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THE RELATION OF THE SYMPTOM CHECK LIST SCL90 AND LOCUS OF CONTROL WITH OBSESSIVE-COMPULSIVE DISORDER.

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ABSTRACT

Obsessive-compulsive disorder (OCD) affects approximately 2-3% of the adult population and is considered as an extremely debilitating and costly disorder, with associated impairments spanning the social, occupational, and familial domains. The present study is addressed to reveal, whether persons with OCD exhibit more depression, anxiety, and personality disorders symptoms; hostility, somatization, introvert, paranoid in community have been studied as well. For the current study 185 participants were selected (male: 30%, female 70%). Participants' age ranged from 19 to 34 and the mean age for the sample was 23.42 years old (SD=2.46). Analyses revealed a significant negative correlation between OCD R and externality by NEO scale (r=-0.25). We began by examining all symptoms in SCL90 scale with OCD and in these analyses; OCD and symptoms of SCL90 were of model factors. Analyses showed that OCD symptoms were significantly shown by SCL90 scale (β=0.55, p>0.001), OCD symptoms significantly predict powerful others locus of control and both are significantly associated, but symptoms that were measured by SCL90 are stronger predictor for OCD (β =35, p>0.001). To conclude, the most important findings of the study are that paranoid thoughts are common phenomena in OCD, associated with high negative extroversion. In obsessive compulsive patients, anxiety occurred frequently and was associated with high positive depression. However, all participants showed correlations between variables, particularly between anxiety and depression.

Keywords: locus of control, externality, scl90, obsessive compulsive disorder.

INTRODUCTION

Obsessive-compulsive disorder (OCD) is a debilitating condition that is characterized by persistent and distressing intrusive cognitions (obsessions), which in the majority of patients trigger repetitive behaviors or mental acts such as washing and counting (compulsions). Typically, these two psychopathological clusters are functionally connected with each other and deal with themes of aggression, contamination, symmetry, order and religion [*Matax C. et al., 2005*]. Obsessive-compulsive disorder (*OCD*) affects approximately 2-3% of the adult population and is considered as debilitating and costly disorder associated with impairments spanning the social, occupational, and familial domains [*GrabillLisa K. et al., 2008*].

The present study is addressed to reveal, whether persons with OCD exhibit more depression, anxiety, and personality disorders symptoms; hostility somatization, introvert, paranoid in community has been studied as well.

OCD is a clinically heterogeneous disorder with symptoms experienced within multiple potentially overlapping symptoms dimensions. Evaluating the symptom structure of OCD, factor analytic studies reported three to five factors solution [*Bloch M. et al., 2008*]. A recently conducted meta-analysis of 21 factor analytic studies generated four major symptom groups explaining a substantial proportion of the heterogenity of the clinical symptoms in OCD [*Bloch M. et al., 2008*].The notion of a spectrum of obsessive-compulsive disorders dates back at least as far as the works of S. Freud [*Freud S., 1908*], who posited a continuum between obsessive compulsive character, neurosis and psychosis [*Stein D., Stone M., 1997*]. A dimensional nature of obsessive-compulsive symptomatology is increasingly highlighted, and integrative hypotheses about the psychobiological mechanisms account-

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ing for these continuities are posited [*Lochnera C., Stein D., 2006*].

In addition to the central role of compulsive behaviors in obsessive-compulsive disorder (OCD), recent data have also documented the presence of compulsive behaviors in individuals with generalized anxiety disorder (GAD). Several studies have demonstrated a relationship between worry and compulsive behaviors in nonclinical samples. For example, in a community sample [*Tallis F., de Silva P., 1992*] found worry to be significantly related to self-reported checking and doubting. High levels of disability have been associated with anxiety disorders, including panic disorder, generalized anxiety disorder, and obsessive compulsive disorder; there is also a relation with depression mood disorder [*Lydiard R. et al., 1996*]. Locus of control was a concept, by means of which we demonstrated in present study that the internality states have played the important role in formation of obsessive compulsive disorder. Locus of control is effectively defined as a person's perception of control over his/her own life and how he/she copes with events. It is emphasized in the literature that individuals have two loci of control, internal and external. Rotter expressed the idea that inter locus of control is effectively defined as a person's perception of control over his/her own life and his / her ability to cope with different situations [*Dag I., 1997*]. It is emphasized in the literature that individuals have two locuses of control – internal and external. Rotter showed the internal locus of control as inclination to ascribe the results of activity to internal factors [*Dag 1., 1997*].

