Volume 42   Issue 1
March 2011
ISSN 0005-7916

ELSEVIER

JOURNAL OF
behavior therapy
and experimental psychiatry

A JOURNAL OF EXPERIMENTAL
PSYCHOPATHOLOGY

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Insight in obsessive-compulsive disorder: A comparative study of insight measures in an Israeli clinical sample

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ARTICLE INFO

ABSTRACT

Background and objectives: Attempts to identify the characteristics of OCD patients with poor insight have not produced a coherent picture. This may be related to the wide variety of the available insight assessment tools. The study aimed to compare five principal measure for assessing insight in OCD and to investigate the relationships between insight and central demographic and clinical variables.
Methods: Sixty outpatients diagnosed with OCD (36 men, 24 women) were assessed with the following insight measures: DSM-IV insight criterion, Over-Valued Ideas Scale (OVIS), Item 11 of the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), Brown Assessment of Beliefs Scale (BABS) and Beck Cognitive Insight Scale (BCIS).
Results: Correlation coefficients indicated high correspondence between all insight measures with the exception of the BCIS. At the same time, the relations of the various insight measures with demographic and clinical variables were distinctive and in some cases measure-specific. The most robust correlation was between insight and current medical treatment, so that medicated participants showed higher insight levels on most insight measures compared to non-medicated participants. Some insight measures were correlated with co-morbidity, onset age and gender. Insight levels did not correlate with OCD symptom severity.
Limitations: Limitations of this study include its cross-sectional design, modest sample size and an incomplete representation of the available insight measures.
Conclusions: The diversity of measures used in previous studies cannot account for the inconsistent findings on the role of insight in OCD.

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1. Introduction

The historical definition of OCD required that the patient recognize the irrational and illogical nature of her obsessions and compulsions (Kozak & Foa, 1994). As early as 1925, Schneider's diagnostic criteria of OCD included a subjective feeling of being compelled to think, sense or act, combined with an understanding that the obsessions are absurd and ego-dystonic, and attempts to resist them (Eisen & Rasmussen, 1993). The DSM-III-R (American Psychiatric Association, 1987) diagnostic criteria included the requirement that "the obsession… [is] experienced as invasive and irrational" and that "the person acknowledges his behavior as extreme or irrational" (p. 247).

Alongside this accepted criterion, clinicians have observed that some OCD patients do not recognize the irrationality or extremity of their symptoms. For example, Lewis (1936) claimed that "the recognition of the obsession as senseless is not an essential characteristic" and recognition that it is absurd…is not always present" (cited in Catapano, Sperandeo, Perris, Lanzaro, & Maj, 2001). This observation was corroborated by the field trial of Foa and Kozak (1995), which documented that there are OCD patients who lack insight into their symptoms, and suggested that insight in OCD lies on a continuum ranging from good to poor. A surprising finding of this study was that only 13% of participants were sure that nothing bad would happen if they did not act on their compulsions, indicating that only a small percentage of OCD participants had full insight regarding their symptoms. As a result of these findings, the DSM-IV (American Psychiatric Association, 1994) no longer requires insight as an OCD diagnostic criterion and allows a sub-diagnosis of "OCD with poor insight" (p. 423).

Attempts to identify the characteristics of OCD patients with poor insight have examined the links between insight and a variety of

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demographic and clinical factors (e.g., Bellino, Patria, Ziero and Bogetto, 2005; Foa & Kozak, 1995; Koren et al., 2004; Marazziti et al., 2002; McEvoy et al., 1989). Overall, it appears that the findings in this area have not converged into a coherent picture (see Appendix for summary of results). For example, while some studies found that poor insight correlated with greater symptom severity (De Berardis et al., 2008; Ravi Kishore, Samar, Janardhan Reddy, Chandrasekhar, & Thennarasu, 2004) or that insight improved as symptoms weakened (Eisen et al., 2001), others found no relations between these variables (Aigner et al., 2005; Bellino et al., 2005; Eisen, Phillips, Coles, & Rasmussen, 2004; Foa, Abramowitz, Franklin, & Kozak, 1999). Similarly, Ravi Kishore et al. (2004) found that poor insight correlated with early onset age, while Catapano et al. (2001) and Turksoy, Tukel, Ozdemir, and Karali (2002) did not find such a relationship. Likewise, Ravi Kishore et al. (2004) and Bellino et al. (2005) found correlations between duration of illness and insight, but Catapano et al. (2001) did not. Foa (1979) and Solyom, Dinicola, Phil, Sookman, and Luchins (1985) found that participants with poor insight did not gain substantially from behavioral therapy, while Steketee and Shapiro (1995) concluded that poor insight did not predict response to behavioral treatment. In contrast to this complex picture, there is a remarkable agreement that poor insight is characterized by poor response to specific serotonin reuptake inhibitors SSRIs (Catapano et al., 2001; Eisen & Rasmussen, 1993; Eisen et al., 2001; Erzegovesi et al., 2001; Foa et al., 1999; Neziroglu, Pinto, Yaryura-Tobias, & McKay, 2004; Ravi Kishore et al., 2004; Solyom et al., 1985).

