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Comparing early maladaptive schemas, perseverative thinking, and somatoform dissociation in patients with obsessive-compulsive disorder with normal population

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Original Article

Abstract

BACKGROUND: Considering the importance of psychological factors in exacerbating diseases such as obsessive-compulsive disorder (OCD), this study was carried out aiming to compare the early maladaptive schemas (EMSs), perseverative thinking, and somatoform dissociation among normal individuals and patients with OCD.

METHODS: The causal-comparative (ex post facto) method was used in this study. The population consisted of all patients with OCD referring to the centers for comprehensive urban health services of Ardabil, Iran, in the second half of 2017. The research cluster sampling included 30 patients with OCD whose disease was diagnosed by a responsible physician or clinical psychologist, selected by random sampling method. Moreover, 30 normal people were selected in the sampling method by matching age, sex, and marital status and included in the study. The subjects responded to the Maudsley Obsessive-Compulsive Inventory (MOCI), Young Schema Questionnaire (YSQ), Perseverative Thinking Questionnaire (PTQ), and Somatoform Dissociation Questionnaire (SDQ). Data were analyzed using multivariate analysis of variance (MANOVA).

RESULTS: The results showed that the mean scores of patients with OCD in EMSs, perseverative thinking, and Somatoform dissociation were significantly higher than normal subjects ($P < 0.001$).

CONCLUSION: The results of this study showed that patients with OCD differ in a wide range of EMSs, perseverative thinking, Somatoform dissociation from normal subjects. Therefore, it is necessary to pay attention to these cognitive components in the treatment process.

KEYWORDS: Early Maladaptive Schemas, Thinking, Somatoform Dissociation, Obsessive-Compulsive Disorder

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Introduction

Obsessive-compulsive disorder (OCD) is one of the serious mental health problems imposing great social and economic cost burden on society and is the fourth common psychiatric disease following phobia, drug-related disorders, and depressive disorders. In addition, the problems associated with OCD and its distressing signs, disturb patient's interpersonal, social, and occupational functions.[1] According to cognitive perspective, the way by which a person evaluates intrusive and unwanted thoughts leads to distress and obsessive behaviors. It appears that these incorrect evaluations stem from maladaptive hypothesis that have been learned throughout life span.[2] Early maladaptive schema (EMSs) is a wide and impressive pattern that is formed by memories, emotions, cognitions, and

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physical feelings about oneself, the relations with other individuals, growth through childhood and adolescence, which is product of the life and somehow doesn't work correctly.[3] Briggs and Price[4] in a study on maladaptive experience in childhood concluded that childhood undesirable experiences was strongly related to obsessive-compulsive beliefs and signs, but after controlling anxiety and depression, this relation was not significant and only a weak relationship was observed. Wilhelm et al.[5] showed in a study that the relationship among perfectionism and obsessive thoughts with maladaptive schemas related to dependence/incapability was significant due to response to treatment. In result, cognitive changes in perfectionism/thought assertiveness and maladaptive schemas related to dependence/incapability predict the reduction of behavioral symptoms in OCD. Kwak and Lee[6] concluded that social isolation/alienation and shame/deficit schemas were active among patients with OCD, although incapability/vulnerability to loss and emotional inhibition/self-sacrifice schemas were active in panic disorder.

Among the problems that might present in cognitive area of obsessive individuals, there is questioning of "self" concept which reflects in preservative thinking. This type of thought is one of the usual characteristics of human mind and includes self-attributions derived from events, topics, and behaviors associating a negative concept for individuals. This way of thinking as well as perception alteration may limit reality invitation. Preservative thinking involves the idea that routine and natural events have a certain meaning with varying intensity for each person.[7,8] In this way, Drost et al.[9] showed in a study that individuals with high perseverative thinking will experience high levels of anxiety and depression. Rodriguez-Testal[10] examined the predictors of perseverative thinking and the results of this study showed that self-references among patients particularly patients with psychotic diagnose were significantly more than those of the control group, and psychotic thinking, thought disorders, and vulnerability to mental disorders indexes are the most important variables among others that may predict self-references. Raines et al.[11] found in a study that there was a significant relationship between rumination and unacceptable thoughts.

In recent decades, a new type of disease has been emerged in terms of somatoform disorders and diseases.[12] The term of psychosomatic disorder is used when the individual indicates physical signs that seem to be formed or intensified due to psychological factors. Emergence and occurrence of somatoform disorders require co-existence of psychological factors and physical symptoms.[13] Somatoform dissociation is a term for somatoform symptoms that usually are seen in dissociative disorders. These symptoms included anesthesia, amnesia, and indetermination.[14] OCD is associated with cognitive impairments and deficit in information processing that seem to be related with aforementioned symptoms. Tolin et al.[15] found in a study that non-clinical obsessive subjects engaging in repetitive examinations showed considerable reduction in memory confidence. Van den Hout et al.[16] found that patients with OCD will gaze at an anxiety-provoking object longer, and this reaction not only doesn't lead to more confidence, but also reduces perceptual confidence and increases the amount of memory errors. Lysaker et al.[17] reported that over-attention to thoughts and mental processes review in OCD cause disturbance of memory function.

