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# Level of insight in Egyptian patients having obsessive compulsive disorder: a comparative study

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## Abstract

**Background and objectives** Obsessive–compulsive disorder (OCD) is a chronic psychiatric disorder defined by the existence of obsessions and/or compulsive behaviors or mental acts persistently and affects around 1–3% of the population in the world. Multiple studies demonstrated the link of the insight level to how severe was OCD and existence of resistance to both medications and psychotherapy in individuals with OCD. Studying the characteristics associated with poor insight is very important for management of treatment-resistant OCD and development of new therapeutic approaches. The purpose of this work was to assess the level of the insight in Egyptian patients with OCD, identify clinical correlates that could anticipate the degree of insight, and assess the validity and reliability of brown assessment of belief scale after being translated to Arabic version.

**Methods** A comparative cross-sectional study of 96 individuals (male and female aged from 18 to 60) diagnosed with OCD based on the Arabic version of the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I). The study excluded any individuals with any coexisting neuro-psychiatric conditions and a history of major medical disease. Severity of OCD was assessed through the Arabic version of the Yale–Brown Obsessive–Compulsive Scale (YBOCS). Subsequently, participants performed the Brown Assessment of Beliefs Scale (BABS) after being translated into Arabic and assessed for reliability, validity and applicability of the translated form.

**Results** Patients with OCD presented with poor insight were associated with more untreated time interval, longer disease duration and more severity that was dramatically differed ( $p \leq 0.05, \leq 0.001, \leq 0.05$  respectively). Also, there was a substantial notable correlation among BABS and YBOCS obsession, compulsion, and total score.

**Conclusions** The existence of good insight in patients diagnosed with OCD was associated with lower severity and less duration of illness compared to patients with poor insight. Also, the more time waited before the intervention the worst the patient scores on the insight scale.

**Keywords** Insight, Obsessive compulsive disorder, Yale–Brown Obsessive–Compulsive Scale, Brown Assessment of Beliefs Scale

## Background

Obsessive–compulsive disorder (OCD) is one of the common chronic psychiatric illnesses associated with the existence of obsessions and/or compulsions persistently and affects around 1–3% of the population in the world during their life in both genders [1]. More than half of patients with OCD start their symptoms throughout

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their youth or adolescence, and in more than 40% their illness continues into adulthood [2]. One of the studies were on an Egyptian sample about anxiety disorders reported that prevalence of OCD among adolescents was 7.4% [3].

Most common obsessions include concerns about contamination, safety, and doubts over one's memory or perspective. Scrupulosity defined as a strong urge to always do what is morally correct, accompanied with an apprehension about doing any wrongdoing and was seen in individuals with religious obsessions. Desire for organization or balance, intrusive sexual/aggressive ideas [4]. On the other hand, most common compulsions consist of cleanup or washing, checking various objects such as stove, locks, and children safety, counting or repetition of actions a specific number or until satisfaction feeling, organizing things, touching or taping objects, hoarding, need for reassurance, and making schedules [5].

The Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) separated the obsessive compulsive and related disorders from anxiety disorders [6]. Furthermore, the DSM-5 has address new disorders to OCD related conditions, such as hoarding disorder, and excoriation disorder [7].

Historically, insight was defined as a level of patient that could recognize the pathology of his mental processes, or some of them [8]. The level of insight is linked to the capacity of patients to see the irrationality of symptoms associated with OCD. Multiple studies showed that there was a significance correlation among insight and failure of therapy in persons diagnosed with OCD. Also, Insight can include recognition of the signs of illness, understanding the need for maintenance of therapy, and awareness of the psychological and social effects of the OCD. Presence of OCD in patients at younger age was reported to have poor insight and associated with more severe symptoms and non-adherence to medications and psychotherapy, while some studied have found that good insight may produce distress about well-being that may be associated with higher rate of depression, stigma, demoralization and social withdrawn [8].

