The Comparison of Irrational Beliefs and Impulsivity Between Obsessive-Compulsive Clinical and Non-Clinical Women in Isfahan

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Abstract: This research aimed at the comparison of irrational beliefs and impulsivity between obsessive-compulsive clinical and non-clinical women in Isfahan. To pursue this purpose, an exposed facto research was carried out. In this regard, 51 obsessive-compulsive participants (with the ultimate diagnosis of OCD) and 60 non-clinical participants were selected as the research sample. The participants of both groups were similar in terms of age, sex, the education level and the economic-social status. To determine the given participants' impulsivity and irrational beliefs, the questionnaires entitled "Barat's Impulsivity Scale" and "Jones's irrational beliefs" were administered. The results of analysis of covariance (with control of education variable) of irrational beliefs between the means of the two groups showed that the difference was not significant. The results (with control of education and age variables) also showed that the difference between impulsivity means was significant (p= 0.001). In addition the results (with control of education variable) showed that the difference between means attention impulsiveness was significant (p= 0.001). The results of two-ways analysis of covariance (with control of education and age variables) showed that the main effect of marital status on motor impulsiveness was significant (p= 0.003). The difference of non-planning impulsiveness between the two groups was not significant. Impulsivity is an important variable in ethologic and maintains of obsessive-compulsive disorder.

Key words: Irrational beliefs %Impulsivity %OCD

INTRODUCTION

Obsessive-Compulsive disorder (OCD) is considered as a serious problem of the psychological health and imposes enormous economic and social expenses on societies. The problems accompanied with OCD disturb the individual's performance in terms of interpersonal relationship, profession and daily life [1].

The main characteristic of obsessive-compulsive disorders is the existence of annoying and distracting thoughts, mental images and impulsivity (obsession) along with mental or behavioral actions (compulsion) in the patient [2]. Obsessive-compulsive continuum is a concept provided by some clinical researchers but has not received enough attention. On the one end of this continuum is obsessive-compulsive disorder and on the other end there are impulsive behaviors such as what can be seen in impulsion control disorder, borderline character disorder and anti social character disorder[3].

