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The Effectiveness of Mindfulness-Based Stress Reduction Training on Self-Efficacy and Self-Esteem in Patients with Obsessive-Compulsive Disorder

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Quantitative Study

Abstract

Background: Obsession is a repetitive and harmful thought, perception, feeling, or movement that is associated with a sense of compulsion and a tendency to resist it. The purpose of this study was to determine the effectiveness of mindfulness-based stress reduction training on self-efficacy and self-esteem in patients with obsessive-compulsive disorder (OCD).

Methods: The present study was a quasi-experimental study with a pretest-posttest design, control group, and follow-up period. The statistical population of this study included all patients with OCD in Tehran, Iran, in 2018. The study sample consisted of 30 people who were selected using a convenience sampling method and divided into experimental (n = 15) and control group (n = 15) participants. Measurement tools included the Coopersmith Self-esteem Inventory (CSEI) (1976) and General Self-Efficacy (GSE) Scale (Schwarzer & Jerusalem, 1995). First, a pretest was conducted in both groups. The experimental group then underwent eight sessions of intervention each lasting 90 minutes, and then, the posttest was performed in both groups. Moreover, one month later, the follow-up phase was completed. Data were analyzed using multivariate analysis of covariance (MANCOVA) and one-way analysis of covariance (ANCOVA).

Results: The results showed that mindfulness-based stress reduction training was effective on self-efficacy and self-esteem in patients with OCD, and this effect persisted until the follow-up.

Conclusion: It can be concluded that mindfulness therapy can stop the rumination cycle and distance individuals from their negative thoughts. Challenging negative beliefs about emotions improves self-esteem and self-efficacy in patients with OCD.

Keywords: Mindfulness, Self-efficacy, Self-esteem, Obsessive-compulsive disorder

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Introduction

Obsessive-compulsive disorder (OCD) is a type of mental illness that, although dissimilar among individuals, many of its symptoms are nearly identical. Obsession is a

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repetitive and harmful thought, perception, feeling, or movement that is accompanied by a sense of compulsion and a tendency to resist it. The patient may realize that his/her personality is different from others in thought or behavior, and he/she may be aware of his/her abnormal behavior. These obsessions cause the patient to waste time and become extremely anxious when unable to perform obsessive behavior (Baron, Mueller, & Wolfe, 2016). OCD also interferes with one's social behaviors, and the obsessive-compulsive person reviews his/her behaviors and seeks an opportunity to apologize from others, or breaks up with others to get rid of these annoying thoughts. As such, they develop depression, loneliness, and rumination with obsession (Barry, Doucette, Loflin, Rivera-Hudson, & Herrington, 2017).

Low self-esteem is one of the factors that seem to contribute to OCD. Self-esteem is one of the most important aspects of personality. Self-esteem determines the development and evolution of human behavioral traits. Self-esteem is a value that one attaches to one's self, and includes the three components of belief, emotion, and behavior. Self-esteem is associated with a negative or positive attitude toward self and is dependent on one's assessment of one's personality traits (Bennett, Egan, Cook, & Mantzios, 2018). Self-esteem as a central factor in emotional-social adjustment is one of the most important components of mental health. Self-esteem is one's degree of conformity, acceptance, and validness toward oneself that is known to be a stressor and the most important source of self-esteem in coping with stress. Having confidence in their skills will help individuals face life's challenges effectively (Bleidorn et al., 2016). Self-esteem is a person's confirmation, acceptance, and sense of self-worth that has been identified as a stress modulator and the most important individual source of adaptation to stress. Thus, people with higher self-esteem in stressful situations feel more valued and more confident in their skills, and this confidence can help them effectively cope with life's challenges (Burguiere, Monteiro, Mallet, Feng, & Graybiel, 2015).

Another component of OCD is low self-efficacy. Self-efficacy is an essential effective factor in self-care behaviors in patients. Patients who have higher self-efficacy better manage their care (Cherkin et al., 2016). Self-efficacy, as one of the central concepts in cognitive-social theory, has attracted the attention of many education professionals. It is defined as one's belief in the ability to cope with particular situations, and how attitudes are, influence the behaviors and emotions of individuals, and determine the initiation of work and the degree of persistence that people need to see them through. Self-efficacy, rather than referring to an individual's judgment about him/herself and his/her physical characteristics, refers to an individual's belief about what he/she can do (Farmer & Tierney, 2017). Self-efficacy is one of the important constructs in Bandura's social cognitive theory (SCT), which means confidence and belief in one's ability to control thoughts, feelings, activities, and performance in times of stress. Choosing higher goals, tolerance, and endurance in assignments, high-performance levels commensurate with abilities, and actively seeking new successes are characteristics of self-efficacious individuals (Frank, Reibel, Broderick, Cantrell, & Metz, 2015).