The inconsistent findings in regard to insight in OCD may be related to specific characteristics of the available assessment tools. As shown below, the lack of a widely accepted tool for assessing insight in OCD has led researchers to rely on a wide array of measures. Such a diversity of tools is likely to lead to inconsistent results, as has been demonstrated in relation to depression (Anderson, Dill, Miller, Riger, & Sedikide, 1994). Available insight measures include Item 11 of the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS; Goodman, Price, Rasmussen, Mazure, Delgado et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann et al., 1989); Fixity of Belief Scale[1] (Foa et al., 1999; Foa & Kozak, 1995); Over-Valued Ideas Scale (OVIS; Neziroglu, Yaryura-Tobias, McKay, Stevens, & Todaro, 1999); Brown Assessment of Beliefs Scale (BABS; Eisen, Phillips, Beer, Atala, & Rasmussen, 1998); The Beck Cognitive Insight Scale (BCIS; Beck, Baruch, Batler, Steer, & Warman, 2004); and the insight criterion according to the DSM-IV (American Psychiatric Association, 1994).

Generally speaking, all the above measures assess the patient's acknowledgment of her symptoms as irrational and her understanding of the implications of not performing compulsions. While this common feature accounts for their use as measures of insight in OCD, these instruments differ considerably in their conception of insight and how it is assessed. Some measures (the BABS, OVIS, and Item 11 of the Y-BOCS) present the patient with clear and direct questions about her symptoms, whereas others (the DSM-IV, one item in the BABS) rely on the interviewer's impression. The BCIS is self-administered, whereas all others are administered in the form of a discussion between interviewer and patient. Finally, the DSM-IV and the Y-BOCS conceptualize insight as unidimensional and assess it with a single item, whereas the other tools conceptualize insight as multi-dimensional and score it as sum of several scales. It is important to note that while these scales vary between instruments (see Measures below), they all include items assessing patients' level of conviction about their beliefs (fixity of beliefs, over-valued

ideation). In OCD these terms are closely related to insight, as the extent to which patients have insight about their disorder is manifested in the extent to which they hang on to their obsessional beliefs.

In order to examine whether the diversity of assessment tools may have contributed to the inconsistency of the findings regarding insight in OCD, the current study aimed to compare a wide range of insight measures. In contrast to prior studies, each of which focused a single measure, the present study administered simultaneously five principal insight measures currently used for assessing insight in OCD. In addition, we explored how insight levels are related to several demographic and clinical variables. Because of the inconsistency of previous findings reviewed above, we did not make specific predictions as to the relationships between the measures or between the insight measures and demographic and clinical variables.

2. Method

2.1. Participants

Sixty outpatients with OCD (36 men, 24 women) participated in the study. The participants were recruited from public and private outpatient clinics ($n = 34$) and from private therapists ($n = 26$). Participants were invited to a personal interview with one of two trained clinical psychologists, which included a structured diagnostic interview (see Measures). The purpose of this interview was to verify that participant met DSM-IV diagnostic criteria for OCD and to assess any co-morbid disorders. The interviewer also verified that participants' primary reason for seeking treatment was suffering from OCD. Exclusion criteria included meeting criteria for psychotic episodes or features, or other compulsive-spectrum disorders characterized with poor insight (e.g., eating disorders and BDD). None of the patients we interviewed met the exclusion criteria. All participants gave informed consent after the study procedures were explained to them and received 100 New Israeli Shekels ($25 at the time of the study) for participation. Participants' age ranged from 18 to 62 years ($M = 33.0$, SD $= 12.2$) and the average level of education was 12.8 years (SD $= 2.3$). Thirty-five participants (58.3%) were diagnosed with additional disorders. Fourteen of these participants (23.3%) were diagnosed only with another anxiety disorders. Twenty-one participants (35%) had a diagnosis of depression, of which 14 (23,3%) were diagnosed with anxiety disorders in addition to depression and 7 (11.7) were diagnosed only with depression. One patient's insight levels were not measured with the OVIS and the BABS due to the absence of beliefs that could be addressed by these measures.