The obsessive-compulsive and impulsive symptoms co-occur in some psychiatric disorders containing inability in preventing from or delaying repetitious behaviors and have clinically many characteristics in common with the obsessive-compulsive disorders. Compulsion, as the core of obsessive-compulsive disorder, is defined as exaggerated perception of damage accompanied with giving a drastic reactional response to this wrong perception. It should be mentioned that, impulsion is underestimating the damage or risk, not responding reactionally, being unable to control repetitious behaviors and having desires to gain pleasure and satisfaction. Lots of research has
supported the co-occurrence of obsessive-compulsive disorders and those disorders existing on the obsessive-compulsive continuum [4]. The researchers have shown that the compulsivity among the obsessive-compulsive patients is higher than that of the normal participants [5]. The results of comparing compulsivity between those obsessive-compulsive patients who were responsive to the controlling selective reabsorbed serotonin medicines and those who were resistant to these medicines revealed that the compulsivity of responsive obsessive-compulsive patients to the medicine was lower than that of the resistant patients [6]. In a sample of 293 obsessive-compulsive patients, 16.4 percent of them were suffering from compulsion controlling disorders during their lives and 11.6 percent of them were recently afflicted with one of these disorders. The researchers concluded that not all of the compulsion controlling disorders did equally exist in the obsessive patients. They also asserted that, according to the obtained results, the concept of obsessive-compulsive continuum had no large domain and just contained some certain compulsion controlling disorders. In comparison other obsessive patients, those who have recently afflicted with compulsion controlling disorder reported stronger obsessive-compulsive symptoms, lower life quality and weaker social functions [7 & 8]. Latently, cognitive methods have also been implemented to treat obsessive-compulsive disorders and indicated the role of cognitive components such as irrational beliefs in these disorders. According to the cognitive theory of obsessive-compulsive disorder the tragic (disastrous) interpretation of annoying thoughts cause the outbreak and continuation of such thoughts [9]. The cognition factor is one of the main factors in the formation of obsessive-compulsive disorders. Obsessive patients' irrational beliefs can be followed in their mental rumination. Mental rumination in obsessive patients contains thoughts which are reviewed endlessly and lead to despair of the future and negative evaluation of oneself [10]. Some thoughts like "I should always concentrate all my efforts on confronting probable risks and I should always be ready" and "there is always just one certain solution for a problem and I certainly find it" are common among these patients. Such patient's cognitive domain includes the intensity of their beliefs regarding perfectionism, certainty and not accepting some specific thoughts and impulsions [1]. The most comprehensive cognitive analysis of the obsessive-compulsive disorder suggests that irrational beliefs and annoying obsessive thoughts are a stimulus to start some specific kinds of automatic thoughts. According to this theory, an interfering thought will lead to moody disturbance if one's belief system evaluates that thought unacceptable and this consequently acts as a trigger to start some automatic thought [11]. The results of some research showed that there is a significant difference between obsessive patients and normal individual in terms of cognitive deviations (including responsibility, evaluation of risk and threat, perfectionism and uncertainty as well [12]. Researchers stated that there is a significant positive difference between Meta cognitive beliefs and obsessive symptoms. Three subscales of positive beliefs in anxiety, uncontrollability of risk and cognitive self-consciousness are the strongest predicators of obsessive symptoms among nonclinical population. They concluded that a change in inefficient Meta cognitive and irrational beliefs and the replacement of incompatible confronting strategies with compatible confronting ones can be helpful in controlling obsession symptoms [13]. The motivation to carry out such research was to increase knowledge regarding the factors effective on continuity of OCD and its treatment. The obtained results of this study could be an introduction to further research on the role of impulsivity and irrational belief in the emergence continuation and treatment of OCD. The difficulty in the comparison of impulsivity sub-scales and their differences with regard to OCD appears due to the novelty of the research topic along with the apparent paucity of studies in the available literature about the separate relationship between each sub-scale of impulsivity and OCD. In the same line, as a harbinger, the present study was founded to show the existence of irrational beliefs and the differences between two peer groups of obsessive patients and normal individuals in their impulsivity. In the direction of the research aim and regarding the background of the study, the following hypotheses were tested: 1) there is difference between female obsessive patients and normal female in their mean of irrational beliefs, 2) there is a difference between female obsessive patients and normal female in their mean of impulsivity, 3) there is a difference between female obsessive patients and normal female in their mean of (attention, motor and non-planning) impulsivity components.

**MATERIALS AND METHODS**

**Participants:** To pursue the purpose of this study an exposed facto research was carried out with the population including females with at least the age of 18 years old had at least passed junior high school.
Participants in the study were on a voluntary basis. The average age of all participants was 31.77 year old (clinical participants' 28. 34 year old, non-clinical participant: 34. 58 years old). In this regard, obsessive participant were invited to participant in the research through summoning and receiving the pamphlets of familiarity with obsession. These participants were diagnosed as those suffering from OCD by the psychiatrics in the specialized counseling centers on the basis of the clinical interview. On the other hand, only those meeting DSM for obsessive-compulsive disorder were included in the study. They were then asked to complete the IBT [14] & BIS [15]. Furthermore, non-clinical participant were selected from among 123 women attending the general lectures presented in the counseling center of "Family Academy". No prior information regarding the purpose, of the questionnaire was given. Finally, after reviewing the questionnaire and taking the research entrance criteria into account, the data obtained from 51 obsessive-compulsive participant (with the ultimate diagnosis of OCD) and 60 non-clinical participant were analyzed. The participants of both groups were similar in terms of age, sex, the education level and the economic-social status. For analyzing data, covariance analysis, as well as other descriptive statistical methods like mean and standard deviation, was used. In this analysis, age and education, which were related to the dependent variables, were controlled. All of the above mentioned statistical operations were done through the computer software SPSS-16.