There are many ways to improve self-efficacy and self-esteem in patients with OCD. One of these methods is mindfulness-based therapy. Over the past decade, behavioral therapy has evolved and led to the development of behavioral science. Newer forms of cognitive-behavioral therapy (CBT), called the "third wave" of behavioral therapy, emphasize considerations such as complete awareness, acceptance, therapeutic relationship, spirituality,

values, meditation, being present, and emotional tools (Juul, Pallesen, Piet, Parsons, & Fjorback, 2018). Full awareness is about being aware of the experience in a receptive way and performing activities based on this non-judgmental awareness. In practicing complete consciousness, clinicians intentionally focus on the present experience while maintaining distance from it. Full awareness involves cultivating an attitude of curiosity and compassion for the present experience. Therapists learn to focus on one thing at a time and return their attention to the present moment when it has been diverted (Murray et al., 2019). Mindfulness training affects depression, anxiety, and psychological adjustment. Mindfulness training also affects stress, and anxiety. Stress-based mindfulness improves mental, physical, and emotional well-being, and sleep quality, reduce stress and chronic pain, and prevents recurrence of depression and generalized anxiety (Orth, Robins, Meier, & Conger, 2016). Thus, this study sought to determine whether mindfulness-based stress reduction training affects self-efficacy and self-esteem in patients with OCD.

Methods

The present study was a quasi-experimental study with a pretest-posttest design and control group. The study population included all patients with OCD in Tehran, Iran, in 2018. The sample of this study consisted of 30 people who were selected using a convenience sampling method and divided into two experimental (15) and control (15) groups.

Coopersmith Self-esteem Inventory: Coopersmith developed the Coopersmith Self-esteem Inventory (CSEI) in 1976. This questionnaire contains 58 yes-no questions. The CSEI has been widely used and has been shown to have sufficient reliability and validity in various studies. Johnson, Redfield, Miller, and Simpson reported a reliability of 0.9 using the split-half method, **a**nd Panadero, Jonsson, and Botella (2017) obtained reliability coefficient of 0.88 after five weeks and 0.7 after three years. Cronbach's alpha coefficient for the whole questionnaire was 0.86. Moreover, the correlation coefficients of the CSEI were calculated using Eysenck Personality Inventory (EPI), and the significant correlation coefficient was 0.80 (Parsons, Crane, Parsons, Fjorback, & Kuyken, 2017). The results of the questionnaire on adults showed that the internal consistency validity coefficient was 0.90.

General Self-efficacy Scale: Schwarzer and Jerusalem developed the General Self-Efficacy (GSE) Scale in 1995. The scale consisted of 17 items with the two subscales of general self-efficacy and social self-efficacy; it was reduced to a 10-item scale (GSE-10) in 1981 and translated into 28 languages (Polusny et al., 2015). The items of the GSE-10 are scored on a 4-point scale. This scale has a minimum and maximum score of 10 and 40, respectively. The reliability and validity of the GSE-10 were investigated in psychology students of the Shahid Chamran University of Ahvaz and Islamic Azad University, Marvdasht Branch, Iran. Factor analysis (structural analysis) yielded a construct called general self-efficacy beliefs that determined 38.69% of the scale options variance. Shapiro, Astin, Bishop, and Cordova, (2005) calculated the validation coefficient of the GSE-10 using an optimistic attribution style. They gained 0.49 in a group of students, 0.45 in challenging perceptions, and 0.58 in self-regulated teachers all of which were significant. The concurrent validity coefficient for the GSE-10 and Rosenberg Self-Esteem Scale (RSES) in 318 students of Shahid Beheshti University was 0.30, in 267 students of Shahid Chamran University of Ahvaz was 0.20, and in 208 students of Islamic Azad University, Marvdasht Branch was 0.23 (Song & Lindquist, 2015).

Results

Mean and standard deviation for scores of research variables in pretest, posttest, and follow-up is shown in table 1.

Table 1. The mean and standard deviation for scores of research variables in pretest, posttest, and follow-up

Variable	Group	Pre-test	Post-test	Follow-up
		Mean ± SD	Mean ± SD	Mean ± SD
Self-efficacy	Experimental	13.93 ± 2.96	20.66 ± 3.97	19.00 ± 2.56
	Control	15.93 ± 3.82	16.40 ± 3.06	16.20 ± 2.78
Self-esteem	Experimental	26.06 ± 4.35	35.73 ± 4.43	34.33 ± 3.79
	Control	32.46 ± 4.95	33.86 ± 6.01	33.53 ± 4.85

SD: Standard deviation

The null hypothesis was confirmed for the equality of variances of the scores of the two groups in the research variables. In other words, the equality of the variances of scores was confirmed in the experimental and control groups. The null hypothesis for the normal distribution of the scores of the two groups in the research variables was confirmed. That is, the normality of the distribution of scores in the pretest in both experimental and control groups was confirmed. The F value of the interaction for the same slope of the regression line was not significant for any of the variables in the study. In other words, the homogeneity of the slope of the regression line was accepted. Evaluation of the data specificity showed that variance-covariance matrices were homogeneous (Box's M = 118.19; P > 0.05); therefore, Wilks' lambda index was used to evaluate the significance of the multivariate effect.

As shown in table 2, by controlling significant levels of all tests in the pretest, it was indicated that there was a significant difference (P < 0.0001; F = 36.79) between the experimental and control groups at least in one of the dependent variables (self-efficacy and self-esteem scores). The effect or difference was 0.44, i.e., 44% of the individual differences in posttest scores of self-efficacy and self-esteem were related to the effect of mindfulness training (group membership).

