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## The role of metacognition and dimensions of perfectionism in prediction of the consequences of individuals with obsessive-compulsive disorder

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### ABSTRACT

*The present research was aimed to explain the role of metacognition and dimensions of Perfectionism in prediction of the consequences of individuals with obsessive-compulsive disorder. The research was descriptive-correlational. The population consisted of all the patients with obsessive-compulsive disorder who attended active clinics in Tehran city in order to receive mental health and medication services. In this regard, 80 individuals were chosen from the mentioned sample size using convenience sampling method and were assessed through standard questionnaires. The obtained data were analyzed using multivariate regression method and Pearson Correlation Coefficient. The findings demonstrated that metacognition, positive perfectionism and negative perfectionism have significance correlation with psychological consequences. Moreover, the results of the regression analysis indicated that 56 percent of variance related to psychological consequences is explained by metacognition, positive perfectionism and negative perfectionism. Increase in the level of metacognition and negative perfectionism leads to increase in the level of psychological consequences and increase in the level of positive perfectionism leads to decrease of psychological consequences.*

**Keywords:** metacognition, dimensions of perfectionism, psychological consequences, obsessive-compulsive disorder.

### INTRODUCTION

After phobias, disorders related to drugs and mood disorders, obsession disorder is the fourth most common disorder in psychiatric diagnoses [1]. Obsessive-Compulsive Disorder (OCD) is a debilitating anxiety disorder which occurrence of obsession and compulsive actions are its main characteristics. Obsessions refer to unwanted and annoying thoughts, images and impulses which take place without the desire and will of the patient and are experienced incompatibly and inconsistently. Wisdom resist against obsessions actively and knows that obsession is the product of the person's mind [2]. Metacognition refers to psychological structures, knowledge and processes which deals with control, change and interpretation of thoughts and knowledge. Based on the recent theories, metacognition is one of the most important factors in the development and continuity of psychological disorders. Using the impact of knowledge, metacognitions have impact on emotional processing and reactions related to trauma. Moreover, Metacognition strategies have significant impacts on changes in beliefs and interpretation of specific signs such as distracting thoughts and metacognition beliefs play an important role in etiology and stability of anxiety and depression [3 , 4]. According to Flavell [5], metacognition is knowledge or a cognitive process which is involved in evaluation, monitoring and control of knowledge and regulates the cognitive performance. Most of the

theorists in the field of metacognition believe that when a person is armed with a weapon like metacognition, he can easily improve his performance in addition to reduction of the severity of his perceived stress levels through planning and controlling the assigned tasks [6]. The majority of the theorists distinguish between the two aspects of metacognition: metacognition knowledge, which refers to the information one has on learning factors and strategies related to the assignments, and metacognition regulation, which refers to a variety of administrative actions such as attention, reviewing, planning and identify errors in the performance and has influence on cognition activities [3]. Perfectionism is a set of high level criteria for performance which is accompanied by negative evaluation, criticism and blame [7]. According to Bandura [8] strict criteria for continuous assessment leads to abnormal reactions and feelings of worthlessness and lack of purpose which this results in stress in the person Hewitt and Flett [9] In fact, negative perfectionism is a constant source of stress, because the person continuously deemed himself to be perfect. Therefore, this expectation has impact on their coping strategies in the face of stressful situations and defeats them most of the time. According to the previous researches in the field of metacognition and perfectionism, it is expected that metacognition and perfectionism have relationship with psychological consequences and develop the groundwork for tendency to OCD. Therefore, the present research studied the relationship between metacognition and perfectionism with psychological consequences in individuals with OCD and found that which one can predict the consequences better.

## MATERIALS AND METHODS

### Methodology

The present research was descriptive-correlational. The population consisted of all the patients with obsessive-compulsive disorder who attended active clinics in Tehran city in order to receive mental health and medication services. In this regard, 80 individuals were chosen from the mentioned sample size using convenience sampling method and were assessed through standard questionnaires. The relationship between metacognition and perfectionism with psychological consequences was studied in the present research and the level of predictability of each of them was evaluated clearly. The short-form metacognition questionnaire, negative and positive perfectionism scale and psychological consequences checklist were used to collect data. Afterwards, the obtained data were analyzed using multivariate regression method and Pearson Correlation Coefficient.