2.2. Measures

Participants' demographic and biographical data were gathered by the interviewer using a structured questionnaire. Primary and co-morbid diagnoses were assessed in individual clinical interviews with the Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1998). The MINI is a short structured interview that assesses Diagnostic and Statistical Manual of Mental Disorders (4th ed.) diagnostic criteria. In the current study the MINI was used to assess only Axis I disorders. The MINI is considered a valid and time-efficient alternative to the SCID-P and CIDI with kappa coefficients between 0.76 and 0.93 (Lecrubier et al., 1997; Sheehan et al., 1998).

OCD severity was assessed by the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS; Goodman, Price, Rasmussen, Mazure, Delgado et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann et al., 1989). This scale is composed of 10 items, with

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[1] Unfortunately, we were unable to obtain this measure from the authors and therefore could not include it in the present study.

5 items for obsessions and 5 items for compulsions, each of which is rated on a 5-point Likert scale (Foa & Kozak, 1995). Total scores range from 0 (no symptoms) to 40 (most severe OCD). This scale has satisfactory psychometric characteristics (Goodman, Price, Rasmussen, Mazure, Delgado et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann et al., 1989). In the current study the scale's Cronbach's alpha was 0.80.

2.3. Insight measures

2.3.1. The DSM-IV insight criterion

Insight is assessed as a dichotomous variable, allowing a diagnosis of 'OCD' or 'OCD with poor insight'. This last specifier is applied when "for most of the time during the current episode the person does not recognize that the obsessions and compulsions are excessive or unreasonable" (p. 423). Insight level was assessed during the interview according to interviewers' impression. The DSM-IV insight criterion was translated to Hebrew by the authors and verified by reverse translation.

2.3.2. Over-valued ideas scale (OVIS; Neziroglu et al., 1999)

The OVIS is a semi-structured clinician-administered rating scale that measures OCD-relevant over-valued ideas. The OVIS was developed to assess over-valued ideation, which is a more general concept than poor insight, but was included as it was previously used as a measure of insight in OCD (Bellino et al., 2005). This continuous multi-dimensional measure identifies the main belief the patient has had in the past week. The main belief must be associated with OCD and with substantial distress or impairment in social or occupational functioning. The ten items that constitute this scale assess the following dimensions: strength of belief; reasonableness of belief; extent of adherence by others; effectiveness of compulsions, attribution of differing views by others; strength of resistance; insight; fluctuation and duration of belief. The score for each item ranges from 0 to 10 and the OVIS total score is the mean score of the 10 items, where a high score represents poor insight (Bellino et al., 2005). For the purpose of this study, the OVIS was translated to Hebrew by the authors and verified by reverse translation. In a recent study Cronbach's alpha was 0.88 (Neziroglu et al., 1999). In the current study Cronbach's alpha was 0.74.

2.3.3. Item 11 of the Yale-Brown obsessive-compulsive scale (Y-BOCS; Goodman, Price, Rasmussen, Mazure, Delgado et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann et al., 1989)

This categorical measure refers to participants' insight during the time of the interview. The item assesses the patient's ability to recognize obsessive-compulsive (OC) symptoms as absurd or irrational and his or her evaluation of the consequences of not carrying out the compulsive behaviors. The item is scored from 0 ('excellent insight, fully rational') to 4 ('lacks insight, definitely convinced that concerns and behavior are reasonable') (Catapano et al., 2001; Goodman, Price, Rasmussen, Mazure, Delgado et al., 1989; Goodman, Price, Rasmussen, Mazure, Fleischmann et al., 1989). Item 11 of the Y-BOCS was translated to Hebrew by the authors and verified by reverse translation.

2.3.4. Brown assessment of beliefs scale (BABS; Eisen et al., 1998)

This semi-structured clinician-administered questionnaire was built for assessing insight in varying pathologies. As in the OVIS, the clinician assesses the patient's main beliefs and their implications during the week prior to the interview. The BABS is based on the assumption that insight is a continuous and multi-dimensional variable. The seven dimensions are conviction; perception of others' view of belief, explanation of differing views, fixity of ideas, attempts to disprove beliefs, insight, and referential

Table 1
Demographic and clinical variables of OCD participants ($N = 60$).