Types of persons and styles of attrition are known to be reciprocally connected. Particular personality traits like introvert personality, in terms of Eysenck's theory, are more prone to make internal attributions in comparison to extrovert individuals, who tend to make external attributions about outcomes throughout their life. Introvert individuals are known to build fast and persistent associations between noxious events and their consequences, which in turn results in high risk for anxiety disorders [*Eysenck H., Kelley M., 1989*].

MATERIAL AND METHODS

For the current study 185 participants were selected: male 30% and female 70%. Participants' age ranged from 19 to 34 and the mean age for the sample was 23.42 y.o. (SD=2.46). Participants completed questionnaire batteries, including measure of Levenson locus of control. SCL90 questionnaire and Y-BOCS OCD scale, NEO scale in patients with a primary OCD according to DSM-IV criteria were used. The other sample formed students recruited at the University for this cross-sectional study. The participants comprised 125 students and co-morbid psychiatric disorder patients in Center of counseling in University, consecutively referred to "a specialized OCD programme of the 60 patients", subjects who had OCD in their life, and the other 125 students without OCD symptoms. Descriptive statistics showed the mean score for OCD patients (M=71, STD=12.40) and in students it was (M=40.13, STD=13.40).

INSTRUMENTS:

Y-BOCS SYMPTOM CHECKLIST AND SEVERITY RATINGS: The Y-BOCS scale was successful in distinguishing between patients with OCD and patients with other anxiety disorder, as well as normal persons [*Goodman W. et al., 1999*]. A number of different types of reliability and a measurement of internal consistency are appropriate to the psychometric analysis of the Y-BOCS. Test-retest reliability was used for Y-BOCS scale. The interrater reliability of the 10-item Y-BOCS was initially evaluated in patients with OCD. Spearman correlation revealed that raters generally agreed with each other on how to rank order the patients. The Y-BOCS has been widely used as outcome measure in both clinical trial and clinic setting and indeed are considered the good-standard, measure of response to treatment in international treatment guide line for adult [*Nakatani E. et al., 2009*]. Obsessive-Compulsive Inventory-Revised Severity of OCD symptoms was assessed nomothetically using the OCI-R, an 18-item self-report questionnaire. Research suggests the OCI-R possesses good internal consistency (total score alphas ¼ 0.81 to 0.93 across samples).

Levenson's Locus of Control Scale: Locus of control was measured with Levenson I, P and C scales. Each scale includes eight items and is designed to measure loose bounders, in the frame of which individuals ascribed the results of their activities to own qualities, the actions of other persons and chance. Participants were asked to rate each statement on a 4-point scale with 1 = "strongly disagree", 4 =

"strongly agree" [*Petrosky M., Bikimer J., 1991*]. The Rotter (*1966*) I-E locus of control assesses, whether patient's attributions control is internal (I) or external (E). H. Levenson modified I-E scale [*Levenson H., 1973*] is designed to distinguish attribution of control over the actions of other persons, powerful others (*P*), from such external factors as fate or luck, which were categorized as chance (C) [*Mamlin N. et al., 2006*]. Thus, this multidimensional instrument contains three separate I, P and C scales. In doing so, Levenson also attempted to reduce the biases in the Rotter. Levenson's scale has reliability and validity that had been identified by numerous researchers [*Garcia C., Levenson H., 1975*].

Check list SCL90: The SCL-90-R is comprised of 90 items; each rated on a five-point scale of distress [*Derogatis L., Cleary P., 1977*]. The instrument is usually scored on nine primary symptom dimensions (comprising a total of 83 items): somatization, obsessive compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. The Global Severity Index (GSI), which is the subject's mean score on the instrument (using all the 90 items), is a widely used global index of distress.

NEO inventory: The NEO-PI consists of 180 items plus a validity question [*Costa P., McCrae R., 1985*]. The main five dimensions measured by the instrument are most frequently labeled: extroversion (E), agreeableness (A), conscientiousness (C), neuroticism (N) and openness to experience (O). In the present context, only the E dimension was used.

Statistical analyses: Statistical analyses were performed in Programme SPSS-19 for Windows: version 19, Descriptive statistics presented by variants; Value of variants is noted as S2; M±SD is given.

RESULT

Descriptive statistics for all study measures is presented in this research. Scores on these measures represented a range mean score of OCD, and anxiety symptoms, as well as the locus of control. Furthermore, scores on the SCL90 measures were generally consistent with available data from previous students and patients samples.