Regarding the increasing prevalence of OCD and more rigorous recognition of factors related to this disorder, in particular childhood schemas, perseverative thinking, and somatoform dissociation, with the aim of appropriate planning for mental health among

patients with OCD and clarifying therapeutic goals, this study was carried out with the objective to compare EMSs, perseverative thinking, and somatoform dissociation among patients with OCD and normal individuals.

Materials and Methods

The current study was a causal-comparative (retrospective) study including all the patients with OCD referred to urban health service centers of Ardabil, Iran, in the second half of 2017. The study population included 30 patients with OCD who were diagnosed by a physician or psychologist using clinical interviews and questionnaires, and they were selected from 17 medical centers of 5 urban health service centers by clustered random sampling method. Moreover, 30 normal individuals who were matched based on age, gender, marital status, and lack of a history of chronic illness were selected randomly among the individuals referred to these centers during the study. The study inclusion criteria were diagnostic criteria of OCD, age of 18 years old, education level of seventh grade, and written consent for participating in the study. Moreover, the exclusion criteria included having psychotic symptoms, substance abuse, other psychological criteria, and personality disorders diagnostic criteria based on the diagnostic interview by the responsible psychologist and physician. The selection criteria for the normal group were complete health and lack of psychiatric and psychological treatments in two past years. After providing required licenses, among the patients who had been diagnosed by relevant centers, 30 patients were selected and 30 individuals were matched as normal group. Then, after stating the study goals and procedure, and getting informed consent from participants, the questionnaires were presented and participants were asked to complete them according to the instructions. Eventually, data were collected and tested by multivariate analysis of variance (MANOVA).

This inquiry was arranged by Hodgson and Rachman[18] with 30 close-ended questions (yes/no). In addition to a total score, this inquiry has several scores for controlling, washing, repetition, and doubt. The main focus of this inquiry was on obsession symptoms and it is particularly appropriate for evaluating treatment effects on these symptoms. The validity of this inquiry has been reported as 85% via retesting method, with a total validity of 84% and the convergence validity presented with Yale-Brown obsessive-compulsive scale.[19] Furthermore, the validity and reliability of this inquiry had been reported well in Iran.[20]

This questionnaire was designed by Young and Brown[21] with 75 questions assigned for investigating 15 EMSs, including emotional deprivation, abandonment/instability, mistrust/abuse, defectiveness/shame, social isolation/alienation, dependence/incompetence, vulnerability to harm, failure, entitlement/grandiosity, insufficient self-control/self-discipline, subjugation, self-sacrifice, emotional inhibition, unrelenting standards/hyper-criticalness, and entanglement. Each of 75 items of this questionnaire could be scored in a 6-point scale. The score obtained by an individual in each schema was achieved by summing the scores of questions related to that schema. High scores showed more presence of maladaptive schema. Validity and reliability of this measure has been reported to be good.[19] Besides, total reliability of this measure by internal sameness method and Cronbach's alpha was up to %70.[2]

This questionnaire was constructed by Ehring et al.[22] in order to evaluate repetitive negative thinking with 15 self-report items. Confirmatory factor analysis (CFA) showed that this questionnaire was formed by a total scale of perseverative thinking and three subscales of core characteristics of repetitive

Table 1. Mean and standard deviation (SD) of early maladaptive schema (EMS), preservative thinking, and somatoform dissociation among patients with obsessive-compulsive disorder (OCD) and normal individuals

Item	Patients with OCD	Normal group
Maladaptive schema	210.64 ± 57.23	130.73 ± 29.25
Preservative thinking	29.88 ± 7.75	9.70 ± 4.92
Somatoform dissociation	45.86 ± 9.03	28.96 ± 6.10

OCD: Obsessive-compulsive disorder

negative thinking (repetitiveness, difficulty with disengagement, and intrusiveness), perceived unproductiveness, and capturing mental capacity. This questionnaire was used for depressive patients and individuals with other mood disorders. Ehring et al.[22] reported Cronbach's alpha of 0.95 for total scale and 0.83 to 0.94 for sub-scales. In addition, good retesting reliability in 4-week interval has been reported. The scale total validity was reported to be 0.86 in Iran.[7]

This questionnaire was designed by Nijenhuis et al.[14] and included 20 items to evaluate the intensity of somatoform symptoms in three areas.[14] These symptoms included anesthesia, amnesia, and indetermination. This measure was with a good validity and reliability and its differential validity was evaluated in a study in which scores of 50 patients with dissociative disorder were compared with 50 patients without this disorder and showed significant difference. There were differences among some subtypes of dissociative disorder; for example, dissociative identity disorder in comparison with personality metamorphosis disorder. The scales of this questionnaire were correlated with one of the mental dissociation scales with a coefficient of 0.71, showing its convergence validity.[14]

In order to analyzing data, descriptive indicators [mean, standard deviation (SD)] and MANOVA were used.

Results

According to descriptive data related to demographic information, 30 patients with OCD (11 men and 19 women) with a mean age of 28.11 ± 6.53 years and 30 normal individuals (20 men and 10 women) with a mean age 27.34 ± 5.21 years participated in the current study. Other information are presents in table 1.