Studying the characteristics associated with poor insight can help clinicians to manage treatment-resistant OCD and researchers to advance therapeutic approaches [9]. Consequently, the objective of the current work was to estimate the level of the insight in Egyptian individuals with OCD, identify socio-demographic and clinical correlates that predict the level of insight, and assess the validity and reliability of brown assessment of belief scale after being translated into Arabic form. This work was depending on the hypothesis that specific socio-demographic variables and clinical characteristics of OCD (duration of untreated illness, disease duration, severity

of symptoms, and treatment used) would not predict the level of insight.

## Materials and methods

### Study design and participants

This work was a comparative cross-sectional study that included 96 patients diagnosed with OCD and had been selected from the outpatient clinics of the Okasha Institute of Psychiatry, Ain Shams University Hospitals and the outpatient clinics of Shebin El-kom Mental Health Hospital in the period between September 2020 till March 2021. This study was hypothesized that there was no association between severity of OCD and level of insight in persons diagnosed with OCD.

The sample size was detected by a comprehensive studying of the relevant literature pertaining to similar studies. Marazziti et al. [10] Using Epi Info 7 program the expected prevalence of excellent level of insight among patients with OCD=50%, with margin of error 10% and 95% confidence level, recruiting a sample size of 96 patients would be needed.

Male and female persons with OCD who had been entered to the inpatient wards or were following-up in the outpatient clinics aged from 18 to 60 had been participated in the present work following providing written consent after being fully informed. Meanwhile, patients with any coexisting neuro-psychiatric conditions and who experienced a history of major medical illness (cardiac, renal, or hepatic) had been excluded.

The Arabic version of the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) was applied to confirm the diagnosis of OCD and exclude other psychiatric disorder [11, 12]. Severity of OCD was evaluated through the Arabic version of the Yale–Brown Obsessive–Compulsive Scale (YBOCS) [13, 14].

### Phase 1: translation and validation of the Brown Assessment of Beliefs Scale (BABS)

The BABS was a clinician-based tool to assess multidimensional insight during the last week and evaluation of their items were based on a 5-point Like scale, where 0 represented a minimal pathological or non-delusional state, and 4 represented the most pathological or delusional state. After removing the optional item 7: confusions and idealism, the ultimate score was calculated by adding the scores for each of the six essential components. The final score categorizes individuals into four groups: a “perfect” group with a score of 0, a “good” group having a 1 to 11 score, a “poor” group with a 12 to 18 score, and a “delusional” group having a score of 19 to 24 [15].

Two experienced psychiatrists converted this scale from English to Arabic and the other way around. Arabic

form of the scale was applied to 20 patients for testing the validity of BABS questionnaire through expert opinion of three professors, validity and reliability testing by Cronbach's alpha test and test re-test application [16, 17]. The questionnaire was distributed to the 20 participants two weeks apart.

### Phase 2: all subjects underwent the subsequent processes *Clinical assessments*

A detailed history was taken in accordance with the Okasha Institute of Psychiatry's prepared questionnaire, which asks about age, place of residence, marital status, job status, finances and education. OCD specifics were acquired, such as the length of the untreated illness, the years of presence of OCD, and family history of OCD, treatment received, treatment compliance, symptom domains, and how severe were the OCD symptoms. Then, the psychometric assessment was conducted.

### *Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) (Arabic version)*

The semi-structured interview conducted by the physician is designed for use specifically with individuals having psychological disorders. It would be applied to verify the presence of OCD and rule out other mental illnesses. The instrument is specifically designed to enhance efficiency and ease of utilization compared to other current devices, resulting in reduced training and administration time [11, 12].

### *The Arabic version of the Yale–Brown Obsessive–Compulsive Scale (YBOCS)*

It is conducted to type and grade the intensity of symptoms in OCD patients. It can detect both present and historical symptoms of obsessions and compulsions, covering the last week as well as previous symptoms. Impairment is detected in five clinical domains: time consumption, psychological distress, functional impairment, attempts to resist, and perceived sense of control. The severity is measured on a 5-point Likert scale ranging from 0 (none) to 4 (severe). The scores of the 10 items are added together to determine the degree of severity (0±7 subclinical, 8±15 mild, 16±23 moderate, 24±31 severe, and 32±40 extreme) [13]. The authors used the Arabic version by Okasha et al. in 1994 [14].