% of participants	N	Category "No" rows are redundant	
83.61	51	Yes	Past pharmacological therapy
14.75	9	No	
78.69	48	Yes	Past psychological therapy
19.67	12	No	
73.77	45	Yes	Present pharmacological therapy
24.59	15	No	
37.70	23	Yes	Present psychological therapy
60.66	37	No	
22.96	14	Yes	First degree family members with OCD
75.41	46	No	
41.61	25	OCD	Co-morbidity
23.33	14	OCD + Anxiety	
35.00	21	OCD + Depression	
42.62	26	Yes	Romantic Relationships
55.74	34	No	

thinking. Each item assesses one dimension and is scored from 0 (representing non-pathological or non-delusional beliefs) to 4 (representing pathological or delusional beliefs). The seventh dimension is not included in the total score due to the absence of referential thinking in some psychopathologies. Total score ranges from 0 to 24, with higher scores representing lower levels of insight. The last item in the BABS indicates the clinician's impression of the participant's insight level from 0 to 4. This impression is also not included in the total insight score but is used as an additional evaluation of insight level (Eisen et al., 1998). The BABS cannot be administered to participants who do not have underlying beliefs about the consequences of not performing their compulsions. For instance, OCD participants who report that repetitive compulsions are carried out simply until it 'feels right' cannot complete the BABS. In this study there was one such patient. For the purpose of creating a basis for comparison with the OVIS, we chose the most dominant belief during the preceding week, which was the same belief chosen for the OVIS. For the purpose of this study, the BABS was translated to Hebrew by the authors and verified by reverse translation. In a recent study Cronbach's alpha was 0.87 (Eisen et al., 2004). In the current study Cronbach's alpha was 0.75.

2.3.5. Beck cognitive insight scale (BCIS; Beck et al., 2004)

This self-report continuous measure focuses on self-reflectiveness about unusual experiences, the capacity to correct erroneous judgments, and certainty about mistaken judgments. It contains 15 statements, to which participants respond on a scale ranging from 0 ('do not agree at all') to 3 ('agree completely'). Nine of the items constitute the self-reflectiveness subscale, which examines the patient's ability to reflect on his cognitive outcomes and to recognize alternative explanations of his experiences. The other 6 items constitute the self-certainty subscale that assesses how certain the patient is of the validity of his beliefs. The composite index of the BCIS, reflecting cognitive insight, is calculated by subtracting the score for the self-certainty scale from that of the self-reflectiveness scale. The BCIS total score ranges from −18 to +27 with higher scores indicating higher insight levels (Beck et al., 2004). For the purpose of this study, the BCIS was translated to Hebrew by the authors and verified by back translation. In a recent study the internal reliability of both subscales was $\alpha = 0.68$ (Beck et al., 2004). In the current study, Cronbach's alpha was 0.71 for the self-reflectiveness subscale and 0.59 for the self-certainty scale.

Table 2
Frequency of dichotomous and categorical insight scores ($N = 60$).

% of Subjects	Number of participants	Category	
26.6	16	Excellent insight	Item 11 of Y-BOCS
35.0	21	Good insight	
30.0	18	Moderate insight	
6.6	4	Poor insight	
1.6	1	Lack of insight	
71.7	43	With insight	DSM-IV
28.3	17	Without insight	
16.67	10	Excellent insight	Impression item of BABS
41.67	25	Good insight	
23.33	14	Fair insight	
18.33	11	Poor insight	
0.0	0	Lack of insight	

Note. Y-BOCS = Yale-Brown Obsessive-Compulsive Scale; DSM-IV = Diagnostic and statistical manual of mental disorders; BABS = Brown Assessment of Beliefs Scale.

2.4. Procedure

Participants were invited to a 1.5 h individual session. They received an outline of the research procedure and signed an informed consent according to IRB regulations. Following a diagnostic procedure, which included the MINI psychiatric interview and the Y-BOCS (see Measures), five insight measures were presented in the following order: Item 11 of the Y-BOCS, BCIS, OVIS, BABS and the DSM-IV insight criteria. At the end of the interview participants were fully debriefed, thanked and paid.

3. Results

Obsessive-compulsive symptom severity according to the Y-BOCS ranged from 13 to 37 ($M = 23.4$, SD = 6.6). OCD onset age ranged from 6 to 51 years ($M = 18.78$, SD = 9.09), and the duration of illness ranged from 1 to 41 years ($M = 14.05$, SD = 9.74). Other demographic and clinical variables are presented in Table 1.