In accordance with study hypotheses, factor analysis coefficients revealed that symptoms of OCD and locus of control significantly correlated with other symptoms in SCL90 scale. In particular, correlations of the OCD and anxiety with the hostility were both medium in magnitude.

To examine the eight-factor structure of the SCL 90, OCD severity Y-BOCS and OCD revised

Table 1:

Total scores for two groups with mean score standard deviation and variances

Variables	Demography in students and patients, in OCD and scl90 scale			
	students		patients	
	M±SD	S2	M±SD	S2
SOM - Somatization	7.87 ± 7.61	58.05	8.50 ± 7.48	55.98
O-C – D SCL 90	8.98 ± 5.04	25.40	9.77 ± 5.26	27.70
I-S - Interpersonal	7.96 ± 4.04	19.36	8.67 ± 4.81	23.19
DEP - Depression	9.94 ± 6.52	42.62	11.47 ± 7.13	50.94
ANX - Anxiety	6.79 ± 3.92	15.43	7.50 ± 3.67	13.50
HOS - Hostility	3.93 ± 3.71	13.77	4.23 ± 3.76	14.18
PHOB - Phobic Anxiety	1.14 ± 1.07	1.16	1.33 ± 1.15	1.33
PAR - Paranoid Ideation	4.61 ± 2.97	8.86	7.65 ± 5.09	25.92
PSY - Psychoticism	3.18 ± 3.23	10.44	5.25 ± 4.11	16.93
Severity OCD	9.57 ± 6.27	39.36	16.90 ± 5.05	25.56
OCD revised	14.94 ± 6.41	41.14	37.10 ± 10.25	109.35
GSI- SCL 90	69.23 ± 32.05	1027.289	92.00 ± 45.16	2039.84
N	125		60	

inventory confirmatory factor analysis was conducted with SPSS software. In the past decade, a number of studies have investigated comorbidity patterns of mood and anxiety disorders in OCD. The results of behavior activity performance are demonstrated in this research. The OCD and control groups have specific characteristics that can be surveyed and calculated. Mean scores obtained from the SCL90 are shown in Table 1. OCD group and students reported paranoid thinking disfunctions to great extent than phobic anxiety in present study (phobic: X=1.33; STD=1.15) (paranoid: x=7.56; STD=5.09). OCD patients reported greater problems with GSI in SCL90 (X=92; STD=45); on the other hand, students reported less abnormality with GSI *(*X=62; STD=32) (Table 1). In an effort to better understand the relationships among study variables, we conducted correlational analyses between Y-BOCS and OCD R inventory item and multi variable in SCL90 scale (Table 2). These analyses revealed a significant negative correlation between OCD R and extrovert by NEO scale (*r=-0.25*). In addition, in the present study negative correlation between GSI score and extrovert personality (*r=-0.31*) was found; the relationship between depression as a sub-scale and extrovert scores continued to have a statistical negative correlation (*r=-0.25*).

In accordance with study hypotheses, factor analyses coefficients revealed that symptom of anxiety were significantly negative correlated with extrovert personality (Table 2).

In particular, correlations of the paranoid and the OCI-R were medium in magnitude (*r*=0.41), but the result showed that symptoms of hostility significantly more strongly correlated with paranoid (*r*=0.74). These analyses revealed that somatization is more dependent on symptoms of OCD than either symptoms or person's disorder and that anxiety was significantly connected with symptoms of OCD (*r=0.74*). Next, we tested the relative magnitude of the relationship between depression and symptoms of OCD R, the results showed that symptoms of OCD significantly correlated with depression.

Table 2

Correlation Matrix among multi ple variable with externality and obsessive compulsive symptom

	Extrovert	OCD R	depression	anxiety	hostility	paranoid	GSI	somatization
Extrovert	*							
OCD R	-0.252							
depression	-0.252	0.509						
anxiety	-0.226	0.523	0.743					
hostility	-0.419	0.354	0.491	0.356				
paranoid	-0.324	0.411	0.524	0.345	0.741			
GSI	-0.311	0.557	0.925	0.839	0.637	0.568		
somatization	-0.330	0.390	0.649	0.557	0.766	0.698	0.806	*

Note: *p>0.01*

Table 3

Regression analyses on variables of obsessive compulsive and, scale of SCL90

	SCL 90: anxiety, depression.paranoid					Locus of control powerful others				
	B	R	R^2	F	P.V	B	R	R^2	F	P.V
OCD R	0.55	0.31	0.29	21.7	> 0.01	0.49	0.49	0.24	52	> 0.01
Severity OCD	0.52	0.52	0.27	18.5	> 0.01	0.35	0.35	0.12	23	> 0.05

Note: P>0.01

Results for the regression analyses are presented in Table 3.We began by examining all symptoms mentioned in SCL90 scale with OCD and in these analyses OCD and symptoms of SCL90 were predictors into the model. Each analysis showed that OCD symptoms were significantly predicted by SCL90 scale (β=55, p>0.001), OCD symptoms were significantly described by the participiants of the investigation in the frame of locus "powerful others" and both were significantly associated, but symptoms measured by SCL90 were stronger predictor for OCD (β=35, p>0.001).