### *The Arabic translation form of Brown Assessment of Beliefs Scale (BABS)*

Subsequently, participants performed the Brown Assessment of Beliefs Scale (BABS) after being translated in Arabic language and verified to assess the degree of insight. Participants were allocated into 2 groups based

on the level of insight: perfect- and good-insight group and poor-insight group.

### Statistical analysis

The evaluation of statistical data was carried out through SPSS v26 software. Data was presented as frequencies, percentages and numbers. The quantitative parametric variables were expressed as the mean and standard deviation (SD) and were analyzed using a paired *t* test for comparison. The qualitative parameters have been displayed as frequencies and percentages (%) and have been contrasted using the chi-square test. The 5% level (*P* value) had been served as the fixed threshold of significance. A *P* value less than 0.05 revealed significant outcomes, whereas a *P* value more than 0.05 suggested non-significant results.

Utilizing Spearman's rho method, correlation analysis was performed to assess the degree of relationship between two quantitative parameters; the higher the *P* value, the less substantial the results were.

### Results

Testing the validity and reliability of BABS questionnaire after translation to Arabic form was depending on expert opinion of three professors and Cronbach's alpha test. Total questionnaire (7 items) Cronbach's alpha test=0.894, suggesting high internal consistency in all dimensions of the scale, all questions add up to the value except the delusion question. However, it is still high so no need to remove the question or modify it as seen in Table 1.

Using test re-test for reliability of the questionnaire, it was found that *r* was ≤0.001 which stated that the test was highly reliable as the correlation coefficient was close to 1 and a whole 1 in delusions dimension as showed in Table 2.

The current study included 96 subjects of both genders. Among the recruited participants, females' participants' percentage was 78%. 96.6% of all participants

**Table 1** Cronbach's alpha test for the questionnaire on the pilot sample

Cronbach's alpha test	If item deleted
Conviction	0.860
Perception of beliefs	0.876
Explaining of different views	0.862
Fixity of beliefs	0.869
Attempts to disprove beliefs	0.882
Insight	0.889
Delusions	0.904

**Table 2** Reliability (test re-test) for the questionnaire on the pilot sample

Correlation	R	P value
Conviction	0.946	0.00*
Perception of beliefs	0.981	0.00**
Explaining of different views	0.955	0.00**
Fixity of beliefs	0.932	0.00**
Attempts to disprove beliefs	0.989	0.00**
Insight	0.979	0.00**
Delusions	1	0.00**
Total score	0.984	0.00**

r person coefficient, \*significant. P value < 0.05

had high education, that almost two third of them lived in in a rural area and were unemployed, more than two thirds were single (66.6%) and that mean age was 26.4 ± 7.8 years.

Average time since onset of illness till going to the doctor in years was 3.7 ± 2.7, mean duration of illness was 5.4 ± 3.4 (ranged from 0.33 to 14 years). Only 21.9% of recruited individuals were with family history of OCD, almost half of them (47.8%) were treated with medication and CBT together and only 4.2% were not under any treatment. The most prevalent type of obsession was cleaning in 31.3% of the participants and lowest type was sexual. It also showed that more than two thirds of the participants were considered severe as illustrated in Table 3.

The recruited individuals had a mean ± SD score of 1.74 ± 1.023 for conviction, 1.37 ± 0.839 for their perception of beliefs, 1.63 ± 0.926 for explaining of different views, 1.85 ± 0.818 for rigidity of beliefs, 1.74 ± 1.318 for efforts to disprove beliefs, 0.67 ± 0.928 for insight, 0.26 ± 0.526 for delusional beliefs, and a total score of 9 ± 4.907. Among the recruited participants, the highest percentage had good insight 61.5% n = 59, followed by poor insight reported in 34.3% of the patients n = 33, only n = 4, 4.2% reported perfect insight while no one was delusional. The YBOCS score for obsession was 14.6 ± 2.7, for compulsion was 14.6 ± 2.9 and total score mean was 29.5 ± 5.3 as shown in Table 4.