Measures

Barrat Impulsiveness Scale, a Brief Summary of the Factor Structure of the BIS-11: The Barratt Impulsiveness Scale, Version 11 [15] is a 30 item self-report questionnaire designed to assess general impulsiveness taking into account the multi-factorial nature of the construct. The structure of the instrument allows for the assessment of six first-order factors (attention, motor, self-control, cognitive complexity, perseverance, cognitive instability) and three second-order factors (attention impulsiveness [attentional and cognitive instability], motor impulsiveness [motor and perseverance], no planning impulsiveness [self-control and cognitive complexity]). A total score is obtained by summing the first or second-order factors. The items are scored on a four point scale (Rarely/Never [1], occasionally [2], Often [3], Almost Always/Always [4]). The reliability and validity of the Persian copy of Barratt Impulsiveness Scale (BIS-11) were evaluated. The value of Cronboch's alpha coefficient was equal to 0.83. Subscales in Barratt scale indicated meaningful correlation (r=0.40). Among impulsiveness factors in Aizank's, Dickerman's and Zakerman's questionnaire with those in barratt's meaningful correlation was acquired. In this research, after analyzing the questions in the given questionnaire, it was clear that item number 5 (related to the subscale of motor) would enjoy negative correlation with the total score of the questionnaire. Therefore, this item was deleted which resulted in having a questionnaire with Cronboch's alpha coefficient equal to 0.85.

The Irrational Beliefs Test (IBT) developed by Jones [14], is a 20-item 5 points rating scale designed to measure the degree to which responders hold Ellis's 10 principle irrational beliefs. Concurrent reliability coefficient between the short form of IBT and Beck's depression test was calculated. In order to check the validity of IBT, Cronboch's alpha was used. It was equal to 0.80 meaning that this scale was valid [16].

RESULTS

As regards covariance equivalent, the results of Levin test demonstrated that there are no significant differences between two groups in their variances. The mean and standard deviation of impulsivity scores was, respectively, 74.72 and 5.82 for clinical participants and 56.38 and 9.61 for non-clinical participant. The results of the correlation coefficient between the variables of demographic characteristic, the total scores of impulsivity and its subscales and the total scores of the whole irrational beliefs revealed that education have a significant negative relation with all variables except the non-planning impulsiveness subscale (r= -0.07 & p= 0.44). The marriage status have a significant relation with only the motor impulsiveness subscale (r= 0.24 & p= 0.01). Also, age has a significant positive relation with the total score of impulsiveness (r=0.18 & p= 0.04) and the motor impulsiveness subscale (r= 0.23 & p= 0.01). If the covariance (the square of correlation coefficient) between the variables was significant and higher than 0.1, then these variables would have been controlled in covariance analysis (Table 1). Present study proposed 3 hypotheses to test. First, there is difference between non-clinical and clinical participants female in their mean of irrational beliefs. By controlling education variable, the difference of two groups in their adjusted mean of irrational beliefs was not significant; therefore, the first main hypothesis was not supported (Table 2). Second, there is a
difference between non-clinical and clinical participants female in their mean of impulsivity. After controlling the age and education variables, the difference between two groups in their adjusted mean of the total score of impulsiveness is significant (p= 0.001). Therefore, the second hypothesis was supported. After controlling the age and education variables, 42 percents of the variance of impulsiveness scores belonged to the group membership (Table 2). Third, there is a difference between non-clinical and clinical participants female in their mean of (attention, motor and non-planning) impulsivity. The result of this hypothesis demonstrated that after controlling the education scores, the difference between the two groups in their adjusted mean of attention impulsiveness is significant (p=0.001). The effect was 0.043, meaning that 43 percents of the variance of attention impulsiveness belonged to the group membership. By controlling the education and age variables, the main effect of marriage status on motor impulsiveness was significant (p=0.003). The difference between two groups in their mean score of motor impulsiveness was significant (p= 0.001). The difference between two groups in their adjusted means of non-planning impulsiveness scores is not significant (p=0.22) (Table 2).