As shown in table 3, there was a significant difference between the experimental and control groups in terms of self-efficacy (P < 0.0001; F = 62.66). The effect or difference was 0.42, i.e., 42% of the individual differences in posttest self-efficacy scores were related to the effect of mindfulness training (group membership).

There was a significant difference between the experimental and control group in terms of self-esteem (P < 0.0001; F = 43.81). The effect or difference was 0.44, i.e., 44% of the individual differences in posttest self-esteem scores were related to the effect of mindfulness training (group membership).

Table 2. Results of multivariate analysis of covariance on mean posttest self-efficacy and self-esteem scores of the experimental and control groups with pretest control

Test name	Value	df hypothesis	df Error	F	Significant level	Effect size	Statistical power
Pillai's effect	0.74	2	25	36.79	0.001	0.44	1.00
Wilks' Lambda	0.25	2	25	36.79	0.001	0.44	1.00
Hotelling effect	2.94	2	25	36.79	0.001	0.44	1.00
The largest root	2.94	2	25	36.79	0.001	0.44	1.00

df: Degrees of freedom

Table 3. Results of multivariate analysis of covariance on mean posttest scores of self-efficacy and self-esteem in experimental and control groups with pretest control

Variables	Source of Changes	SS	df	MS	F	P	Effect size	Statistical power
Self-efficacy	Pretest	640.92	1	640.92	149.63	0.0001	0.30	1.00
	Group	268.41	1	268.41	62.66	0.0001	0.42	1.00
	Error	158.47	27	4.28				
Self-esteem	Pretest	302.79	1	302.79	49.06	0.0001	0.37	1.00
	Group	270.43	1	270.43	43.81	0.0001	0.44	1.00
	Error	228.35	27	6.17	-	-	-	-

SS: Sum of squares; df: Degrees of freedom; MS: Mean of squares

Discussion

The present study results showed that mindfulness-based stress reduction was effective on self-efficacy and self-esteem in patients with OCD. The results were in line with those of St-Louis, Verner-Filion, Bergeron, and Vallerand (2018), Fairfax (2008), and Hanstede, Gidron, and Nyklicek (2008). Their findings also indicated that mindfulness-based stress reduction affected self-efficacy and self-esteem in patients with OCD.

The results showed that group mindfulness training reduced the symptoms of OCD in treated patients. Mindfulness, as a technique, can produce a higher level of awareness of physical and environmental conditions; therefore, it can help people in different situations, especially when they feel compelled to perform specific actions. Indeed, they focus the mind on other phenomena, and focusing on emotional and physical states creates a barrier against rumination and repetitive acts. Mental training for patients with OCD helps them to see changes in their minds and change their performance by undergoing practical clinical courses. The change in the mind can easily bring about the expected performance changes. The mindfulness method affects the input and output as well as the biological processes underlying the obsessive behavior (unlike the behavioral methods that influence and control the output). These changes are taught to the patient in a step-by-step manner and are required to guide them to the next level through self-monitoring when they overcome a step. Hertenstein et al. (2012 also suggested that mindfulness treatment is appropriate for some OCD patients who do not have negative emotional states and anxiety, and that mindfulness-based cognitive therapy (MBCT) increases the patient's self-control, self-regulation, and self-monitoring by directing moment-by-moment and non-judgmental consciousness toward their behavior and recovery.

In explaining the effectiveness of cognitive group therapy based on mindfulness on improving the self-esteem of patients with OCD, it can be said that mindfulness therapy is one of the new approaches to modifying, controlling, and processing thoughts. In this approach, one's thoughts are experienced as mental events, and focus on and attention toward breathing is used as a means of living in the present moment. In this way, patients are trained to stop the rumination cycle and stay away from negative thoughts. Flexible training improves self-esteem by affecting attention, stopping rumination, correcting negative and positive beliefs, and challenging negative emotions (Hale, Strauss, & Taylor, 2013). The effect of mindfulness on self-esteem is through people's beliefs about their personality and values, which can keep their personality stable even when a person is ill. With these beliefs, individuals can influence the outcomes of their lives and feel more in control. Patients with OCD lose their source of social support and become isolated when they are upset (Wahl, Huelle, Zurowski, & Kordon, 2013). These physical and role changes lead to changes in their mental and physical image and decrease self-esteem and confidence in them. In the mindfulness intervention, emotional

management and both physical and mental dimensions are considered simultaneously, and one is taught to be completely aware of one's thoughts and feelings. Moreover, as patients with OCD are less likely to be in contact with the present moment, presence of mind and its training through mind control is effective and helps the person to become fully conscious of their thoughts and feelings and accept them. In a state of relaxation and concentration, without being overwhelmed, they gain the ability to control their thoughts. This ability makes individuals feel more in control of their life and, instead of giving negative self-responses in troubled situations, respond with more comfort and awareness, and better cope with problems.

Conflict of Interests

Authors have no conflict of interests.

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