A statistically significant variation was shown among participants with good and poor insight in relation to residence with urban scoring 49.2% for perfect and good insight and 21.2% for poor insight. Rural scored 50.8% for perfect and good insight and 78.8% for poor insight with P ≤ 0.05 which stated a significant variation in insight based on residence. No significant difference in relation to gender, age, education, employment, marital status and family history or treatment compliance (P > 0.05) was found. Illness duration from symptoms to visiting the

**Table 3** Clinical features and data on sociodemographic status of the recruited participants

Item	N = 96
Sex	
Male	18 (18%)
Female	78 (78%)
Age (ranged from 18 to 56 years old)	26.4 ± 7.8
Education	
Secondary	3 (3.1%)
High	93 (96.9%)
Residence	
Employed	38 (39.6%)
Unemployed	58 (60.4%)
Employment	
Urban	38 (39.6%)
Rural	58 (60.4%)
Marital state	
Single	64 (66.6%)
Married	28 (29.2%)
Widow	4 (4.2%)
Divorced	0 (0%)
Clinical characteristics of the recruited patients	
Duration from illness presence till going to the doctor in years	3.7 ± 2.7
Disease duration in years (ranged from 0.33 to 14 years)	5.4 ± 3.4
Family history	
Positive	21 (21.9%)
Negative	75 (78.1%)
Treatment	
Medication only	30 (31.3%)
CBT only	16 (16.7%)
Both	46 (47.8%)
None	4 (4.2%)
Treatment compliance	
Compliant	49 (51%)
Noncompliance	47 (49%)
Type of obsession	
Checking	12 (12.5%)
Cleaning	30 (31.3%)
Fear of dying	4 (4.3%)
Harming others	12 (12.5%)
Hypochondriasis	7 (7.3%)
Religious	18 (18.5%)
Rumination	9 (9.4%)
Sexual	4 (4.2%)
Severity of OCD symptoms	
Mild	4 (4.2%)
Moderate	29 (30.2%)
Severe	63 (65.6%)

Data are presented as Mean ± SD or number (%). CBT cognitive behavioral therapy

**Table 4** BABS scoring, insight diagnosis and yale brown obsession compulsion scale in the recruited participants

Items	N=96
Conviction	1.74±1.023
Perception of beliefs	1.37±0.839
Explaining of different views	1.63±0.926
Fixity of beliefs	1.85±0.818
Attempts to disprove beliefs	1.74±1.318
Insight	0.67±0.928
Illusions	0.26±0.526
Total score of BABS	9±4.907
BABS score for insight diagnosis	
Perfect (0)	4 (4.2%)
Good (1–11)	59 (61.5%)
Poor (12–18)	33 (34.3%)
Delusional (19–24)	0 (0%)
Yale Brown obsession compulsion scale	
YBOCS obsession	14.6±2.7
YBOCS compulsion	14.6±2.9
YBOCS total	29.5±5.3

Data were shown as mean ± SD. BABS Brown Assessment of Beliefs Scale, YBOCS Yale Brown obsession compulsion scale

doctor, duration of illness and illness severity had been significantly greater among individuals with poor insight ( $p \leq 0.05$ ), which mean the more time waited before the intervention the worst the patient scores on the insight scale. Regarding adherence to treatment or family history, there was no discernible distinction ( $p > 0.05$ ) as seen in Table 5.

A notable positive correlation was found among BABS and YBOCS obsession, compulsion, and total score ( $p \leq 0.05$ ,  $\leq 0.001$ , and  $\leq 0.05$  respectively). YBOCS score for obsession was  $14.6 \pm 2.7$ , for compulsion was  $14.6 \pm 2.9$  and total score mean was  $29.5 \pm 5.3$  as shown in Table 6.

## Discussion

OCD is one of the serious psychiatric illnesses characterized by recurring and persistent obsessions and/or compulsions. Globally, OCD affects around 1–3% of the population during their life in both genders [1]. OCD symptoms usually start during adolescence in more than half of patients and continue into adulthood in more than 40% of patients [2]. DSM-5 excluded OCD from the anxiety disorders and recognized the existence of new concept of obsessive compulsive and related disorders, suggesting a new understanding of OCD [18].