**DISCUSSION**

The results of testing the first hypothesis revealed that after controlling the education variable, there were no significant differences between the two clinical and non-clinical groups in their adjusted mean of irrational beliefs; therefore, the first hypothesis was not supported. These results were, in some way but not necessarily, different from those of Rachamn [17], Clark [1], Chosak et al. [18], Shams et al. [12], Khosravi et al. [10] and Mohammadkhani et al. [13]. The importance of the obtained results is that through controlling the education variable, the difference between female obsessive patient's means of irrational beliefs and normal females' was not significant. Underlying rationale for these results can be this fact that, firstly, there is a lack of relative research on comparing the means of irrational beliefs between female obsessive patients and normal females and most of the research which was referred to in the review of literature, were dealt with the existence of irrational or Meta cognitive beliefs among the obsessive patients, but no attention had been paid to the difference of these beliefs between the obsessive patients and the normal individual. Secondly, the point that the difference between the two patient and normal groups, after controlling the education variable, was not significant in their means of irrational beliefs, can be due to the increase in the quality and quantity of psychological trainings and the improvement in knowledge and attitude of the society towards the psychological studies. This fact that the difference was not significant after controlling the education variable does not mean that the educated persons have no irrational beliefs. Rather, it can imply that, regarding the increase in the level of education and psychological studies and also regarding that the probable effect of this increase was more on the irrational
beliefs of more educated persons, controlling the education variable led to the insignificant difference between the two groups. Since the participants of this study were educated female and the graduated female were the most frequent participants in both groups, it can be supposed that education and increase in qualitative and quantitative level of psychological trainings and the improvement in the attitudes in this area, especially among the educated female, are the main rationales that two patients and normal groups are not significantly different in their means of irrational beliefs.

The results of testing the second main hypothesis showed that after controlling the education and age variables, the difference between the two groups in their adjusted means of the total score of impulsivity was significant (p=0.001); therefore, the second main hypothesis was supported. After controlling the education and age variables, 42 percent of the variance of impulsivity scores belonged to the group membership. Such findings support Sunimerfeldt et al. [5], reporting the significant difference between obsessive patients and normal individual in their impulsivity and also the results of Matsunaga et al. [19], Carvet & Miller [20], Grant et al. [8] and Smari et al. [21] focusing on the impulsivity as an important feature among obsessive patients. Obsessive-compulsive continuum is a concept which was proposed by some clinical researchers and it was revealed that at one end of this continuum there is obsessive-compulsive disorder and at the other end is impulsive behaviors such as impulsive disorders, borderline character disorders and antisocial character disorders. Previous research emphasized that the symptoms of obsessive-compulsive disorders and impulsivity co-occurred in some of the psychiatric disorders containing disability in preventing from or delaying repetitious behaviors; these disorders have many clinically common characteristics with obsessive-compulsive disorders. Lots of research has supported the co-occurrence of obsessive-compulsive and obsessive-compulsive continuum disorders [4].

Therefore, according to the results of this study emphasizing on the existence of significant difference between the obsessive and normal female, even after controlling the education and age variables, in their means of impulsivity, it can be concluded that impulsivity can have an important role in the ethologic of obsessive-compulsive disorders.

Regarding the third hypothesis, the results revealed that there is significant difference between the two obsessive and normal female in their means of attention and motor impulsiveness. These results are in accordance with the results of testing the first main hypothesis. That the difference between the obsessive and normal female was not significant in their means of non-planning impulsiveness can be due to the small sample size. In the case of rationale for the difference of impulsive components with a special disease (OCD in this research), because this research area (obsessive-compulsive continuum) was new, there was not a wide theoretical review of literature on the subject. Regarding the attention impulsiveness and the difference existing between the obsessive and normal female in this case, it can be said that this difference is due to the fact that most of the symptoms of obsession subscales belong to the inspection (61%) [1] and the attention impulsiveness is defined as one's disability to concentrate on doing something [4].

**Limitations:** This study faces some limitations which should be taken into close consideration. Firstly, since this research was carried out on female obsessive-compulsive participants due to their more reference to the counseling centers, any claims of extrapolating the results to all people including men are not warranted and are in need of further confirmation. Secondly, regarding that the obsessive-compulsive participants were all educated, the results can be generalized to educated persons. The last point to be mentioned here is that the obtained results should be generalized only to the obsessive-compulsive individuals, not to other kinds of psychological disorders.

**Implications:** In the case of the relation of two other components with obsession, more research is needed and the present researcher has emphasized this research to be considered as a starting point in this area. It is suggested the same research to be done on participants with lower level of education and also on some other wider samples.

**References**


