within gender	30.8%	20.4%	26.8%
	% of total	19.2%	7.6%	26.8%
Accurate report	Count	274	178	452
	% within perception	60.6%	39.4%	100.0%
	% within gender	50.8%	54.4%	52.2%
	% of total	31.6%	20.6%	52.2%
Over report	Count	99	83	182
	% within perception	54.4%	45.6%	100.0%
	% within gender	18.4%	25.4%	21.0%
	% of total	11.4%	9.6%	21.0%
Total	Count	539	327	866
	% within perception	62.2%	37.8%	100.0%
	% within gender	100.0%	100.0%	100.0%
	% of total	62.2%	37.8%	100.0%

Collaborating with patients by getting their global impression of their illness severity may provide clinicians with valuable information to best plan and initiate treatment with clients in a timely manner. The YBOCS remains the recommended measurement tool to fully capture OCD severity levels; however, a simple one-item question when compared to a validated instrument may reveal important diagnostic information that could aid in addressing areas of disability and promoting motivation to change.

Limitations/Future Directions

Despite the significant findings of the present study, limitations must be noted. The OCD Challenge does not have a formal diagnostic assessment and is a voluntary self-help website for individuals who self-identify with OCD. All measures are completed individually by participants of the website in an informal research setting. Assessments used in this study, including the self-perception of OCD severity measure and the managing OCD symptoms measure are not validated measures, both of these measures were developed for the website and are informal measures used to capture an understanding of these areas. The managing OCD symptoms measure (motivation scale) is a measure that can be edited throughout the program; therefore, there is a possibility that some of the responses from the motivation scale may have been edited since original entry. Additionally, findings from this study are referenced for a self-identified OCD population. Individuals who do not self-identify as having OCD may not have similar symptom and diagnosis awareness. In such cases, a formal, more detailed measure such as the YBOCS may be better suited for a non self-identifying group versus a one-item screener.

Future research should further examine the differences in individuals who are not accurately rating their OCD severity and examine reasons for our findings, including reasons for higher levels of disability with discrepant severity reporting. Furthermore, future directions should address a validated measurement for motivation for change within an OCD sample with comparisons to severity perception ratings, and the motivation for change assessment should be assessed simultaneously with the other reported measures. Further research should address self-perception of OCD with the sub-clinical category option to match the YBOCS, as it was noted previously that this was not available in the present data. Finally, future studies should address self-perceptions of OCD and its impact specifically related to access to care and treatment outcomes. The overall severity levels of the users of this website proved to be in much higher ranges than should be expected within a self-help cohort. As such, a need for research regarding access to care across severity levels is evident.

Conclusion

Although previous literature concerning perceptions of mental illness symptom severity exists, there are no reported studies to date addressing OCD severity perceptions and its impact on individuals with OCD. Within our cohort a significant relationship exists regarding OCD symptom perception and subsequent factors. Our findings indicate that inaccurate knowledge of one's OCD symptom severity directly correlates with motivation for treatment and disability. With an increased understanding of one's illness and insight into its severity level, disability and motivation for change may be positively impacted. Continued research focusing on perception of OCD severity is warranted in order to confirm these findings and to better understand the impact they can have on education around OCD, treatment, and treatment outcomes. Additionally, our findings suggest that a basic question of asking individuals to rate their OCD severity level may be as meaningful as a standardized measure. Our findings indicated that majority of individuals in our study accurately rated their OCD symptom severity in a one-item OCD severity perception screener. Incorporating a simple one-item severity screener in which clinicians ask clients to rate their perceived OCD severity levels may have a positive impact on clinicians, clients, and the mental health field. A one-item question regarding symptom severity decreases assessment time and empowers clients through the strength of their self-report. Future studies should further explore the efficacy of a one-item severity measure for OCD.

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