This study's objective was to evaluate the degree of insight in a sample of Egyptian patients with OCD, identify factors that can predict level of insight. The study's initial phase sought to translate the BABS into Arabic

version. It was on 20 patients and used Cronbach's alpha test and test re-test correlation to test the validity and reliability of the BABS questionnaire. The Cronbach alpha test scored 0.894 with high internal consistency in all dimensions of the scale, and the test re-test  $r$  was  $\leq 0.001$  with acceptable correlation coefficient. Additional proof that the BABS was a valid and reliable measure of insight/delusional came from the findings of the current study, which examined the measure in a sizable sample of OCD patients.

In the Özcan et al. 2013 trial, two independent doctors translated the BABS into Turkish and used it on 20 patients with obsessive compulsive disorder (OCD) and 29 patients with schizophrenia. A week later, the results were used on 57 patients. Results from the study showed that the BABS was reliable and valid in Turkish population [19]. Also, Niu al. 2016 study translate the BABS into Chinese language and become a reliable and valid measure to evaluate the insight in OCD patients clinically [20].

After translation, the current study was an attempt to investigate this relationship in a sizable sample of OCD patients, taking into account a comprehensive range of clinical features in addition to a standardized insight evaluation, comparing OCD severity, gender, family history, compliance on medications and its type, educational level, age, residence, employment, marital status, duration of disease and treatment outcome. Most of sociodemographic data from this study didn't show any significant difference on the insight condition; the only significant difference was between participants with good and poor insight in relation to residence with urban scoring 49.2% for good insight and 21.2% for poor insight, while rural scored 50.8% for good insight and 78.8% for poor insight ( $P \leq 0.05$ ) which states a significant difference in insight based on residence.

Ozkan et al. 2021 found that most of patients diagnosed with OCD were mostly less than 30 [21]. Meena et al. 2021 found that checking compulsions were more in males with higher education (59.7%), while women were more likely to be married, had a higher rate of hoarding compulsions and agoraphobic compulsions. Findings from this large study considered gender as an important factor of heterogeneity in OCD [22]. Other findings were different from the present study and maybe related to small sample size.

Also, the present study found that disorder's duration from symptoms to visiting the doctor, duration of illness and its severity showed a statistically significantly increase in patients with poor insight ( $p \leq 0.05$ ,  $\leq 0.001$ ,  $\leq 0.05$  respectively).

Manarte et al. 2021 reported some difference from this study and reported that no relations were found for age at onset and illness duration and insight level [23]. It could



**Table 5** Sociodemographic data and clinical characteristics in relation to the degree of insight in the recruited participants

Items (N=96)	Perfect and good insight (N=63)	Poor insight (N=33)	p value
Sex			0.079
Male	15 (48%)	3 (30%)	
Female	23.8 (76.2%)	9.1 (90.9%)	
Age	26.7 ± 9.1	25.7 ± 4.1	0.095
Education			0.316
Secondary	3 (60%)	0 (33%)	
High	4.8 (95.2%)	0 (100%)	
Residence			0.008*
Urban	31 (32%)	7 (26%)	
Rural	49.2 (50.8%)	21.2 (78.8%)	
Employment			0.178
Employed	28 (35%)	10 (23%)	
Unemployed	44.4 (55.6%)	30.3 (69.7%)	
Marital state			0.335
Single	41 (18%)	23 (10%)	
Married	4 (0%)	0 (0%)	
Widow	65.1 (28.6%)	69.7 (30.3%)	
divorced	6.3 (0%)	0 (0%)	
Clinical traits of the patients that were enrolled in connection to the level of insight			
Duration from symptoms appearance till going to the doctor in years	3.27 ± 2.8	4.56 ± 2.2	0.008*
Disease duration in years	4.5 ± 3.1	6.8 ± 4.1	0.001*
Family history			0.685
Positive	13 (20.6%)	8 (24.2%)	
Negative	50 (79.4%)	25 (75.8%)	
Treatment			0.001*
Medication only	15 (23.8%)	15 (45.5%)	
CBT only	16 (25.4%)	0 (0%)	
Both	32 (50.8%)	14 (42.4%)	
None	0 (0%)	4 (12.1%)	
Treatment compliance			0.222
Compliant	35 (55.6%)	14 (42.4%)	
Noncompliance	28 (44.4%)	19 (57.6%)	
Severity of OCD symptoms			0.003*
Mild	4 (6.3%)	0 (0%)	
Moderate	25 (39.7%)	4 (12.1%)	
Severe	34 (34%)	29 (87.9%)	