DISCUSSION

We found statistically significant association between OCD and other aspects of abnormalities, except for the extrovert subscale, where the correlation score was negative. We have also found the relationship among depression and paranoid ideation with OCD that was showing higher scores. Statistically significant association was found in somatization, obsessive-compulsive, anxiety, and hostility subscales [*Torres A. et al., 2006*]. Reported psychiatric comorbidity occurs in 62% of the subjects with OCD identified in the psychiatric comorbidity survey, and this factor was significantly higher than that which was displayed by individuals with other neuroses (10%). Individuals diagnosed with OCD had another psychiatric disorder. Individuals with OCD were also significantly more likely than people without OCD to have met criteria for affective and use anxiety disorders, use of drugs and person's disorder [*Fontenel L., Hasler G., 2008*].

The results of the present study was consistent with the results [*Shannon L. et al., 2011*], in which overall levels of OCD showed significant associations with emotional disfunctions. Depressed OCD patients experienced more severe of overall distress and functional disorders compared to non-depressed OCD patients [*Abramowitza S. et al., 2007*].

The increase in depressive mood caused by OCD might also result in a depressive episode in the long term and thus helps to explain high comorbidity rates between OCD and major depression disorder [*Wahla K. et al., 2011*].

The present study showed that in non-clinical young adults, direct relationships have been found between hoarding behaviors and obsessive-compulsive symptoms (OCS), social anxiety, depressive symptoms, and generalized anxiety [*Coles M. et al., 2003*]. The relationships with hoarding cognitions and symptoms of both anxiety (in particular, *OCS*) and depression were of special interest.

Study findings showed the relation among obsessive ideas with paranoid mentality, somatization, depression, introvert personality, and anxiety. These results justify that revealed patients with obsessions and compulsions of OCD combined with panic attacks must receive unique form of cognitive-behavioral therapy, in which a discrimination is made between obsessional thoughts on the one hand, and the irrational thoughts associated with panic on the other hand [*Lawrence A., 2000*].

The relationship between OCD with paranoid thinking was high, but the reason of this relationship is not clear. Moreover, there is no agreement about the contents that characterize these dimensional OCD symptoms, due in part to the existing instruments, which cannot be used (e.g., *Y-BOCS-SC*) to measure them [*Julien D. et al., 2007*].

Some schizophrenic patients report *de novo* emergence or exacerbation of OCSs, whereas some patients with pure OCD benefit from the additional treatment [*Sareen J. et al., 2004*]. In patients with fulfilled criteria of deep depression or disthymic disorder, a percentage similar to usually reported rates of comorbid depression in OCD [*Alonso P. et al., 2008*] is recorded.

The present study surveyed OCD in order to find a relationship with locus of control and the results showed a significant correlation between them. Locus of control had main influence on obsessive thinking symptom scores. That is, external locus of control was associated with higher obsessive thinking symptoms. According to these results, it seems that locus of control exerts an impact on the thinking symptom group of OCD [*Altın A., Karanci N., 2008*]. The results obtained in this research showed negative correlation between extroversion and OCD, and these results corresponded to the previous study that demonstrated: introvert group is significantly more anxious than extrovert on trait anxiety manner. Individuals with neurotic personality properties, in terms of Eysenck's theory, are more able to build fast and persistent associations between noxious events and their consequences, which even in its turn results in high risk for anxiety disorders [*Temel A., An I. L., 2010*].

CONCLUSION

To conclude, the most important findings of the study are that paranoid thoughts are common phenomena in OCD associated with high negative extroversion. Anxiety occurred frequently in obsessive-compulsive patients and was associated with high positive depression. However, in all participants, the correlation among other variables was showed, particularly, between anxiety and depression.

People with high, obsessive compulsive symptoms had higher external locus of control (powerful others), as compared to those with an internal locus of control. According to these results, it can be concluded that for people with high obsessive attitudes, the likelihood of suffering from higher levels of introvert personality may increase when they also have externally oriented locus of control.

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