Participants' mean insight scores on the BABS was $M = 9.05$ (SD = 4.88). OVIS mean insight score was $M = 4.88$ (SD = 1.53) and BCIS insight scores was $M = 5.32$ (SD = 5.25). Insight scores on other measures are presented in Table 2. These findings generally concur with previous ones. For example, mean insight scores on the BABS was $M = 8.38$ (SD = 4.1) in Eisen et al. (2004) and $M = 7.9$ (SD = 3.4) in Eisen et al. (2001), whereas mean insight scores on the OVIS was $M = 3.8$ (SD = 3.0) in Bellino et al. (2005).

As some of the insight measures do not meet the requirements for parametric statistical tests, we used non-parametric tests to examine the relationships among insight measures and between insight measures and other variables. Spearman correlation coefficients indicated high correlations between most insight measures, as presented in Table 3. Specifically, there were significant correlations between the BABS, the Impression item of BABS, the OVIS, Item 11 of the Y-BOCS and the DSM-IV insight criteria, whereas the BCIS did not correlate with the other insight measures.

Table 3
Spearman correlation coefficients between insight measures ($N = 60$).

5	4	3	2	1	Measure
					1. BCIS
				−0.14	2. Item 11 of Y-BOCS
			0.56**	0.07	3. BABS
		0.68**	0.76**	0.02	4. Impression of BABS
	0.60**	0.69**	0.57**	0.05	5. OVIS
0.63**	068**	0.55**	0.61**	0.15	6. DSM-IV

Note. BCIS = Beck Cognitive Insight Scale; Y-BOCS = Yale-Brown Obsessive-Compulsive Scale; BABS = Brown Assessment of Beliefs Scale; OVIS = Over-Valued Ideas Scale; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders.
**$p < .001$.

Mann–Whitney U test showed that participants who were receiving medications for OCD at the time of the study, as compared to non-medicated participants, showed higher insight levels on four measures: OVIS, BABS, Impression item of BABS and DSM-IV insight criteria (Table 4). This finding did not obtain with either the BCIS or item 11 of the Y-BOCS. There were no differences in insight levels between participants who received medications in the past and those who did not, and between participants who have had psychological treatment in the present or the past and those who have not.

3.1. Insight and co-morbidity

We divided participants into four groups based on the presence of depression and anxiety: OCD only ($N = 25$), OCD with other anxiety disorders ($N = 14$), OCD with depression ($N = 7$) and OCD with both anxiety and depression ($N = 14$). One-way ANOVAs showed significant differences between the four groups in OCD symptom severity according to the Y-BOCS, $F(3,56) = 5.87$, $p = .001$. Post-hoc Tukey contrasts showed that the OCD patients with both anxiety and depression had greater severity of OCD symptoms ($M = 28.71$, SD = 5.14) compared to participants with OCD only ($M = 20.76$, SD = 6.80) and participants with OCD with anxiety ($M = 22.21$, SD = 3.42). The OCD and depression group ($M = 24.86$, SD = 7.22) did not differ significantly from any of the other groups, probably due to its small sample size.

χ^2 tests showed nearly significant differences in insight levels according to the DSM-IV between the four groups, $\chi^2(3) = 7.15$, $p = .067$. Whereas in the OCD only group 12% were classified as having poor insight, the corresponding proportions were 50.0% in the OCD with anxiety group, 28.6% in the OCD with depression group and 35.7% in the OCD with anxiety and depression group. Post-hoc contrasts showed that only the difference between the OCD and the OCD with anxiety groups was statistically significant. Significant differences between the four groups were also found with the impression item of the BABS, $\chi^2(3) = 9.16$, $p = .027$, with post hoc contrasts showing significant differences between the OCD only group (*Mean Rank* = 24.2) and the OCD and anxiety group (*Mean Rank* = 38.75). Other measures did not show significant differences in insight levels between these two groups, and none of the insight measures differed between these groups and the OCD and depression group.[2]

3.2. Insight and onset age

Negative Spearman correlations were found between OCD onset age and insight according to the BABS ($r = -0.26$, $p = .044$) and the impression item of the BABS ($r = -0.30$, $p = .018$), so that later OCD onset age correlated with lower symptom severity. These findings were not replicated with other insight measures.

3.3. Insight and gender

Mann–Whitney tests showed significant differences in insight levels between men (*Mean Rank* = 34.0) and women (*Mean Rank* = 25.25), according to the DSM-IV criteria, with women showing higher insight levels than men, *adjusted Z* = 2.43, $p = .014$. Similar differences in insight levels between men (*Mean Rank* = 25.86) and women (*Mean Rank* = 37.45) were found with

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[2] We also analyzed the data based on primary OCD symptoms. The only subtypes in our sample with enough participants were "washers" and "checkers." None of the results reported in this article differed between these two groups.