*Metacognition Questionnaire:* this scale was developed by Wales and Katrait- Hanton and consisted of 30 items. Each participant answers to the items using a 4-point scale (from strongly disagree to strongly agree). This questionnaire consisted of 5 components of positive beliefs about concerns, cognitive competence, cognitive self-awareness, negative beliefs about uncontrollability of thoughts and beliefs about the need to control thoughts. The Cronbach's alpha coefficient and retest reliability coefficient were reported 0.93 and 0.78, respectively. Its correlation coefficients with the State-Trait Anxiety Inventory (STAI) ( $r=0.53$ ) and Penn State Worry Questionnaire ( $r=0.54$ ) were significant. The Cronbach's alpha coefficient of the scale in a research conducted by Abolghasemi et al [10] was 0.85 which is acceptable statistically.

*Negative and Positive Perfectionism Scale:* this scale was developed by Terry-Short et al. and consisted of two sub-scales of negative and positive which is measured with 40 questions. Moreover, each participant answers to the questions using a 5-point scale (from strongly disagree to strongly agree). The Cronbach's alpha coefficients related to the Positive and Negative Perfectionism Scales were 0.83 and 0.81, respectively. The correlation coefficients of the Positive and Negative Perfectionism Scales with the Hoyt and Felt Perfectionism Scale were -0.46 and 0.53, respectively. The Cronbach's alpha coefficient of the scale in a research conducted by Abolghasemi et al [10] was 0.86 which is acceptable statistically.

*Researcher-Made Psychological Consequences Checklist:* the psychological consequences checklist (anxiety, stress, depression, anger, pain, unpleasant memories, exhaustion, etc.) had 20 items which each participant answers to the questions using a 4-point scale (from strongly disagree to strongly agree). In the present research, the Cronbach's alpha coefficient of the checklist was 0.87 which is acceptable statistically.

## RESULTS

**Table 1. Multivariate regression coefficient of metacognition and perfectionism with psychological consequences in individuals with obsession disorder using input method**

| Predictor variables        | R <sup>2</sup> | R     | F(0.001) | SE    | B     | β     | T(0.001) |
|----------------------------|----------------|-------|----------|-------|-------|-------|----------|
| Psychological consequences |                |       |          |       |       |       |          |
| Metacognition              | 0.649          | 0.423 | 54.14    | 0.089 | 0.603 | 0.655 | 8.38     |
| Positive perfectionism     | 0.671          | 0.431 | 31.36    | 0.362 | 0.621 | 0.199 | 1.96     |
| Negative perfectionism     | 0.742          | 0.547 | 23.80    | 0.186 | 0.696 | 0.428 | 4.30     |

**Table 2. Multivariate regression coefficient of metacognition and positive and negative perfectionism in order to predict psychological consequences in individuals with obsession disorder using stepwise method**

| Predictor variables           | MR    | RS    | F(0.001) | β    | T    | P      |
|-------------------------------|-------|-------|----------|------|------|--------|
| Psychological consequences    |       |       |          |      |      |        |
| Negative perfectionism        | 0.667 | 0.449 | 59.21    | 0.69 | 8.61 | <0.001 |
| Metacognition                 | 0.733 | 0.537 | 43.14    | 0.41 | 3.96 | <0.001 |
| Cognitive trust               | 0.692 | 0.478 | 67.07    | 0.71 | 9.18 | <0.001 |
| Uncontrollability of thoughts | 0.726 | 0.524 | 38.87    | 0.31 | 3.02 | <0.001 |