As it is presented in table1, mean and SD of EMSs, preservative thinking, and somatoform dissociation are listed.

Table 2 shows MANOVA results for group effects of maladaptive schemas, preservative thinking, and somatoform dissociation between groups (OCD, normal) [$P < 0.001$, $F (40 \text{ and } 20) = 22.04$].

According to results of MANOVA test, there was significant difference among EMSs (F: 36.10; $P < 0.001$), preservative thinking (F: 44.10, $P < 0.001$), and somatoform dissociation (F: 3.82, $P < 0.001$) between OCD and normal group (Table 3).

Table 2. Multivariate analysis of variance (MANOVA) method used for comparing differences in two groups

Test name	Value	F	DF hypothesis	DF error	P	Eta square
Pillai's trace	0.91	22.04	20	40	0.001	0.91
Wilks' lambda	0.08	22.04	20	40	0.001	0.91
Hotelling trace	10.47	22.04	20	40	0.001	0.91
Roy's largest root	10.47	22.04	20	40	0.001	0.91

Df: Degree of freedom

Table 3. Multivariate analysis of variance (MANOVA) results on the mean values of early maladaptive schemas (EMSs), preservative thinking, and somatoform dissociation in obsessive-compulsive disorder (OCD) and normal group

Item	Sum of squares	Mean of squares	F	Significance level
Maladaptive schema	515.48	515.48	36.10	0.001
Preservative thinking	155.50	155.50	44.10	0.001
Somatoform dissociation	228.15	228.15	3.82	0.001

Discussion

This study was conducted for the purpose of comparing EMSs, preservative thinking, and somatoform dissociation in patients with OCD and normal individuals. The study results showed that there is significant differences among EMSs in patients with OCD and normal persons (Table 3). This finding is along with the findings in other studies.[3-6] Concentered perspective to schemas emphasize on the deepest level of cognition naming EMSs instead of automatic thoughts and underlying propositions. Schemas-centered patterns define the EMSs as wide and comprehensive topics considering self and interpersonal relationships that are formed in childhood and develop by a degree of insufficiency through the life span. This perspective assumes that maladaptive schemas are the main core of personality pathology and psychological disorders such as interpersonal problems, anxiety, personality, and eating disorders.[3,4] Thus, in explaining these findings, it can be claimed that people with OCD have unpleasant experiences in childhood, and their emotionally-affected requirements have not been met. Schemas arise from harmful experiences that grow through childhood to adolescence developed during life. Moreover, these schemas develop and are fixed in early stages of life and are valid representations of unpleasant experiences of childhood, therefore, they are triggering distorted thoughts and insufficient behaviors and main core of OCD. Maladaptive schemas could have negative effects on these patients by worsening worries and these negative effects lead people to seek impossible solutions instead of correct and logical ones, hence preventing improvement and treatment.[5,6]

Moreover, there is a significant difference in preservative thinking between OCD and normal group (Table 3). This finding is along with findings in other studies.[7-11] It could be claimed that one of the cognitive characteristics of patients with OCD is preservative thinking that is a kind of repetitive internal negative discussion about unimportant issues that may escalate patient's condition. Patients with OCD are oversensitive to their signs and symptoms, especially obsessive thoughts and tend to interpret these signs negatively. Such a tendency can activate preservative thinking patterns in patients. Furthermore, preservative thinking is related to repetition of the feelings arising from the lack of solving the problems among patients with OCD and contributes to worsening the obsessive symptoms. This finding implies that attending to thought content and thinking style of patients is important in the treatment process of this disorder.[8,9]

In addition, findings showed that there is a significant difference in somatoform dissociation between OCD and normal group (Table 3). However, studies did not focus directly on this variable, and it might be along with studies by Tolin et al.[15], Van Den Hout et al.,[16] and Lysaker et al.[17] in the lack of information retrieval sub-item. It might be said that obsessive beliefs including over-responsibility and over-estimation of danger or threat in ambiguous condition control thoughts, problems in memory confidence, and information retrieval error (of dissociative

symptoms) are effective in patients with OCD and each of these beliefs causes to repetition and tendency to compulsive ritual behaviors. Moreover, patients with OCD lose their behavioral and mental balance, so that they feel that the certain thoughts, desire, or opinion are false and become so aimless (of dissociative symptoms) that act against their desires; however, they are aware of their action disutility, but cannot stop performing this feeling.[16,17]

Conclusion

In sum, it can be concluded that patients with OCD exhibit a wide spectrum of maladaptive schemas, preservative thinking, and somatoform dissociation in comparison with normal individuals. Therefore, it can be suggested to therapists and clinicians to investigate EMSs, preservative thinking, and somatoform dissociation as part of treatment process, and consider their modulation in their programs to step in mental health enhancement by appropriate training. One of the limitations of the current study was the patients referred to medical centers of Ardabil City. So, cautions should be considered in order to generalize the result. Finally, it can be suggested that other studies be conducted among other clinical and non-clinical groups.

Conflict of Interests

Authors have no conflict of interests.

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