Outcomes were shown as means ± SD or number (%), \*significant difference as p value < 0.05

**Table 6** Spearman's correlation of YBOCS score and BABS score in the recruited participants

Parameter (no = 96)	BABS score	
	Spearman's correlation (r)	P value
YBOCS obsession	0.291	0.004*
YBOCS compulsion	0.576	0.00**
YBOCS total	0.282	0.005*

\* Significant as p value < 0.05

be explained by socio-cultural factors and larger sample size in the present study.

Guillén-Font et al. 2021 showed that there was a significant association among insight and severity of OCD, poor prognosis of illness, working status, educational level, CGI scale scores, and functionality of the patient [24].

Also, Eisen et al. 2004 showed that poor insight linked to more severe OCD relative to patients with good insight [25].

On the other hand, the studies by different investigators did not find any relation among symptom severity and insight [10, 25]. Similarly, Catapano et al. 2001 showed that level of insight had only a weak correlation with severity of obsessive–compulsive symptoms [26].

The study had certain limitations, such as the relatively small sample size for the reliability analysis of the BABS and the focus on OCD alone. Further research on the BABS was required to address a variety of diseases, including eating disorders, mood disorders, schizophrenia, and hypochondriasis. Furthermore, this study did not investigate the consequences of improving the insight during therapy (after taking medicine and receiving behavioral therapy for six months), Matsunaga et al. 2002 found that 56% of their patients with poor insight at the start of the treatment period improved to good or fair insight [27], so the study suggested that studying the insight in patients with OCD was important in dealing with their illness and future research should take into account the impact of insight in response to behavioral treatment or its change.

## Conclusion

The Arabic translation of BABS proved to be a valid and reliable tool that could be used to evaluate patients with OCD for insight/delusionality. Additionally, OCD patients who delayed in seeing their doctors were linked to worsening symptoms and having poor insight. The duration of OCD, the severity of the illness, and poor insight were all related; patients with poor insight showed more severe OCD than did patients with good insight. Therefore, assessing the level of insight in OCD patients may be crucial to determining the severity of their illness and may have an impact on how these patients would be managed.

## Abbreviations

BABS	Brown Assessment of Beliefs Scale
DSM-5	Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition
MRI	Magnetic resonance imaging
OCD	Obsessive compulsive disorder
SCID-I	The Structured Clinical Interview for DSM-IV Axis I Disorders
SD	Standard deviation
YBOCS	Yale–Brown Obsessive–Compulsive Scale

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## Authors' contributions

SAK, ANE, and MHA were responsible for the conception and design of the study. RAS and MIA were responsible for acquisition of data. SAK, ANE, and MHA were responsible for analysis and interpretation of data. MHA and MIA were responsible for drafting the article or revising it critically for important intellectual content. All authors provided comments on the manuscript at various stages of development. All authors read and approved the final version to be submitted.

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## Availability of data and materials

Data and material are available on a reasonable request from the author.

## Declarations

### Ethics approval and consent to participate

This study had been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans. It received approval from the Shebin El-Kom Mental Health Hospital Ethics Committee and Ain Shams University Faculty of Medicine, and it was operational from September 2020 to March 2021. Participants gave their informed written consent to be used as human test subjects in the study. Both the patients' right to privacy and all ethical protocols were followed.

### Consent for publication

Each author agreed to have their work published in the journal.

### Competing interests

The authors declare that they have no competing interests.

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