According to the statistical analysis of the obtained data, the mean and standard deviation is  $14.19 \pm 75.21$  for metacognition,  $5.16 \pm 66.11$  for positive perfectionism,  $47.15 \pm 52.75$  for negative perfectionism and  $13.95 \pm 46.19$  for psychological consequences. The Pearson Correlation Coefficients demonstrated that metacognition has a significant correlation with psychological consequences ( $r=0.68$ ) in addicted participants. Moreover, there is a significant correlation between positive perfectionism and psychological consequences ( $r=-0.31$ ) and there is a significant correlation between negative perfectionism and psychological consequences ( $r=-0.69$ ) in addicted participants. In addition, there are significant relationships between psychological consequences and trust ( $r=0.73$ ), positive beliefs about concern ( $r=0.33$ ), cognitive self-awareness ( $r=0.27$ ), beliefs about uncontrollability of thought ( $r=0.65$ ) and need to thought control ( $r=0.51$ ) ( $P<0.01$ ). Negative and positive perfectionism and metacognition were considered as predictor variables and psychological consequences were considered as criterion variable in the regression equation in order to determine the impact of each of the variables of metacognition and perfectionism on the variance of psychological consequences. The results of the variance analysis and statistical characteristics of the regression between the mean score of psychological consequences with metacognition, negative and positive perfectionism are listed in table 1. Based on the results, the observed F is significant ( $P<0.001$ ) and 55% of the variance related to the psychological consequences are explained by the metacognition variables and perfectionism. The regression coefficient of each of the predictor variables indicates that metacognition and positive and negative perfectionism can explain the variance of psychological consequences significantly. The impact coefficients of metacognition ( $B=0.603$ ), positive perfectionism ( $B=0.621$ ) and negative perfectionism ( $B=0.696$ ) demonstrate that metacognition, positive perfectionism and negative perfectionism can predict the changes related to psychological consequences at 99% confidence level. On other words, increase in the levels of metacognition and negative perfectionism leads to increase in the level of psychological consequences, and increase in the level of positive perfectionism results in reduction of psychological consequences. The multivariate regression coefficient was shown in table 3 in which the negative perfectionism and metacognition are the strongest predictors of psychological consequences in obsessive individuals. In addition, the results demonstrate that among the components of metacognition, cognitive trust and negative beliefs about uncontrollability of thoughts are the strongest predictor for psychological consequences in individuals with OCD.

## CONCLUSION

Based on the research findings, metacognition had a significant and positive correlation with psychological consequences of individuals with obsession disorder. According to the results, it can be expressed that self-regulation behavior is impaired in individuals with obsession disorder which leads to psychological consequences such as anxiety, stress, depression, anger, exhaustion and somatic complaints. On other words, obsessive individuals are less able to regulate various psychological events and are weak in pursuit of specific objectives and intervention. In addition, according to the relationship of metacognition beliefs with psychological consequences, unpleasant cognitive events are continuously recalled with recurrence of obsessive-compulsive disorder. Existence of such metacognition beliefs might represent differences in coping skills. Totally, impaired metacognitive beliefs

undermine the coping skills, particularly cognitive (defiant irrational beliefs) and behavioral (dysfunctional behaviors) interactions are formed and the groundwork for obsessive-compulsive disorders is provided.

In addition, the research findings demonstrated that negative perfectionism has a significant negative correlation with psychological consequences of individuals with obsession. Negative perfectionism could lead to difficulty for the person in the context of interpersonal relationships through shaping the unrealistic expectations and criteria and critical assessment and self-blaming. This unpleasant condition could lead the perfectionist person to the impossibility of establishing a good relationship and loss of his original position in the eyes of others. This vicious cycle is the reason of continuation and intensification of its processing and psychological problems and issues, a process in which the correlation between negative perfectionism and psychological consequences is explained. Moreover, the findings indicated that positive perfectionism has a significant negative correlation with psychological consequences. Perfectionism keep the person's mental health away from failures, fears and anxieties, and taking refuge to avoidance coping strategies through readiness and capabilities for realism, equipping the person with positive thinking, paying attention to successes and provision of appropriate background. Hence it can be expressed that right after the perception of perfectionism criteria by the person, individuals with more self-regulatory behavior provide adaptive responses to social stress. Furthermore, the highest psychological consequences are experienced in individuals who perceive perfectionism criteria in their own atmosphere but they don't have self-control behaviors or negative behavior control and negative cognitions behavior. The results of the previous researches such as Abolghasemi, Ebrahimzadeh, Narimani and Ahadi [10] indicate that individuals with obsessive-compulsive disorder and post-traumatic stress disorder scored higher on cognitive beliefs compared to normal people. The role of metacognition in creation and continuation of psychological disorders, especially obsession, is paid special attention in a research conducted by Spada [11]. According to Rees and Wells [6], there is a significant correlation between metacognition beliefs and obsessive signs. Heinz [12] compared individuals with obsessive-compulsive disorder with the control group of non-anxious participants and found that there are differences between the two groups in different dimensions of metacognition beliefs and individuals with obsession more believe in negative beliefs about controllability and danger. According to Junk [13], cognitive self-awareness, which refers to revision of thoughts and it is a subset of metacognitive beliefs, has relationship with symptoms of obsession.

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