Table 4
Mann–Whitney tests comparing insight measure scores of participants with and without medical treatment.

p	*z* (adjusted)	Mann–Whitney U	Mean rank without current medical treatment (*N* = 15)	Mean rank with current medical treatment (*N* = 45)	
0.387	−0.86	287.00	27.13	31.62	BCIS
0.312	1.01	281.00	34.27	29.24	Item 11of Y-BOCS
0.031	2.16	211.50	38.90	27.70	BABS
0.035	2.11	220.00	38.33	27.89	Impression item of BABS
0.018	2.37	198.50	39.77	27.41	OVIS
0.014	−2.46	225.00	23.00	33.00	DSM-IV

Note. BCIS = Beck Cognitive Insight Scale; Y-BOCS = Yale-Brown Obsessive-Compulsive Scale; BABS = Brown Assessment of Beliefs Scale; OVIS = Over-Valued Ideas Scale; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders.

the impression item of the BABS, *adjusted Z* = 2.65, *p* = .008, but not with other measures.

3.4. Insight and romantic relationships

Mann–Whitney tests showed significant differences in insight levels according to the DSM-IV insight criteria between participants who were in a romantic relationship at the time of the study (*N* = 26, *Mean Rank* = 26.31) and participants who were not (*N* = 34, *Mean Rank* = 33.70), *adjusted Z* = 2.08, *p* = .004. These differences were not attained with other insight measures.

4. Discussion

The first aim of this study was to compare five of the principal assessment methods of insight in OCD. We found high compatibility between all of the insight measures used in this study with the exception of the BCIS. Specifically, the BABS, the impression item of the BABS, the OVIS, item 11 of the Y-BOCS and the DSM-IV insight criterion were highly correlated. These findings are nontrivial and perhaps even surprising in view of the considerable differences between the measures examined in this study in terms of structure, wording, length, range of responses etc. These findings suggest that the variety of measures per se does not account for the inconsistent picture of the role of insight in OCD.

Differences in the contents and administration method might explain why the BCIS did not accord with other measures. In addition to being the only self-report measure in this group, the BCIS was not specifically designed to test insight in OCD. The BCIS does not address insight in regard to obsessional beliefs but rather examines insight in regard to more general thought patterns (e.g., "My interpretations of my experiences are definitely right"). This may be a meaningful difference, as participants with OCD may demonstrate different levels of insight in regard to OCD-relevant thought patterns as compared to general thought patterns (O'Connor, 2002; Rachman, Thordarson, Shafran, & Woody, 1995).

The second aim of this study was to investigate the relationships of insight to demographic and clinical variables using a comparative and exploratory approach. Interestingly, although insight measures were highly correlated with each other, their relations with demographic and clinical variables were distinctive and in some cases measure-specific. We should note that considering the large number of correlations calculated in this data set, these results should be treated as tentative.

Higher insight levels as measured by the BABS, OVIS, DSM-IV and the impression item of BABS were positively related to present pharmacological treatment. This finding may reflect a positive effect of the medications on insight level or a failure of low-insight patients

to gain from and therefore persevere with pharmacological treatment. The latter possibility is consistent with previous findings that poor baseline insight levels predicted poor response to SSRI treatment (e.g., Catapano et al., 2001; Erzegovesi et al., 2001; Ravi Kishore et al., 2004). Notably, we did not find a similar relationship between insight and psychological therapy. This may be due to the relative inefficacy of the dynamic psychotherapy, which is the dominant approach in Israel, for OCD patients. This explanation must be qualified, however, as we did not have specific information regarding the nature of the psychological treatment (i.e. type or length) provided to our participants.

Insight as measured by the impression item of the BABS and the DSM-IV was associated with co-morbidity. Specifically, participants suffering from OCD and an additional anxiety disorder showed poorer insight in comparison to participants suffering from OCD alone. These results are consistent with Steketee and Shapiro's (1995) hypothesis that insight is poorest when anxiety levels are highest, and improves as anxiety levels decrease. Assuming that participants suffering from OCD and an additional anxiety disorder are likely to be especially anxious, this hypothesis may account for their relatively poor insight. This possibility is qualified, however, by the finding that the group of OCD patients with depression in addition to anxiety did not have significantly reduced insight compared to the OCD only group. It is difficult to interpret these results as we did not assess the anxiety levels of the patients in each group, so further studies are needed to account for these findings.

