ORIGINAL RESEARCH

The relationship between the severity and specific dimensions of OCD in Iranian clinical sample

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Abstract:

Background: There have been a few studies that examined the association between insight and the clinical symptoms of obsessive-compulsive disorder (OCD) among the Middle Eastern population. The current study aimed to find a relationship between insight, general score and the specific dimensions of OCD among Iranian clinical sample.

Method: The cross-sectional research method was conducted on 108 OCD patients from 18 to 61 years old. Participants were interviewed with a semi-structured interview based on DSM-V, and those who were diagnosed with other psychiatric disorders were excluded. Also, participants filled out some self-report scales including Obsessive-Compulsive Inventory-Revised, Overall Anxiety Severity and Impairment Scale and Beck Depression-II Inventory.

Result: The results showed that poor insight has a relationship with OCD symptoms except for hoarding. Moreover, anxiety was significantly correlated with the severity of OCD.

Keywords: OCD, Severity, Insight, Specific dimensions of OCD

Introduction

Obsessive thoughts (OT) are series of images, thoughts and recurrent impulses, which are sudden and undesirable. Obsessive behaviors are recurrent behaviors which the obsessed person feel the obligation to do in order to reduce the anxiety of their obsessive thoughts (1). The obsessive-compulsive disorder (OCD) has been found to be related to several disorders like mood disorders (2), other anxiety disorders like social phobia (3) and PTSD (4) and some risky behaviors such as suicidal ideation (5). On the other hand, insight is described as the ability of recognizing the reasons and meanings of the situation, which the person is experiencing, and also the awareness about the disorder (6). Therefore, insight is a multidimensional concept that has multiple components including the realization about the psychological or psychiatric basis of the beliefs or preparation to consider that their thoughts might be wrong (7). In this spectrum, good insight is considered to be associated with obsessive thoughts, which the absence of insight can lead to delusion. Additionally, overvalued ideas (OVI) are in the middle of this spectrum between obsessive thoughts and delusions. OVI is sever than OT but not as much as delusions are (8). It has been clarified that insight might happen in a spectrum of complete awareness about vanity of thoughts or behaviors to complete absence of these types of awareness (9). However, there is no specific determination yet to clear what has to be considered as the target of insight of OT; symptoms, necessity of therapy or the general perception of the disorder (10).

Back to the literature, having low insight and severity in younger patients with OCD is reported to be linked with the higher rates of comorbid disorders such as major depressive disorder (11), schizotypal personality disorder (12), increasing risk for schizophrenic disorders in first-degree family member (13, 14), more compulsion for hoarding obsession (9, 11, 12), somatic obsession (12, 15) body dysmorphophobia , need for symmetry and accuracy (12), fear of stain and washing compulsion (9, 16), fear of hurting self and religious obsession (17). However, there have been several studies that have not approved the relationship between insight, severity and some clinical features as well as the research which declared the lack of evidences that shows the effectiveness of insight in responding to medications and cognitive behavior therapy (12, 14, 16, 18, 19). Also, some studies reported that 5% to 45% of patients with OCD have low insight (9, 13, 19, 20). Probably, the basis of present differences in assessments should be investigated throughout the nature of assessment tools, individual or cultural differences (9). A series of factors such as mentioned above and also due to the importance of OCD which has been described as one of the 10th disabling disorder recognized, weak response of medication and cognitive- behavior therapy for patients with lower insight (14, 20, 21), absence of an absolute final result about the association between insight and clinical symptoms such as severity of symptoms, comorbidity, dimension of the symptoms and therapeutic results (22), and more crucially, the lack of enough information about samples in Middle East, this study aimed to examine the relationship between insight, general score and specific dimensions of OCD among Iranian clinical sample.

Method

The current study was a cross-sectional descriptive project including 108 OCD patients referred to the psychological clinics located in the south of Iran. The participants were Muslim with an age ranged from 18 to 61 years old (M= 29.77). In order to have a homogeneous group of patients with OCD being the first and the main disorder, participants were interviewed with a semi-structured interview based on DSM-V and those who were diagnosed with other disorders such as schizophrenia, dementia, cognitive disorders and so on were excluded. Before conducting the assessments, participants were asked to fill out the consent form and they were informed about the confidentiality of the results' revealing.

Measures

Yale-Brown Obsessive Compulsive Scale-II (Y-BOCS-II): The Y-BOCS-II contains two main components. Among the 67-item of Y-BOCS-II-SC, 29 items assess obsessions, 29 items assess compulsions, and 9 items assess avoidance. The Severity Scale, the Y-BOCS-II-SS, consist of 10 items which assess the amount of time that individuals spent on obsessions and compulsions; obsession-free interval; resistant to compulsion; control over

obsessions and compulsions; distress associated with obsessions; distress if compulsions prevented; and interference from obsessions and compulsions. The Items were scored from 0–5 with maximum of total score. The Y-BOCS-II reported to have strong internal consistency for the Symptom Checklist (Kuder-Richardson-20 = .91) and Severity Scale (alpha = .89). Also, the interrater reliability of the test-retest showed high significance. (p> .85) (23). In the Iranian version, the total internal consistencies, Obsession subscale, and Compulsion subscale scores of the Y-BOCS-II-SS were reported to be 0.948, 0.841, and 0.944, respectively (24, 25).

The Obsessive-Compulsive Inventory-Revised (OCI-R): The Obsessive-Compulsive Inventory–Revised is an 18-items measurement, which assesses the distress associated with various OCD symptoms. It has been widely used in the clinical and subclinical trials and studies, which reported to have strong reliability, validity, and clinical utility and also to be correlated strongly with other measures of OCD. Moreover, OCI-R showed to be a valid instrument in order to discriminate fairly between OCD and other anxiety disorders. A cut off score of 21 represents patients with a sensitivity of 78.2% and a specificity of 65.0% and Cronbach alpha was (0.87) (26). The result of reliability and validity in Iranian sample declared a high score (0.98) and strong correlation with the first version of OCI (27)

Brown Assessment of Beliefs Scale (BABS): The Brown Assessment of Beliefs Scale (BABS) is a semi-structured and clinician-administered scale consisted of 7 items designed to assess insight into preoccupying thoughts of the participant during the last week of the testing day. The dimensions included conviction, perception of others' beliefs, explanation of differing views, and fixation of ideas; attempt to disprove beliefs, insight, and ideas of reference. For each item, participants receive scores ranging from 0 (non delusional/least pathologic) to 4 (delusional/most pathologic). Reliability of the Interrater and test-retest for the total score and individual item scores showed a high degree of internal consistency. Scores on the Brown Assessment of Beliefs Scale were correlated

with all measures of insight except for the severity(7).

Overall Anxiety Severity and Impairment Scale (OASIS): The Overall Anxiety Severity and Impairment Scale (OASIS) is a 5-item self-report which assess the severity of the anxiety impairment. The answers will be scored from 0 (no anxiety) to 4 (sever anxiety) based on the last week experiences of the participants. Results of a split-sample analysis recommended a strong 1-month test-retest reliability, and convergent and divergent validity (28). Among the Iranian sample, acceptable validity was observed among the five components of the study (1=0.96, 2=0.98, 3= 0.93, 4= 0.91, 5= 0.95) (25).

Beck Depression-II Inventory (BDI-II): The Beck Depression-II inventory (revised version) is a 21-item self-reporting inventory (29). Scores are ranged from 0 (never) to 4 (always) assessing the severity of depression symptoms. In Iran، the validity of the translated version of the BDI-II reported to be 0.913 and the reliability was 0.873. Cronbach's alpha was also reported to be 0.87 (30).

Procedure
After choosing the participants with OCD, they were interviewed by expert clinicians in the area of OCD using Y-BOCS-II in order to evaluate the type and the severity of OCD. Furthermore, the components of OCD were evaluated by self-report questionnaire OCI-R, as well as insight, which assessed by BABS. Beck Depression Inventory-II was also used for the evaluation of depression. Finally, demographic information was collected through various questions at the beginning of the questionnaire booklets. Table 1 illustrates the socio demographic information of the participants.

Results:
Partial correlation was conducted in order to examine the relationship between the variables of the study. As Table 2 demonstrates, poor insight showed significant relationship with severity of OCD and acceptable relationship with general OCD factor (p<0.05). Among the factors of OCI-R, ordering, washing, neutralizing and checking illustrated moderate to weak correlation with insight (p<0.05). However, the relationships between insight and obsessive thoughts components especially

hording were not significant (p<0.05). Also depression showed minor significance with the weak insight.

In order to control the demographic variables, a partial correlation was conducted which is summarized in the Table 3. As it can bee seen, results did not change after controlling the gender and education. Only a minor correlation was found among insight and age and also severity and onset (p<0.05).

On the other hand, insight was divided to the four qualitative groups: perfect, good, poor and delusional. These four groups were analyzed considering the study variables that the results are demonstrated in the Table 4. As the table shows, there are significant differences between four groups of insight considering the study variables such as severity, anxiety, depression, general OCD factor and components of OCD (hording, ordering, washing and neutralizing) and also with considering the demographic factors such as age, onset and gender. However, insight levels did not show any significant relationship with checking, obsessive thoughts and marital status among the demographic components. The other result of the study reported that the delusional group had a significantly higher score in the general factor of OCI-R and all the OCI components except for hording (p<0.05). However, among the group with good insight, hording showed a significant difference comparing to the other groups (p<0.05). Moreover, a significant gender differences were also reported in the Table 4 between men and women among the insight groups (p<0.05). Finally, Insight was also analyzed among the demographic variables considering the quantitative scores. Results showed that men have reported insight significantly less than women (F= 12.10; p<0.001), while no significant relationship was observed between education (F= 2.13; p<0.1), drug abuse (f=0.379; p=0.539) and marital status (F=1.48; p<0.225).