The current study did not find relations between insight and symptom severity. Y-BOCS scores were not correlated with insight measures and the group with the highest symptoms severity (OCD with anxiety and depression) did not demonstrate reduced insight. This negative finding is consistent with previous studies by Aigner et al., 2005 (using the DSM-IV), Bellino et al., 2005 (using the OVIS), Eisen et al., 2004 (using the BABS) and Foa et al., 1999 (using the Fixity of Belief Scale), but inconsistent with Ravi Kishore et al., 2004 (using the BABS) and Turksoy et al., 2002 (using item 11 of Y-BOCS). Symptom severity is one of the most investigated variables in the context of insight in OCD, as it stands at the heart of the debate whether poor insight OCD represents a severe form of OCD (Turksoy et al., 2002) or constitutes a different diagnostic category (Bellino et al., 2005). The present results do not support either constructs - neither that of poor insight OCD as a severe form of OCD (since we did not find correlations between symptom severity and insight), nor as a separate diagnostic category (since we did not find substantial correlations between insight and other variables).

Insight as measured by the BABS and the impression item of the BABS was positively related to onset age of OCD. This finding supports Ravi Kishore et al. (2004), who found that late onset age

was related to higher insight levels as measured by the BABS. In a similar vein, Erzegovesi et al. (2001) found a correlation between high insight levels as measured by item 11 of the Y-BOCS and later onset age.

In sum, the relations between insight and a variety of clinical and demographic variables were diverse and in some cases limited to only one or two insight measures. Interestingly, insight measures that are based on the examiner's impression (the DSM-IV insight criterion and the impression item of the BABS) yielded more significant relations with clinical and demographic variables than did tools with specified criteria for assessing insight. One interpretation of this finding is that the examiner's impression is more global and incorporates multiple sources of information that accumulate during the interview. These may include psychosocial information, behavioral cues such as tone of voice or rigidity as well as participant's responses to previous items. As such, the interviewer impression items cannot be viewed as independent measures.

Beyond the data, informal interactions with the participants raised some issues in regard to insight conceptualization and measurement that deserve consideration. One aspect that is represented in some of the measures is the extent of resistance to the main belief (BABS and OVIS). Various studies have linked poor insight with lack of resistance to obsessions and compulsions (e.g., Catapano et al., 2001). However, lack of resistance can be due to multiple causes about which the instruments do not inquire. For example, some participants in this study explained their lack of resistance to the obsessions and compulsions as stemming from exhaustion or despair. In these cases coding these responses as indicative of poor insight may be misleading.

In referring to the rationality of their beliefs, some participants distinguished between *knowing* that their belief is irrational while still *feeling* that not executing their compulsions will have negative implications. These responses appear to represent the meta-cognitive distinction made by Beck et al. (2004) between *intellectual* and *emotional* insight. Clarifying and distinguishing these potentially independent types of insight may be useful for improving our understanding of insight and belief in OCD.

Some participants reported a different degree of conviction as to the rationality of their symptoms *during* an OC episode as compared to *following* the episode. While feeling anxious and performing rituals they felt convinced of their beliefs and of the implications of not executing compulsions, but once the compulsion had been performed and anxiety surpassed they felt less convinced of their beliefs and of the necessity to perform compulsions. Hence, participants may have better insight following a decline in their anxiety levels, as suggested also by Steketee and Shapiro (1995). These observations suggest that insight should not be conceptualized as a stable trait and that repeated assessments of insight levels are advised. More generally, incorporating participants' insights about their insight into existing theories may lead to more complex and flexible conceptualization and measurement of this variable.

4.1. Conclusion

The current study found strong correlations between the most widely used insight measures in an OCD sample. With the exception of the strong correlation between high insight level and present drug treatment, there were relatively few associations between insight and demographic and clinical variables. This finding may be related to the observation that the conceptual development of insight is not adequately reflected in the assessment tools available today. Developing new tools may allow researchers and clinicians to capture a more experience-near representations of insight, for example by measuring changes in insight over time or by distinguishing insight of OCD-specific themes and insight in regard to other life spheres of the patient. It may also be beneficial to address new theoretical paradigms, such as the Medical model (Amador & Kronengold, 1998; Amador & Strauss, 1990), the Meta-Cognitive approach (Beck et al., 2004) and the narrative approach (Liblich, Tuval-Mashiach, & Zilber, 1998), which were discussed as relevant theoretical counterparts (Amador & David, 1998; Koren et al., 2004).