Discussion

The purpose of this study was to examine the relationship of the insight with the dimensions and severity of OCD, depression, anxiety, control and resistance toward OCD as well as demographic information. The most challenging finding of the study was the failure of finding validation between the hoarding dimension and insight in adults while

in previous studies hording had showed medium to strong relationship with insight (15, 19, 31). In contrast, in a survey by Stroch (32), which was conducted on children and adolescents ranged from 6 to 17 years old with OCD, no relationship was found either between hording and insight. In another research (24), hording was found to be strongly related to insight during early adolescence. However, with controlling the hording dimension through Partial Correlation, the relationship between other dimensions of OCD with insight were not significant, not even with the severity of OCD (24). Moreover, it was discovered that in both sides of the qualitative spectrum of insight, individuals with most and least symptoms of delusions had sever symptoms of hording while previously, prevalence of hording was discovered to be more common among those who had poorer insight (12, 15, 19, 31). These contradictory results suggest that the symptoms of hording in individuals with OCD do not follow a specific pattern, whereas they are possibly related to the cultural, political, financial, ecological factors, or even, age, religion or familial factors.

Another finding of the research was the medium to strong relationship between poor insight and the general OCD factor, which is coherent with findings of Fontenelle and et al. (33). However, among the dimensions of general OCD factor in the current study, insight was averagely related to ordering, washing, checking and neutralizing factors. This finding was also coherent with some previous studies (12, 34), although, when there was a control on the severity factor, the correlations were vanished (19). Moreover, in the prior research findings, the relationship between either poor and strong insight with the fear of washing/ pollution was reported (16) but our findings were coherent with Jakubvski and et al, (19) which showed a poor relationship between insight and fear of washing. While some studies reported weak relationship between poor insight and severity of OCD (14, 20, 35) there is some other research that failed to reach to such a result (7) or reported contradictious results (14, 16, 36) which these inconsistencies might be due to the research methods and individual differences among the participants.

Another challenging finding of this study that is in contrast with previous literature findings

was that depression was not significantly related to depression among the individuals with OCD (13, 20). However, in few studies it was declared that there is no significant relationship between some clinical aspects such as depression and insight (24, 37), which might be a possible reason for this finding. However, an average correlation was found between poor insight and anxiety, strong correlation was found between control and obsessive thoughts and behavioral resistance with insight and a strong relationship was also reported between general factor and severity of OCD with resistance which all are coherent with prior research studies (11, 16).

No significant difference was found among demographic factors considering the insight such as age, onset of the disorder, marital status, educational status and drug usage which this finding is also consistent with previous literatures that showed insufficient support for relationship between demographic factors and poor insight (11, 16, 34). Although, older individuals showed better insight comparing to those with younger ages and male participants reported lower insight comparing to female participants. This is also coherent with prior studies, which demonstrated that men show less insight to sexual, religious, hording and symmetry components and women show less insight to washing component in the middle ages (38). In addition, with controlling gender and education variables the results have not changed dramatically and only the onset of the OCD showed a relationship with the severity of OCD. It was a significant result of this study that 55.5% of the participants illustrated poor and delusional insight, comparing to the western samples that reported 5%-45% of poor insight among individuals with OCD (9, 12, 19, 20, 32, 37).

Finally, in the qualitative category, insight was divided to four groups considering the extent of having insight: perfect, good, poor and delusional. It was cleared that there are significant differences among this four groups in the factors such as the severity of OCD

symptoms, anxiety, depression, general factor of OCD, hording, neutralizing, ordering and washing components as well as some of the demographic variables such as age, onset of the disorder and gender. The group of participants who were considered under the category of delusional insight was ranked higher in the severity factor, general factor of OCI-R and all its components except for hording, which was only high in the group with good insight. Also, in the delusional group, the onset of OCD was notably lower than the other groups. Among the group of participants who reported perfect insight, higher rates of anxiety and depression were reported higher comparing to the other groups.

Conclusion:
Overall, the results of the current study demonstrated that weaker insight is related to the OCD specific components, which are: neutralizing, checking, washing and ordering while this study was unable to find a significant relationship between weak insight and the hording component. Finally, the only suggested demographic factor that showed significant difference in the level of insight was gender.