Finally, several limitations of the current study should be noted. First, while we compared major insight measures, we did not include all available measures, such as the Fixity of Beliefs Scale (Foa et al., 1999). Second, this study did not examine DSM-IV Axis II disorders in relation to insight in Axis I OCD, which could be potential mediators for the relationships between insight and other dependent measures. Third, the study had a cross-sectional design, which does not permit exploration of several important questions, such as changes in insight in response to psychological or medication therapy. Fourth, it is possible that some insight measures influenced scores on others. It would have been optimal, though not very practical, if each measure would have been assessed by a different interviewer. Fifth, the study was conducted in an Israeli sample and generalization to other populations must be established empirically. Finally, some of the comparisons between groups were based on relatively small sample size and thus had modest power; therefore, null results should be interpreted with caution.

Conflict of interests

Financial support

Appendix.

Summary of studies on insight in OCD (In Chronological Order).

Study	Participants	Insight measure	Major findings
Foa and Kozak (1995)	$N = 431$ 4% with no insight, 26% with poor insight, 30% with medium insight, 27% with good insight, 13% with very good insight	Fixity of Beliefs Scale and Supplemental questions on symptoms	A wide range of insight levels was found in OCD. Writers recommend adding a sub-type of OCD in DSM-IV 'with poor insight'.
Foa et al. (1999)	$N = 20$ 55% low fixity, 45% high fixity	Fixity of Beliefs Scale: certainty item (0–4). Cutoff: $>2 =$ high fixity	Insight levels did not correlate with baseline symptom severity. Poor insight participants were not significantly affected by ERP treatment.
Erzegovesi et al. (2001)	$N = 159$ 88% absence of "poor insight" sub-type 12% presence of "poor insight" sub-type	Item 11 of Y-BOCS. Cutoff: $>3 =$ poor insight	Poor insight was the most significant predictor of poor response to SSRI.

Appendix (*continued*)

Study	Participants	Insight measure	Major findings
Catapano et al. (2001)	N = 94 84% with normal insight, 16% with poor insight	Item 11 of Y-BOCS. Cutoff: >2 = poor insight	Poor insight participants did not respond to SSRIs, showed greater symptom severity, had more 1st degree family members with schizophrenic spectrum disorders, and had a personal history of psychopathology in childhood. Insight did not correlate with onset age and duration of illness.
Eisen et al. (2001)	N = 71	BABS. Cutoff: ≥12 and conviction item ≥3 = poor Insight	Insight improved with decrease in symptom severity, but degree of insight at baseline did not predict response to Sertraline.
Marazziti et al. (2002)	N = 117 47.9% excellent insight; 21.4% with good insight, 5.4% with moderate insight, 10.3% with poor insight, 5% with no insight	Item 11 of Y-BOCS	No relationships were found between insight and clinical factors.
Turksoy et al. (2002)	N = 94 69% with good insight, 31% with poor insight	DSM-IV and item 11 of Y-BOCS	High symptom severity predicted poor insight according to item 11 of Y-BOCS. Poor insight correlated with severity of depression and anxiety, but not with early onset or duration of illness.
Eisen et al. (2004)	N = 64	BABS	No relationship was found between insight and symptom severity.
Ravi Kishore et al. (2004)	N = 100 75% with good insight, 25% with poor insight	BABS. Cutoff: ≥12 and conviction item ≥3 = poor Insight	Poor insight correlated with early onset, longer duration of illness, greater symptom severity, co-morbidity with major depression and poor response to SSRI.
Aigner et al. (2005)	N = 84 57% with insight, 43% with poor insight	DSM-IV	83% of participants with poor insight showed MRI brain abnormality compared with only 21% of participants with insight. No relationship between insight and symptom severity.
Bellino et al. (2005)	N = 74	OVIS	Poor insight was positively related to severity of compulsions, to a chronic course of OCD and to the occurrence of OCD in 1st degree family members. Good insight was related to OCPD prior to OCD.
De Berardis et al. (2008)	N = 75 30.7% with poor or absent insight, 69.3% with excellent, good or moderate insight	Item 11 of Y-BOCS. Cutoff: >2 = poor insight	Poor insight correlated with higher symptom severity, depression, perceived emotional expression (EE), and perceived family criticism.
Alonso et al. (2008)	N = 132 29.5% with poor insight, 70.5% with good insight	BABS. Cutoff: ≥12 and conviction item ≥3 = poor Insight	Poor insight correlated with depressive symptoms and personality disorders. No relationship between insight and response to SRI treatment. Insight improved after treatment.

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