Limitations and Future Implications:
The main limitation of the study was using the OCI-R as the only assessment tool for evaluating the OCD symptoms while additional instruments also could be used. Moreover, the sample was clinical and limited to those who had sought for treatment. Therefore, generating the results of this study to those who have not applied for treatment should be very cautiously and needs further evaluations among sub-clinical patients. Furthermore, future studies might consider the therapy efficiency based on the relationship between the symptom specificity and the level of insight.

Conflict of interests
Authors declare no conflict of interests.

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Appendix:
Table 1: Socio-demographic Information of the Participants

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Variables	Subgroup	Value
Onset Mean ± (S.D)		20.70±6.01
Age Mean ± (S.D)		34.70±13.92
Min-max		18-61
Gender	Male	64(59.3%)
	Female	44(40.7%)
Medicine Usage	Yes	88(81.5%)
	No	20(18.5%)
Marital Status	Relationship	84(77.8%)
	Single	24(22.2%)
Education	Non	12(11.1%)
	Under diploma	44(40.7%)
	Diploma	36(33.3%)
	Bachelor	16(14.8%)

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Table 2: Partial Correlation of the Study Variables

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	Insight	Severity	OCI-R	Hoarding	Neutralizing	Obsessing	Ordering	Washing	Checking	Anxiety	Depression	Age	Onset
Insight	1												
Severity	0.636**	1											
OCI-R	0.414**	0.572**	1										
Hoarding	-0.05	-0.12	0.492**	1									
Neutralizing	0.405**	0.527**	0.621**	0.188	1								
Obsessing	0.171	0.441**	0.440**	0.01	0.02	1							
Ordering	0.300**	0.252**	0.739**	0.557**	0.212*	0.220*	1						
Washing	0.333**	0.508**	0.766**	0.204*	0.444**	0.153	0.457**	1					
Checking	0.383**	0.623**	0.805**	0.135	0.500**	0.500**	0.443**	0.500**	1				
Anxiety	0.331**	0.537**	0.140	-0.306**	0.223*	0.336**	-0.09	0.01	0.363**	1			
Depression	-0.16	0.08	0.255**	0.103	0.02	0.159	0.07	0.248**	0.343**	0.09	1		
Age	0.03	0.157	0.112	0.161	0.10	-0.01	0.225**	-0.230*	0.253**	0.106	-0.006	1	
Onset	-0.01	0.137	0.07	0.03	-0.16	0.150	0.225*	-0.159	0.263*	0.281**	0.09	0.583**	1

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Table 3: Partial Correlation after Controlling Gender and Education

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Control Variables		Insight	Severity	OCI-R	Hoarding	Neutralizing	Obsessing	Ordering	Washing	Checking	Anxiety	Depression	Age	Onset
Gender&Education	Insight	1	0.621**	0.427**	-0.01	0.465**	0.259*	0.353**	0.379**	0.454**	0.324**	-0.18	0.03	0.12
	Severity	0.621**	1	0.605**	-0.08	0.506**	0.538*	0.300**	0.531**	0.658**	0.530**	0.09	0.14	0.21*

Table 4: Insight Qualitative Categories' Descriptive Analysis

	Perfect Insight	Good Insight	Poor insight	Delusional
Severity M±SD	31.75.5± 1.25	22.80 ± 6.44	29.33±10.17	41.01± 6.14
Anxiety M±SD	15.5± 0.57	8.63±2.99	11.58±3.15	11.66±2.46
Depression M±SD	29.0±0.81	14.18±9.30	22.66±12.47	12.33± 9.43
OCI-R M±SD	18.2± 1.44	27.47±11.61	32.33±11.05	39±3.41
Hoarding M±SD	0.0±0.0	1.45±1.89	0.2±2.67	0.0±0.0
Neutralizing M±SD	0.0±0.0	1.81±2.31	2.91±2.68	4.33±2.46
Obsessing M±SD	8.57±0.50	8.38±2.38	8.50±1.86	9.66±0.98
Ordering M±SD	3±0.81	4.18±3.07	6.50±2.81	6±0.85
Washing M±SD	0.25±0.50	4.90±3.54	4.83±3.39	10.0±4.47
Checking M±SD	6.00±0.81	6.27±3.63	7.58±3.43	9.00±0.0
Age M±SD	59.5±1.5	30.54±9.21	37.25±14.34	31.33±18.23
Onset M±SD	20.01±1.56	20.09±6.41	22.66±5.35	15.33±4.29
Gender Male (%)	4 (100%)	16(36.4%)	32(66.7%)	12(100%)
Marital status Married (%)	4 (100%)	36(81.8%)	36(75%)	8(66.7%)

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